

# People, Portraits, Perspectives: Improving Employability for Inclusive Growth in Hungary

## Output 2

*Technical report on labor market analytics for improved  
jobseeker profiling*



Social Protection and Jobs Global Practice

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## Notes and acknowledgments

This report has been delivered under the provisions of the Reimbursable Advisory Services (RAS) Agreement on *Improving Employability for Inclusive Growth in Hungary*, which is carried out in partnership with the Hungarian Ministry of Finance. It was prepared under the guidance and supervision of Cem Mete (Practice Manager, Social Protection and Jobs, Europe and Central Asia) and Tatiana Proskuryakova (Country Manager, Hungary and Romania). The report was drafted by a team consisting of Sándor Karácsony (Senior Economist, co-TTL), Natalia Millán (Economist, co-TTL), Alina-Nona Petric (Social Protection Specialist), Dorothee Buhler (Expert), Céline Ferré (Expert), and Nóra Teller (Expert). The team was supported by András Tamás Torkos and Andrei Zambor in Bucharest, and Amara Khiev in Washington, DC. The team is grateful for peer review comments received from Aylin Isik-Dismelik, György Molnár, and Manuel Salazar.

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The report has benefited from several rounds of consultations with the Ministry of Finance, the Ministry of Human Capacities, the Ministry of Interior, the Hungarian Central Statistical Office, and the HÉTFA Research Institute. Local-level Hungarian stakeholders—mayors, public employment service officials from district and county government offices, managers of social inclusion projects, civil society representatives—in a number of Hungarian locations have also been consulted as part of the process of developing this report. The team is grateful for the inputs received from all counterparts. (A detailed list of consultations and further mission activities are presented as part of the Progress Reports delivered under the work program.)

This document has been produced using the 2016 EU-SILC data files of the Hungarian Central Statistical Office. The calculations and the conclusions within the document are the intellectual product of the World Bank.

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## Acronyms and abbreviations

ALMP	active labor market program
CEE Continental	Central and Southeast Europe Continental Europe (includes Croatia, Czech Republic, Hungary, Poland, Slovak Republic, and Slovenia)
DREAM	Danish Register for Evaluation of Marginalization
EFOP	Human Resource Development Operational Program
ESF	European Social Fund
EU	European Union
EU-28	The current membership of the European Union (28 Member States)
EU-SILC	European Union Statistics on Income and Living Conditions
GDP	gross domestic product
GINOP	Economic Development and Innovation Operative Program
HCSO	Hungarian Central Statistical Office
HUF	Hungarian forint
IAP	individual action plan
IR	Integrated Registry
ISCED	International Standard Classification of Education
ISCO	International Standard Classifications of Occupations
IT	information technology
JSCI	Job-Seeker Classification Instrument
LFS	Labor Force Survey
MfNE	Ministry for National Economy
MHC	Ministry of Human Capacities
MoF	Ministry of Finance
MoI	Ministry of Interior
MoIT	Ministry for Innovation and Technology
NEET	not in employment, education, or training
NES	National Employment Service
NGO	nongovernmental organization
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organisation for Economic Co-operation and Development

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OPs	Operational Programs
PES	public employment service
PHARE	Poland and Hungary Assistance for the Restructuring of the Economy
PISA	Programme for International Student Assessment
RAS	Reimbursable Advisory Services
TÁMOP	Social Renewal Operational Program
TOP	Territorial and Settlement Development Operational Program
VEKOP	Competitive Central Hungary Operative Program

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## Executive summary

**Employment rebound has led to labor shortages in Hungary—but reserves of human resources remain untapped.** The country has experienced a full labor market recovery since the 2008 financial crisis, with unemployment at historically low levels. Despite these achievements, labor shortages affect almost all sectors of the economy, and an important share of individuals remain inactive and outside the reach of the National Employment Service (NES). Inactivity and unemployment are particularly high among young Hungarians, women, and those with lower levels of education, and regional labor market disparities and skills mismatches continue to prevail.

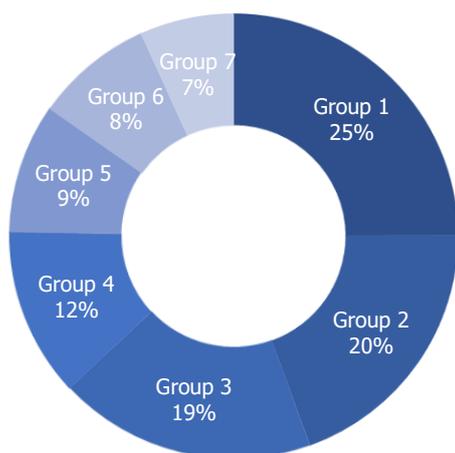
**A tight labor market, a shrinking working-age population, combined with evidence of skills and regional labor market mismatches call for structural improvements.** There are high disparities in unemployment by skill level and region, and there is evidence that the Hungarian education system further exacerbates social and economic inequalities, limiting the next generation's skills and chances for social mobility (Ridao-Cano and Bodewig 2018). Regional inequalities will further exacerbate these tendencies and challenge the efficient implementation of employment, education, and training programs and policies. Efforts should be made to level the playing field through a more equitable education system that aims to equip future labor market entrants with the type of nonroutine, cognitive, analytical, and personal skills that are in increasingly high demand. Meanwhile, social safety nets and taxation should be made more progressive.

**But there is also opportunity to make better use of available labor reserves and ensure that today's most vulnerable jobseekers can find and secure (higher quality) employment.** Characterizing the Hungarian population that is out of work or marginally employed shows a great degree of diversity in terms of employment barriers, some of which overlap with each other. The analysis—conducted based on 2016 European Union Statistics on Income and Living Conditions (EU-SILC) data—identifies seven distinct groups that vary in terms of size, characteristics, and barriers faced with respect to successful labor market engagement. The seven groups include three groups of unemployed, one of which is made up of mostly youth; two groups of inactive women, which differ in terms of size and other social characteristics and barriers; one group of people with health limitations who may be difficult to activate; and finally, one group of working individuals who have a marginal position on the labor market (see Figure ES.1). The most common barriers to employment include having no recent work experience, low relative work experience, or no experience at all; having a low level of education; experiencing health limitations; and having care responsibilities (the latter almost exclusively affects women). Some groups represent individuals living in rural areas, and in the Great Plain and North region, where job opportunities are scarce. Individuals who identify as Roma also tend to be overrepresented among certain groups; Roma and may face labor market discrimination, making their employability more difficult.<sup>1</sup>

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<sup>1</sup> Roma are generally overrepresented among those who are out of work, but even more so among group 4 (*Rural, low-income, low-educated, prime-aged unemployed*) and group 7 (*Low-income, inactive women with low education and no work experience, some with care responsibilities*). Roma and may face labor market discrimination, making their employability more difficult.

**Figure ES.1: Latent groups among the Hungarian out-of-work and marginally employed, 2016**



**Group 1.** Prime-aged, marginally employed, mainly with low earnings (25%, 300,000)

**Group 2.** Mostly rural, older inactive with health limitations and no recent work experience (20%, 244,000)

**Group 3.** Relatively well-off, educated, inactive married women with no recent work experience and care responsibilities (19%, 232,000)

**Group 4.** Rural, low-income, low-educated, prime-aged unemployed (12%, 153,000)

**Group 5.** Urban, mostly male, prime-aged and older unemployed (9%, 118,000)

**Group 6.** Mostly rural, relatively educated, mostly unemployed youth, mostly with no work experience (8%, 106,000)

**Group 7.** Low-income, inactive women with low education and no work experience, some with care responsibilities (7%, 84,500)

Source: World Bank staff calculations based on 2016 EU-SILC.

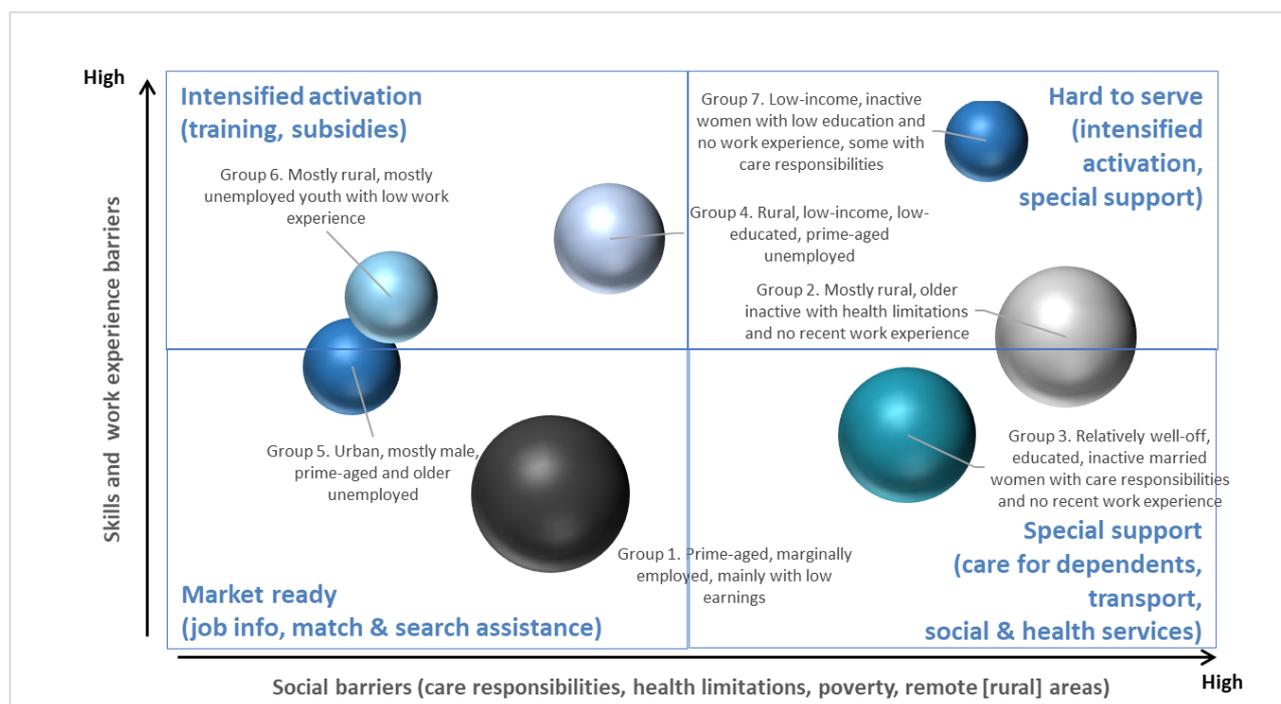
**Ensuring economic growth requires that activation and employment support measures address the labor market barriers that keep individuals from finding (better) jobs or from participating in the labor market altogether.** The above segmentation of those who are out of work and marginally employed provides a broad overview of the types of barriers likely to be encountered by NES workers, which in turn helps to identify the services that individuals need to be better placed in the labor market. It can also be used to assess the current supply of activation and employment support services. The groups are loosely plotted in Figure ES.2 according to their need for activation (based on skills or work experience) and for social services such as child care, mobility, and transportation (due to living in remote areas or poverty), or health services. Indeed, there are various levels of vulnerability: some clients are more market ready and may be serviced via information, job matching, and search assistance, whereas others require a more complex mix of services, many of which are not directly provided by the NES.

**Delivering tailored activation and employment support services also requires overcoming institutional constraints along the service delivery chain.** Various ministries are responsible for addressing labor market challenges, barriers to employment, low youth participation, and unemployment in general.<sup>2</sup> The effects of partially overlapping responsibilities are further intensified by the design of resources dedicated to programs, services, and employment-related projects,<sup>3</sup> which results in supply-driven delivery of services and programs. Many services' temporary or project-based nature results in inadequate or unavailable services, while coordination with and referral to services outside the realm of active labor market programs (ALMPs) is ad hoc at best.

<sup>2</sup> Involved ministries include the Ministry of Human Capacities, the Ministry of Finance, the Ministry of Interior, and the Ministry for Innovation and Technology. Stakeholders involve municipalities, NES offices, employers, and NGOs. There are also multiple funding sources, including three ESF-funded operational programs and national budget lines.

<sup>3</sup> Output 3 of this technical assistance concludes that the institutional design impacts both planning and delivery of programs and services, with considerable room for improvement.

**Figure ES.2: Activation needs and social barriers of identified groups, 2016**



Source: World Bank staff elaboration based on Sundaram et al. 2014.

Note: The size of each bubble represents the relative group sizes.

This report provides recommendations to improve the employability of vulnerable individuals around the four links in the client delivery chain: (i) client intake; (ii) classification; (iii) service identification; and (iv) service delivery. Output 3 of this technical assistance, “Technical report including policy recommendations for improved labor market interventions,” contains recommendations on all four links<sup>4</sup>.

**Regarding client intake:**

- More intensive outreach work is required to broaden the pool of clients and reach inactive individuals, along with facilitating close partnerships between local municipalities and civil society.
- Outreach efforts should especially focus on inactive women; for some, addressing their need for child care via referrals may be sufficient to encourage work; for others, their lack of skills and work experience pose additional constraints.
- NES portfolio should be re-designed to address—in addition to registered jobseekers—the potential labor force reserve, and this requires increasing its capacities and clarification of its tasks.

<sup>4</sup> To ensure the key findings and proposals reflect the views of as many stakeholders as possible, the team launched a two-part online consultation process. A description of the process is available in Appendix G of this report.

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**Regarding *client classification*:**

As per the inputs to the proposal put forth by the HÉTFA Research Institute to improve the current profiling methodology used by the NES to channel jobseekers to services,<sup>5</sup> this report makes the following recommendations for *client classification*:

- Additional data should be collected to calibrate a more complete statistical profiling model.
- The ability to reclassify a jobseeker into a different category after statistical profiling is conducted should be minimized.
- Additional trainings and measures to reduce the administrative burden can help minimize the risk that case managers will refuse to use the profiling system.
- The individual action plan (IAP) should be restricted to jobseekers with high (compulsory IAP) and medium (voluntary IAP) barriers to employment, and clear rules for retroactive profiling should be introduced.
- Identify overlaps between social services and the NES (with special emphasis on Category 3, likely to remain in long-term unemployment, clients of the profiling system)
- In line with HÉTFA's recommendations, there is no need to further segment the current three categories of jobseekers (differentiating them by low, medium, and high probability level of finding employment is sufficient).

**Regarding *service identification*:**

- The NES should strive to take a more demand-driven approach when designing activation and employment support programs, bearing in mind the labor market barriers for its target groups, including registered and potential jobseekers.
- The NES should be prepared to refer clients to service channels outside of employment services.
- Caseworkers should be enabled to increase their focus on clients who fall under Category 3<sup>6</sup> of the current profiling system (classified by the NES as those who are likely to remain in long-term unemployment).

**Regarding *service delivery*:**

- To effectively address employment barriers, institutional mandates must be strengthened, and cooperation mechanisms be put in place.
- The NES can be enabled to coordinate the multiple parallel employment programs and projects through stronger decision making and resource planning mandates delegated at the local level.
- Funding streams should be coordinated more effectively to address various parallel labor market challenges.

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<sup>5</sup> The NES needs to effectively profile jobseekers so it can more efficiently deliver services. This can be done by ensuring that jobseekers who may more easily find jobs on their own are channeled to job-matching and self-service job searching services, whereas more vulnerable jobseekers are served by ALMPs or complementary services. The Government of Hungary recently commissioned the HÉTFA Research Institute to propose a new algorithm for profiling and to provide recommendations for how to implement a new system.

<sup>6</sup> The current profiling algorithm used by the NES takes into account certain sociodemographic characteristics to categorize jobseekers as Category 1 (independent jobseeker), Category 2 (likely to find a job in the medium term, but also likely to benefit from public employment services and ALMPs), and Category 3 (likely to remain in long-term unemployment). The latter category is officially referred to as "to be assisted by the public works scheme."

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- To resolve regional and at times local unemployment, the mobility support system must be completely re-designed, including more effective support for housing and travel costs, and the development of the transport infrastructure.
  - It is necessary to strengthen basic competences and to improve the adult and vocational training system in order to prepare for the expected changes in the labor market that are driven by technological development.
  - Better coordination is needed with other service providers to complement existing ALMPs.

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## Introduction

**Employment rebound has led to labor shortages in Hungary, but reserves of human resources remain untapped.** Despite a full labor market recovery in Hungary since the 2008 financial crisis—unemployment has reached historically low levels—labor shortages affect almost all sectors of the Hungarian economy, and a large share of individuals remain inactive and outside the reach of the National Employment Service (NES). Even though the number of unfilled vacancies has reached a historically high level—it was at 84,000 by 2018 Q3, according to the Hungarian Central Statistical Office (HCSO)—public works, the single largest government intervention on the Hungarian labor market, continues to have a significant retention effect on the rural labor force. Moreover, inactivity and unemployment are high among young Hungarians, women, and those with lower levels of education, and regional labor market disparities and skills mismatches continue to prevail.

**Against this background, the objective of this report is to provide technical inputs to improve the Hungarian government’s capacity to address the emerging needs of jobseekers at risk of marginalization on the labor market.** The Government of Hungary has requested that the World Bank support the Ministry for National Economy (MfNE)—which, following the government reorganization, is now known as the Ministry of Finance (MoF)—in improving jobseeker client segmentation, targeting, resource planning, and service delivery of active labor market programs (ALMPs) that target vulnerable jobseekers. This technical assistance activity is conducted under the Reimbursable Advisory Services (RAS) Agreement titled, “Improving Employability for Inclusive Growth in Hungary.” Since its inception in October 2017, the World Bank has been carrying out two main activities under the technical assistance, structured under two components, A and B. The first activity (Component A) analyzes survey data; it provides a snapshot of vulnerable (potential) jobseekers’ household and individual profiles and inputs to the ongoing technical dialogue about possible revisions to the Hungarian jobseeker profiling system. The second activity (Component B) presents preliminary inputs for upcoming policies and programs aimed at improving access to labor market programs and related services (social, health, technical vocational education training) tailored to the needs of vulnerable jobseekers.

**The findings and conclusions of these two activities—presented in Figure 0.1—are captured in four reports:**

- An inception report—Output 1, delivered in November 2017—presented an overview of the activity, detailed tentative outlines and timelines, and discussed working arrangements to be followed during the RAS implementation.
- Output 3, titled, “Technical report including policy recommendations for improved labor market interventions,” was initially delivered in October 2018, followed by revised final version delivered in December 2018. It presented preliminary findings from the work conducted under Components A and B. The report captures emerging findings from a latent class analysis of 2016 European Union Statistics on Income and Living Conditions (EU-SILC) data,<sup>7</sup> along with key findings from qualitative research and field visits in Hungary; key results of an online survey conducted among NES caseworker staff; and preliminary policy recommendations. Given the size of the public works program, the report pays special attention to its impact on the labor market—particularly in rural and disadvantaged communities—as well as to ongoing

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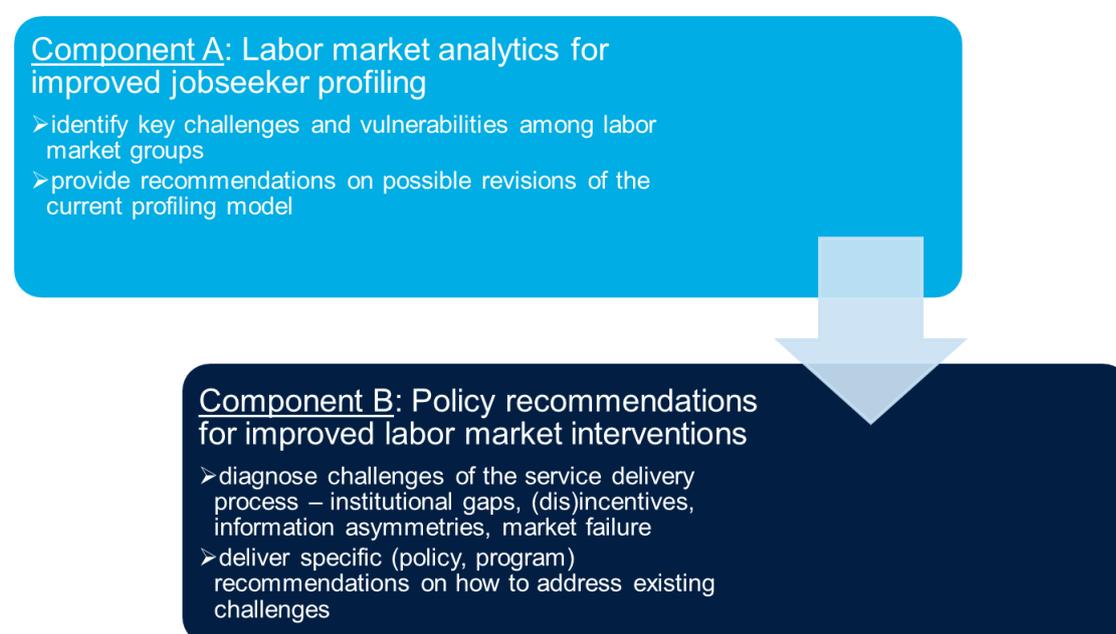
<sup>7</sup> The EU-SILC instrument is the EU reference source for comparable statistics on income, social inclusion, and living conditions at the European level. It collects comparable multidimensional microdata on income, poverty, social exclusion, housing, labor, education, and health.

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government reforms aimed at decreasing the number of participants, the program, and its outcomes.

- This report, Output 2, is based on quantitative data analysis carried out with a view toward improving the segmentation of vulnerable jobseekers.<sup>8</sup> Building on the latent class analysis methodology applied in the *Portraits of Labor Market Exclusion 2.0* report (Karacsony et al. 2017), it analyzes 2016 EU-SILC survey data with the objective of identifying groups of vulnerable individuals on the labor market and assessing the barriers faced by the population that is either out of work or marginally employed. Moreover, the report provides inputs for possible revisions to the NES's current profiling system; the revisions are based on proposals elaborated in a recent report by the HÉTFA Research Institute that was developed independently of this research.<sup>9</sup>
- Key conclusions and final recommendations combining the findings of Output 2 and Output 3 will be delivered in Output 4, "Synthesis report."

**Figure 0.1: Linkages between the two activities carried out under technical assistance**



**The activity's analytical approach follows the client's service delivery pathway.** The analytical framework of the technical assistance—and the associated reports—is reflected in Figure 0.2. The analysis explores the critical points across the client's service delivery pathway, starting from *client intake*, and continuing through the *classification*, *service identification*, and *service delivery* stages—

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<sup>8</sup> As a result of delays by the HCSO in responding to MoF's request for data, data for quantitative analysis was delivered to the World Bank team on April 11, 2018. In line with the RAS agreement, the Bank team has nine months to deliver Output 2 after the receipt of data; therefore, Output 2—this report—was delivered after Output 3. Given the linkages between the two outputs, the vulnerable groups identified among the population that is out-of-work or marginally employed were already introduced in Output 3, in addition to a brief background concerning recent developments in the Hungarian labor market. Output 2 includes more detail on both of these aspects. To make the report more self-contained, excerpts from Output 3 have been included. Output 3 is available to readers upon request.

<sup>9</sup> The Government of Hungary recently commissioned the HÉTFA Research Institute to propose a new algorithm for profiling, as well as provide recommendations for how to implement profiling. See Bördös, Adamecz-Völgyi, and Békés 2018.

that ideally lead to successful entry to the labor market (as further reflected in Figure 0.3). *Client intake* issues identify the characteristics of vulnerable groups among (potential) jobseekers to focus on mapping which groups have access to services, and which have limited or no access to services in the current labor market support system. The report’s critical analysis of the *client classification* system, through the stocktaking of labor market barriers, is complemented by exploring issues related to classification decisions in general. Issues concerning *service identification* and *service delivery* are also examined via desk research, interviews, and focus groups held with stakeholders from the government, the private sector, and civil society.

**Figure 0.2: Analytical approach underlying the technical assistance**

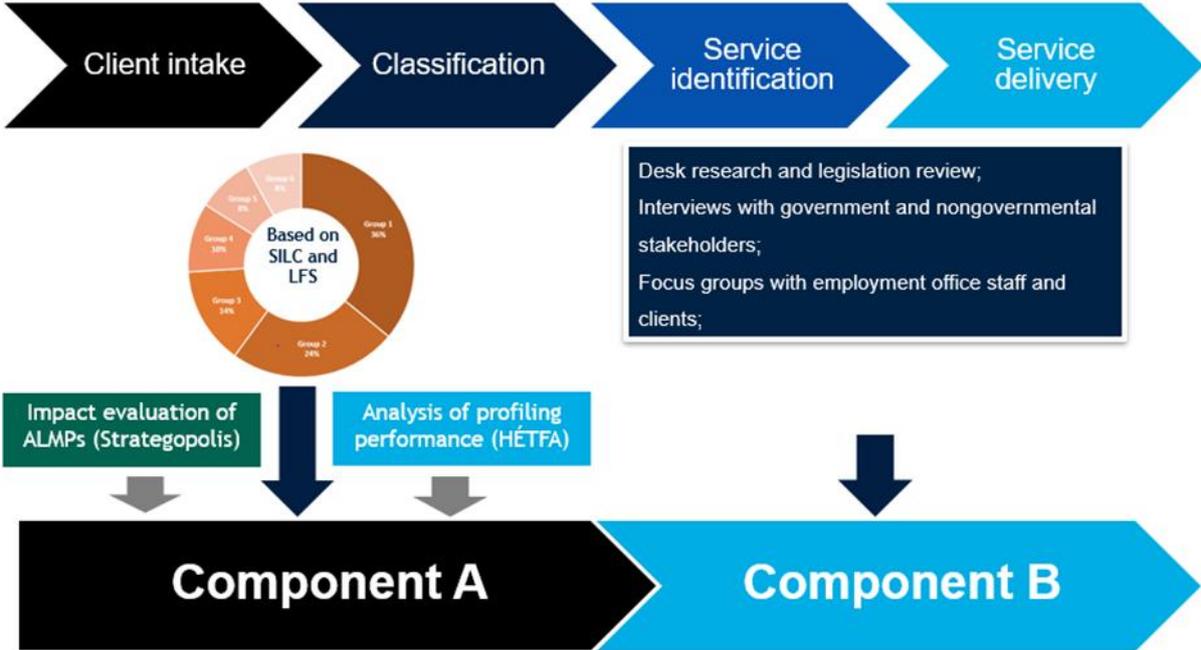
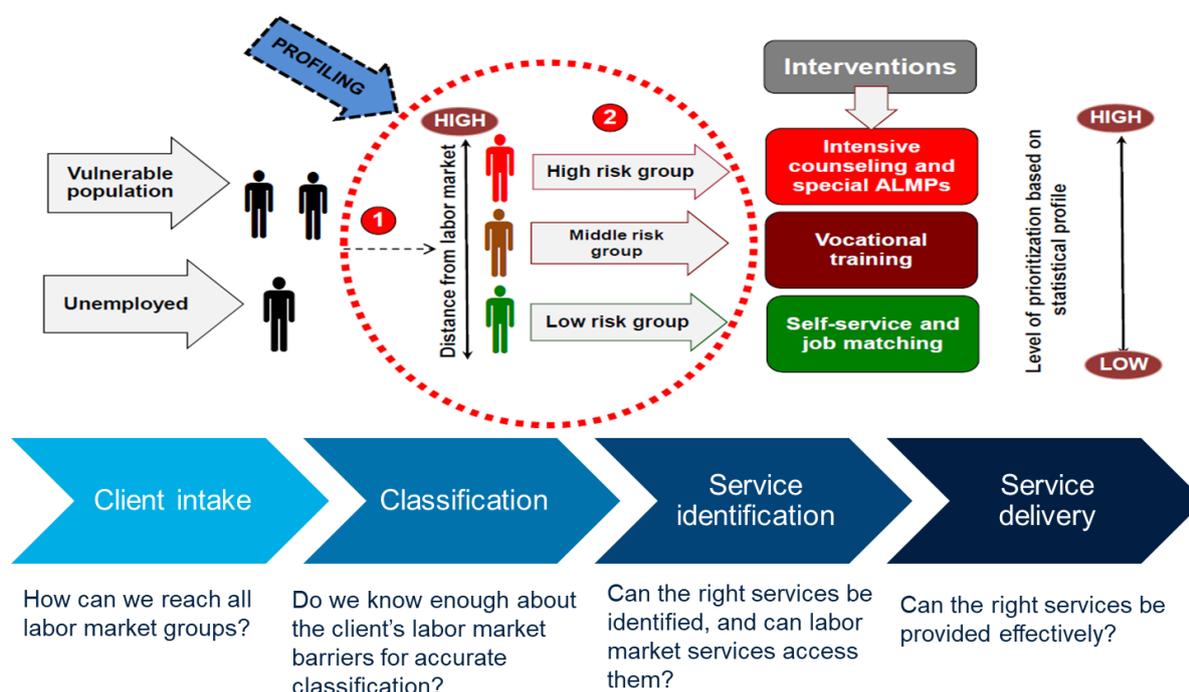


Figure 0.3: Analytical approach of the RAS vs. the service delivery process



This report uses an employment barrier framework to identify the key challenges and vulnerabilities experienced by different groups of out-of-work and marginally employed.<sup>10</sup> Three main sets of barriers are understood as preventing individuals from finding (better) employment or from participating in the labor market altogether. These include capabilities, financial incentives, and scarce opportunities. Through the statistical segmentation technique known as latent class analysis, a vast and heterogeneous population is segmented according to prevalence of such barriers. The result is distinct groups that have varying degrees of vulnerability with respect to employment.

Apart from this introduction, this report is organized in six sections. Section 1 provides background on recent labor market trends in Hungary, with particular attention paid to inequalities and vulnerable populations excluded from the labor market, namely women, youth, and low-skilled individuals. Section 2 presents the framework of employment barriers to activation and offers an overview of previous results of latent class analysis of Hungary's out-of-work and marginally employed undertaken under *Portraits 2.0*. Section 3 provides a broad description of the population that is out of work (inactive or unemployed) and marginally employed using the latest available survey data (2016 EU-SILC) and presents the updated latent class analysis results of vulnerable jobseekers and individuals currently excluded from the labor market. Based on the labor market barriers faced by each group, section 4 suggests interventions for the identified latent groups. Considering the complexity of services and interventions needed to address overlapping labor market barriers, the section also highlights key issues driven by institutional and procedural gaps in the delivery and design of labor market policies in Hungary. Next, section 5 provides recommendations for ways the current jobseeker profiling methodology might be revised, in response to revisions to the NES's current profiling system that were proposed by the HÉTFA Research Institute. Finally, section 6 provides conclusions and

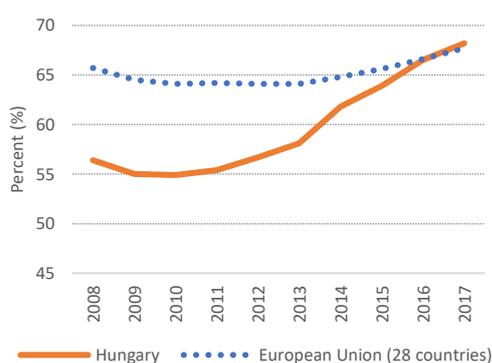
<sup>10</sup> The framework, used in *Portraits of Labor Market Exclusion 2.0*, is based on OECD and World Bank, 2016.

recommendations along the client delivery pathway outlined above—client intake, classification, service identification, and service delivery.

## 1 Recent trends and structural issues in the Hungarian labor market

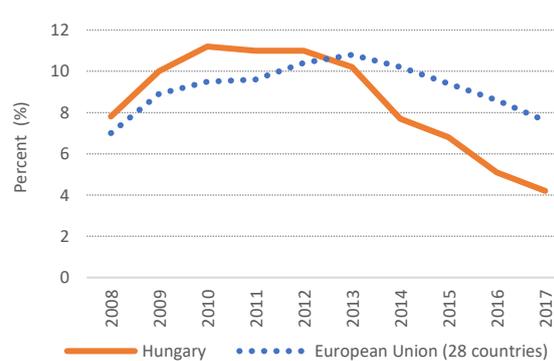
**The labor market in Hungary has fully recovered since the 2008 financial crisis, with unemployment now at historically low levels.** Recovery held a steady pace: The employment rate, which was well below the EU-28 average, has grown continuously since 2011; at 68.2 percent in 2017, it now surpasses the EU-28 average of 67.7 percent (see Figure 1.1). Furthermore, the unemployment rate has been rapidly decreasing since 2012, falling to 4.2 percent by 2017—well below the EU-28 average of 7.6 percent (see Figure 1.2). During this period, the activity rate also increased significantly, reaching 71.2 percent in 2017, up from the pre-crisis level of 61.2 percent. These developments have been partly driven by economic growth and private sector labor demand picking up in 2013; there have also been significant contributions by the Hungarian public works scheme,<sup>11</sup> though this is in the process of being scaled down.

**Figure 1.1: Employment rate (ages 15–64) in Hungary, 2008–17**



Source: Eurostat.

**Figure 1.2: Unemployment rate (ages 15–74) in Hungary, 2008–17**

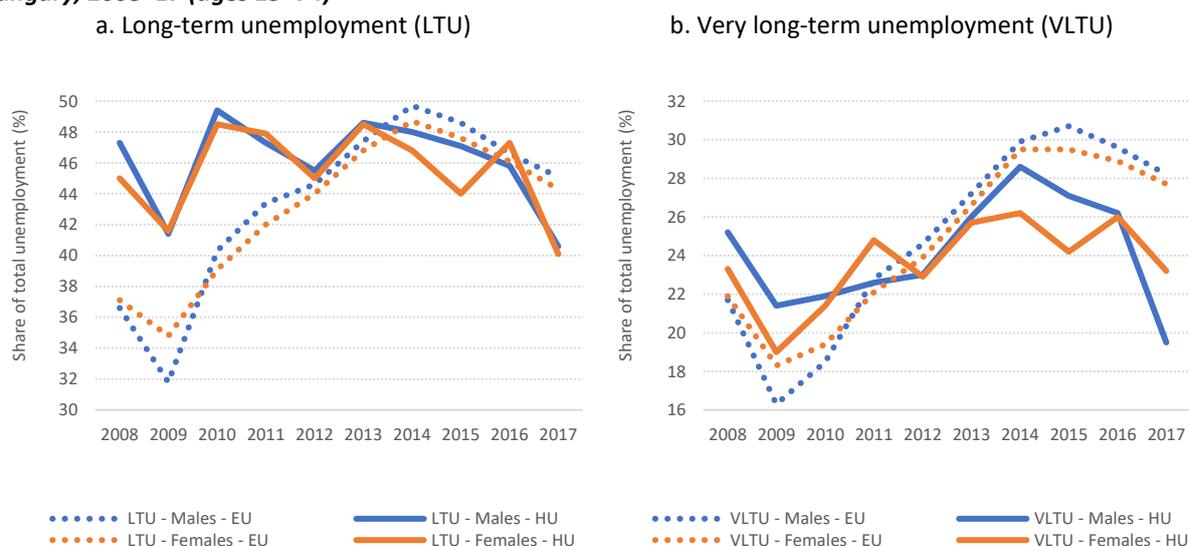


Source: Eurostat.

**Like unemployment, long-term unemployment is on the decline and much lower than the EU-28 average.** The share of long-term unemployed (those unemployed for over 12 months) over total unemployment settled at about 40 percent at the end of 2017, down from 46 percent in 2008 and from a peak of 49 percent in 2010 (see Figure 1.3, panel a). Very long-term unemployment (over 24 months) is also back to rather low levels that are well below the EU-28 average, after peaking in 2014 at over 26 percent for women and 28 percent for men. The recovery was better for men, with very long-term unemployment below 20 percent of total unemployment in 2017; for women the corresponding figure is about 23 percent (see Figure 1.3, panel b).

<sup>11</sup> The employment rate in 2017 would have been 2.8 percentage points lower without public workers: 65.4 percent (below the EU-28 average of 67.7 percent) instead of 68.2 percent. (The average number of public workers in 2017 was 179,492, according to <http://kozfoglalkoztatás.bm.hu/>.) Similarly, without public works, the unemployment rate in 2017 would have been 7.3 percent, instead of 4.2 percent.

**Figure 1.3: Long-term and very long-term unemployment as a percentage of total unemployment by sex in Hungary, 2008–17 (ages 15–74)**

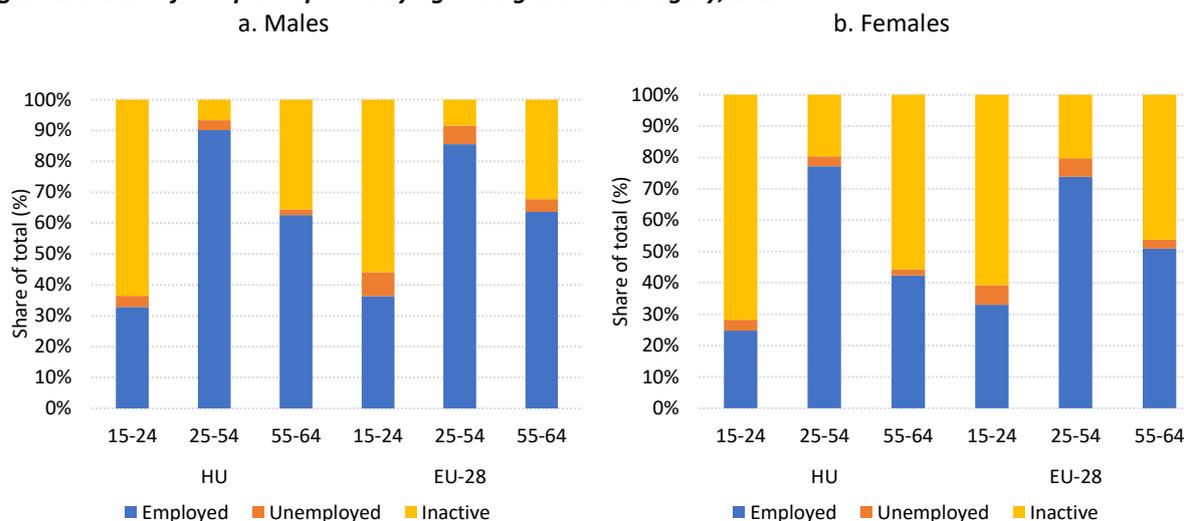


Source: Eurostat.

Note: Long-term unemployment refers to unemployment that lasts 12 or more months. Very long-term unemployment refers to unemployment that lasts 24 or more months.

**Although unemployment is low, almost one-third of the working-age population (15–64 years old) remains inactive, and this average masks important differences by age and sex.** Despite a recent rise in activity rates, the overall activity rate in Hungary, at 71.2 percent in 2017, remains below the EU-28 average (73.3 percent). More importantly, large gaps relative to the EU-28 average remain among younger and older individuals, especially among women (see Figure 1.4). In 2017, prime-age men (25–54) were the most likely to be active, with activity rates of 93.3 percent, above the EU-28 average. On the other hand, only 28.2 percent of young Hungarian women (ages 15–24) are active, as compared to 39.2 percent in the EU-28. Older women (55–64) are not very engaged in the labor market, with less than half (44.3 percent) being active, versus 53.8 percent in the EU-28. This means that a significant share of the population, especially (female) youth and (female) older individuals, remain disengaged from the labor market and largely outside of the scope of public employment services. As will be seen later, many of the inactive individuals—the majority of which are women—face significant barriers to labor force participation and employment.

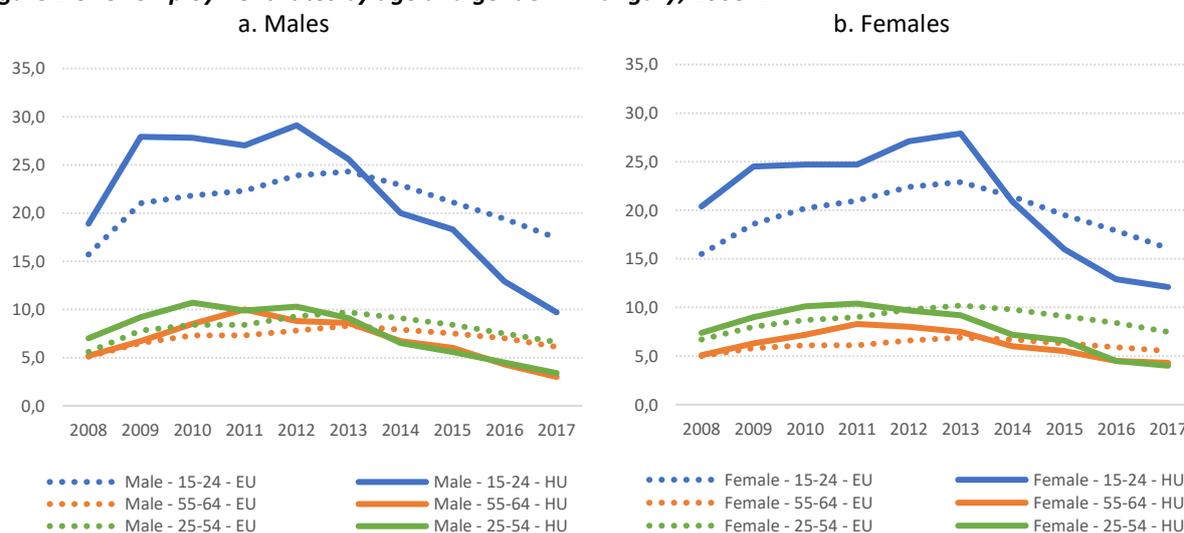
**Figure 1.4: Labor force participation by age and gender in Hungary, 2017**



Source: Eurostat.

**Unemployment continues to disproportionately affect youth, especially females.** Youth (ages 15–24) were already experiencing high unemployment rates before the 2008 economic and financial crisis (above 20 percent), and reached as high as 30 percent in 2012–13. Since then, unemployment rates have decreased drastically, but youth continue to have the highest unemployment rates, with 10 and 12 percent of male and female youth unemployed in 2017, respectively. Over the same period, older workers (aged 55–64) experienced unemployment rates similar to prime-age workers (ages 25–54), i.e., below 4 percent for men and below 5 percent for women (see Figure 1.5).

**Figure 1.5: Unemployment rates by age and gender in Hungary, 2008–17**



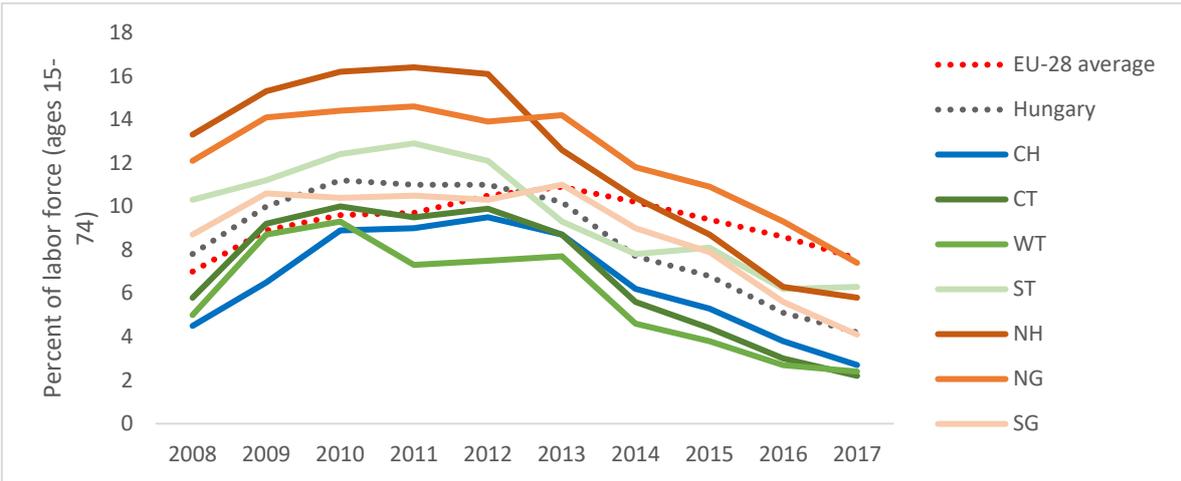
Source: Eurostat.

**Unemployment disparities are also apparent at the regional level.** A look at unemployment rates by NUTS<sup>12</sup> 2 regions shows that all regions experienced an increase in unemployment during the crisis years, with a subsequent sharp reduction. Unemployment is now lower than the EU-28 average across

<sup>12</sup> Nomenclature des Unités territoriales statistiques (Nomenclature of Territorial Units for Statistics)

all regions, with especially remarkable recoveries in Northern Hungary and the Northern Great Plain. However, considerable variation remains across regions: in 2017 unemployment ranged from as low as 2.2 percent in Central Transdanubia to as high as 7.4 percent in the Northern Great Plain. At the NUTS 1 level, unemployment is highest in the Great Plain and North region (see Figure 1.6). Such regional disparities are even greater considering the fact that most public workers reside in Northern Hungary and the Northern Great Plain.

**Figure 1.6: Unemployment rate by NUTS 2 region, 2008–17**



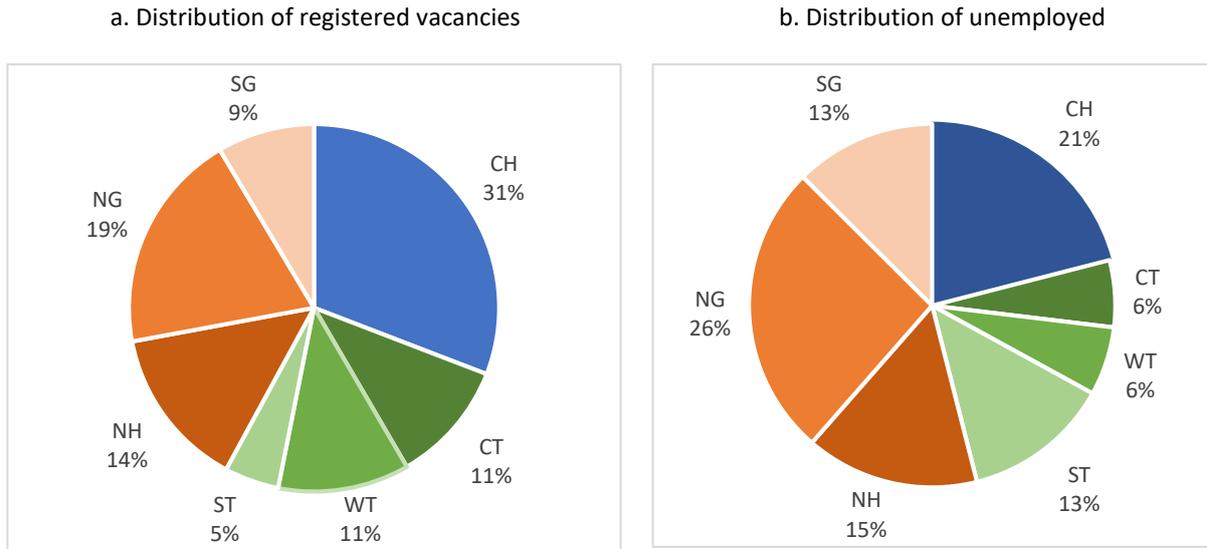
Source: Eurostat 2017 (latest regional data available).

Note: NUTS 2 regions are labeled as follows: Central Hungary (CH), Central Transdanubia (CT), Western Transdanubia (WT), Southern Transdanubia (ST), Northern Hungary (NH), Northern Great Plain (NG), Southern Great Plain (SG). Color shadings group regions according to NUTS 1 levels: Blue = Central Hungary; Green = Transdanubia; Orange = Great Plain and North.

**The distribution of registered vacancies by NUTS 2 region differs from that of the unemployed, suggesting regional mismatches in supply and demand for labor.** Overall, 84,115 vacancies were registered with the NES as of October 2018, of which 41 percent are subsidized vacancies.<sup>13</sup> Figure 1.7, panel a, shows the distribution of registered vacancies at the NUTS 2 level. Though close to a third of registered vacancies are in Central Hungary, this is true of only a fifth of the unemployed. On the other hand, the proportion of vacancies in Southern Transdanubia, the Southern Great Plain, and especially the Northern Great Plain are lower than the proportion of unemployed. This is also reflected in the higher unemployment rates in these regions.

<sup>13</sup> Both public authorities and private firms are legally obligated to report vacancies that are to be filled by an employment contract. The reporting obligation is only effectively enforced in the case of public bodies and in the case of group-wise redundancies. In this regard, the sample is not necessarily representative of all vacancies in the country.

**Figure 1.7: Registered vacancies and unemployed by region**

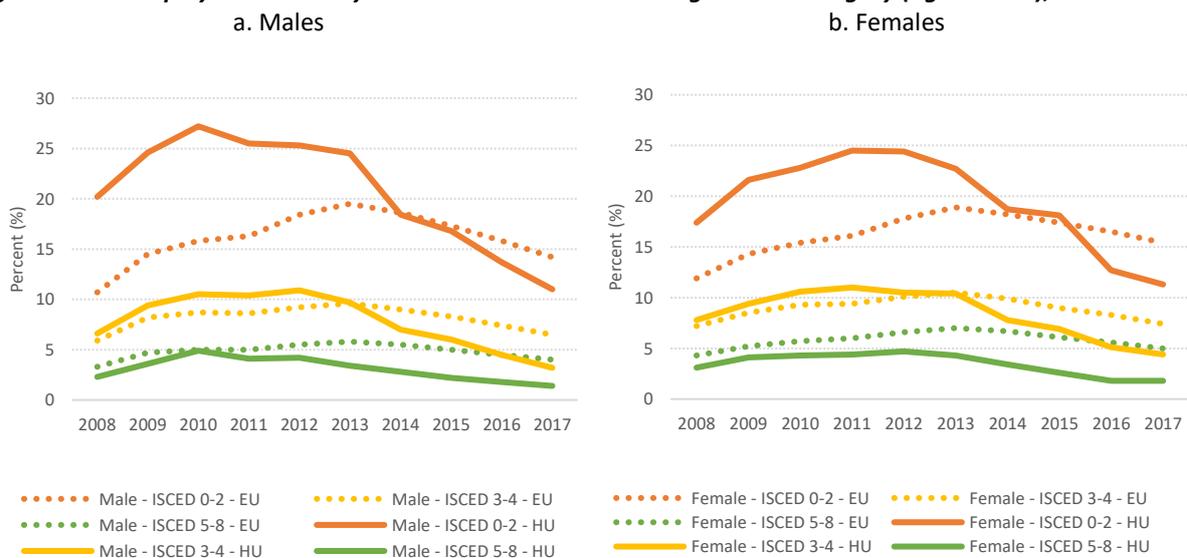


Source: For registered vacancies: NES data, as of October 2018; for unemployed: Eurostat 2017 (latest regional data available based on LFS).

Note: NUTS 2 regions are labeled as follows: Central Hungary (CH), Central Transdanubia (CT), Western Transdanubia (WT), Southern Transdanubia (ST), Northern Hungary (NH), Northern Great Plain (NG), Southern Great Plain (SG). Color shadings group regions according to NUTS 1 levels: Blue = Central Hungary; Green = Transdanubia; Orange = Great Plain and the North.

**Unemployment disproportionately affects those with lower levels of education.** Even though unemployment is at historically low levels and below the EU-28 average, individuals with less than upper secondary education (International Standard Classification of Education [ISCED] 0-2), were most affected by the 2008 financial crisis, and continue to display unemployment rates more than two times above the national average (11.1 percent in 2017). On the other hand, upper secondary, nontertiary graduates (ISCED 3-4) display relatively low levels of unemployment (3.7 percent in 2017), as do tertiary education graduates (ISCED 5-8), at 1.6 percent. At all levels of education, the female unemployment rate is slightly higher than that for males (this is also the case for EU-28) (Figure 1.8).

**Figure 1.8: Unemployment rates by educational attainment and gender in Hungary (ages 15–74), 2008–17**



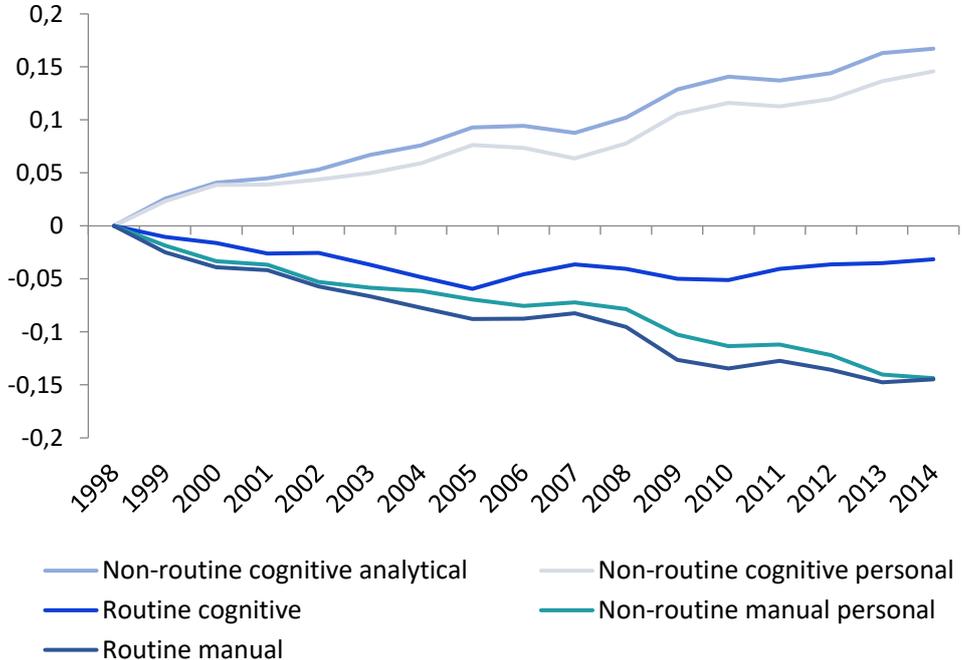
Source: Eurostat.

**Unemployment differentials by education level suggest skills mismatches in the labor market.** Kiss and Vandeplass (2015) find that the dispersion of both employment and unemployment rates by skill levels in Hungary are among the highest in the EU. The authors also show that data from three surveys commonly used to measure skills shortages (the European Business Survey, the Manpower Talent Shortage Survey and the European Company Survey) place Hungary among the European countries with the highest skills shortages reported by employers. The data suggest that the skills sought after by employers are different from those offered by workers or jobseekers (Kiss and Vandeplass 2015).

**Such skills mismatches in the labor market may soon become more apparent among youth.** The early school leaving rate<sup>14</sup> has been on the rise in recent years; at 12.5 percent in 2017, it is higher than the EU-28 average of 10.6 percent (Eurostat). Moreover, although unemployment among Hungarian youth (ages 15–24) is now significantly lower than the EU-28 average (10.7 percent vs. 16.8 percent, respectively), the not in employment, education, or training (NEET) rate among the same age group remains above the EU-28 average (4.3 percent vs. 3.5 percent, respectively).

**As is the case in the EU as a whole, rapid technological change may further exacerbate skills mismatches in Hungary.** With the adoption of new technologies, labor markets are expected to increasingly reward cognitive and interpersonal skills rather than manual and routine tasks. Some jobs may also move offshore or from old to new EU Member States. Figure 1.9, which shows changes in occupation-specific task intensities for CEE Continental Europe, which includes Hungary, confirms that such trends are already occurring, as occupations are becoming more focused on nonroutine, cognitive, analytical, and non-routine, cognitive, personal skills compared to routine and nonroutine manual skills.

**Figure 1.9: Occupation-specific task intensities, aggregated for each country and standardized over time, CEE Continental Europe averages, 1998–2014**



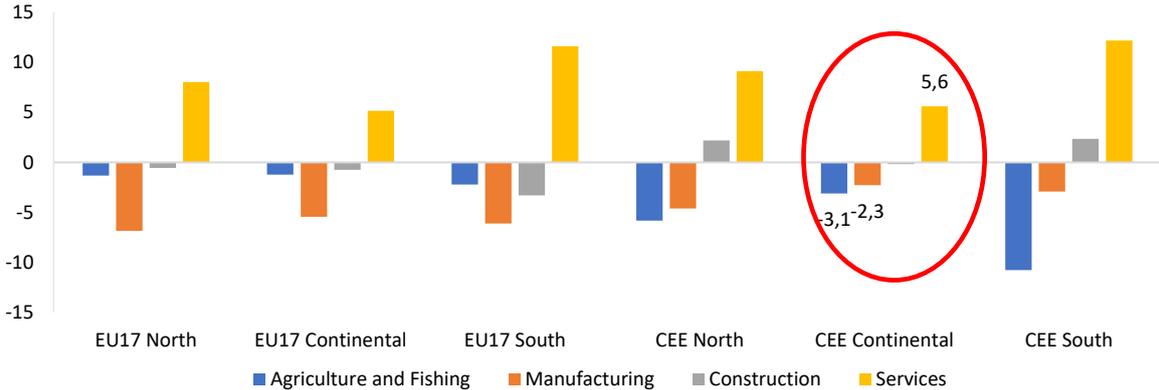
Source: Ridao-Cano and Bodewig 2018.  
 Note: CEE Continental Europe includes Croatia, Czech Republic, Hungary, Poland, Slovak Republic, and Slovenia.

<sup>14</sup> The early school leaving rate refers to the percentage of 18–24-year-olds who have completed at most a lower secondary education (ISCED 2) and are not in further education or training.

These changes are also visible in terms of employment by sector; employment has shifted away from primary and secondary sectors such as agriculture, industry, and manufacturing, and toward services. The service sector is increasingly relying on nonroutine cognitive tasks. In CEE Continental Europe, the share of employment in the service sector between 2000 and 2015 increased by 5.6 percent. Within the same time span, employment in the agricultural and manufacturing sectors decreased by 3.1 and 2.3 percent, respectively (see Figure 1.10, panel a). Hungary is no exception: even though structural transformation in the last 20 years has not been significant, in 2017 the service sector contributed 65.2 percent of the total value added.<sup>15</sup> In contrast, the contribution of the agricultural and industry sectors has declined to 4.4 and 30.4 percent of the total value added in 2017, respectively.<sup>16</sup> This trend is also visible in employment shares: Between 2008 and 2017, the share of those employed in agriculture and industry declined from 7 percent to 6 percent and from 24 percent to 20 percent, respectively, while the share of people employed in the service sector increased from 61 percent to 67 percent.<sup>17</sup> Furthermore, across the EU and also within CEE Continental Europe, the subsectors of the service sector that have seen the largest increase in terms of employment—such as transportation, information and communication, real estate, technical and professional services, and health services—rely more on relatively high-skilled workers (Ridao-Cano and Bodewig 2018) (see Figure 1.10, panel b).

**Figure 1.10: Percentage point change in employment shares**

a. Percentage point change in employment shares, 2000–2015

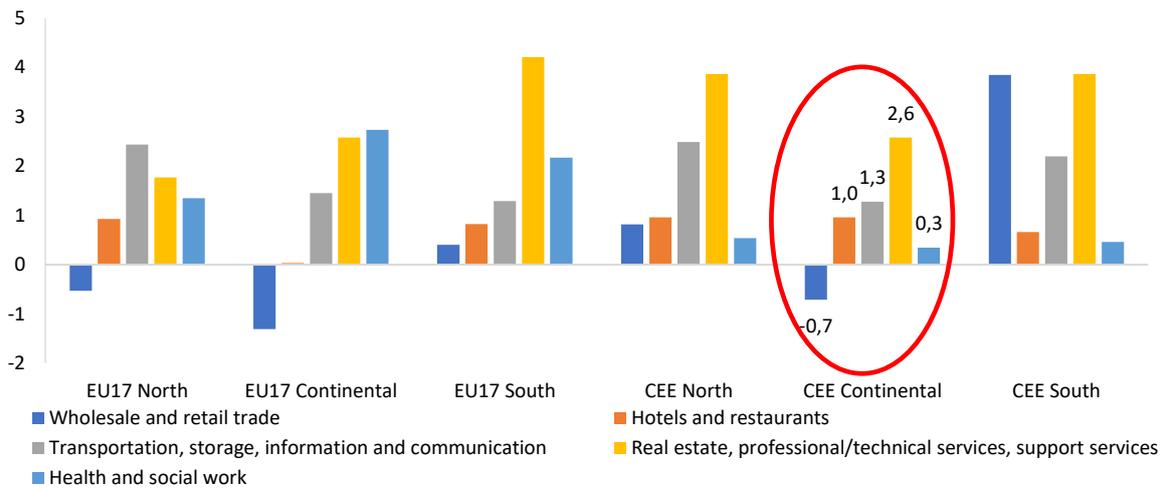


<sup>15</sup> Figures are based on Eurostat 2017.

<sup>16</sup> Figures are based on Eurostat 2017.

<sup>17</sup> Figures are based on Eurostat 2017.

b. Percentage point change in employment shares within the service sector

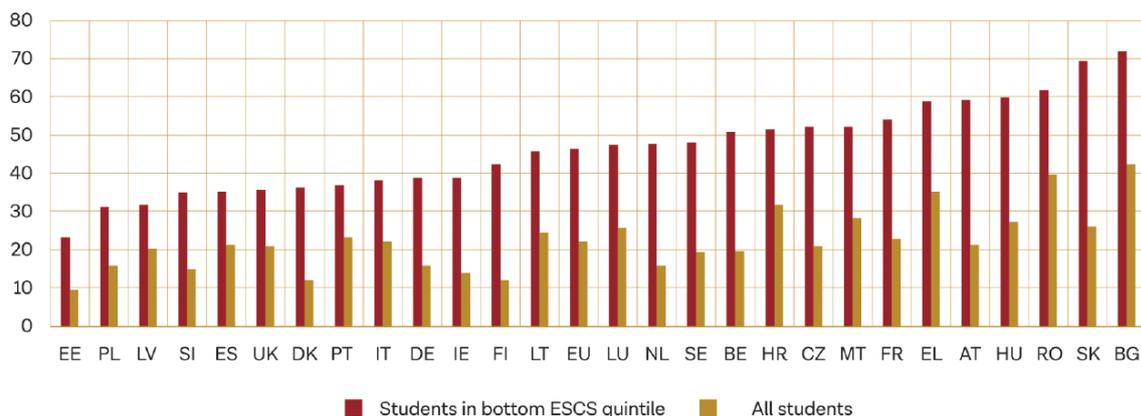


Source: Ridao-Cano and Bodewig 2018.

Note: CEE Continental Europe includes Croatia, Czech Republic, Hungary, Poland, Slovak Republic, and Slovenia.

**As the economy continues to demand higher skills, there is evidence of a wide skill divide in Hungary, one that affects poorer students and hinders upward social mobility.** Results from the Programme for International Student Assessment (PISA) indicate that the share of low performers is relatively high in Hungary, with stark and increasing inequalities according to socioeconomic background (see Figure 1.11). Furthermore, social segregation in schools is a large driver of the skills divide. Among all EU countries, the correlation between each student’s socioeconomic level with the average socioeconomic level of his or her school is highest in Hungary, at 0.65, compared to just above 0.5 for the EU-28 (Ridao-Cano and Bodewig 2018). In addition, students from poor socioeconomic backgrounds often go to schools of poorer quality. Early tracking is another driver of social segregation in school, and the early choice between vocational and academic tracks in Hungary decreases the potential for upwards social mobility.

**Figure 1.11: Share of low performers by socioeconomic status, PISA 2015 mathematics (%)**

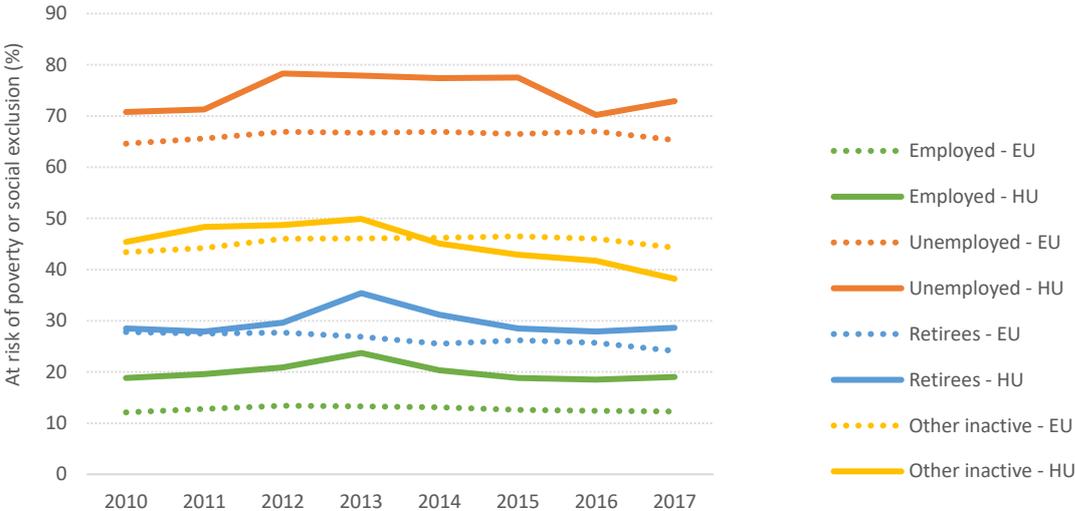


Source: Ridao-Cano and Bodewig 2018, based on PISA 2000–2015 database: [www.pisadataexplorer.oecd.org/ide/idepisa/](http://www.pisadataexplorer.oecd.org/ide/idepisa/).

Note: ESCS refers to PISA’s index of economic, social, and cultural status.

Such inequalities are also reflected in a high percentage of working poor, suggesting that many employed individuals are marginally employed. In 2017, 19 percent of working Hungarians were at-risk of poverty or social exclusion. This number was relatively stable over the past decade but remains well above the EU-28 average of 12.3 percent (see Figure 1.12). Labor income inequality in Hungary is largely related to unequal opportunities. In comparison to its CEE Continental Europe peers, Hungary has the second highest inequality of opportunity share and inequality of opportunity according to the Gini coefficient, indicating that about two-fifths of the inequality in individual disposable labor income is explained by factors beyond the control of the individual, such as parental education, country of origin, gender, and age (Ridao-Cano and Bodewig 2018).

**Figure 1.12: At risk of poverty or social exclusion by main working status in Hungary (ages 18–64), 2010–2017**

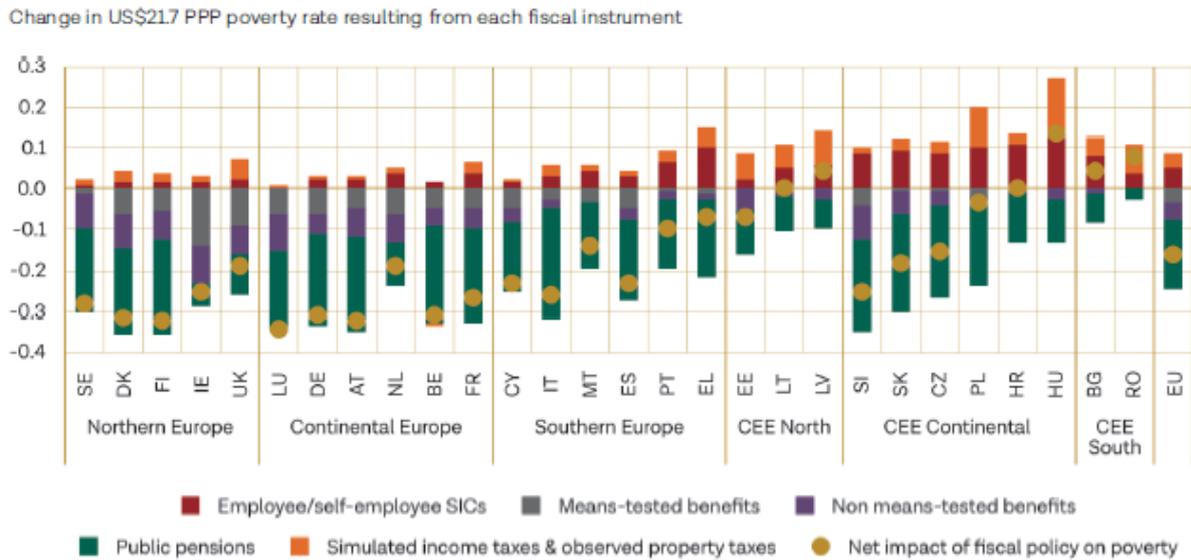


Source: Eurostat.

**Hungary is among the few countries in the EU in which direct taxes and social transfers do not reduce poverty.** Across all EU countries, the lion’s share of social protection spending is geared toward social insurance for old age and health. However, with only 0.1 percent of gross domestic product (GDP) spent on social assistance (noncontributory benefits), Hungary belongs to the countries with the lowest spending in that category (Ridao-Cano and Bodewig 2018).<sup>18</sup> Furthermore, in contrast to its CEE Continental Europe peers and most EU countries, social transfers are unable to mitigate the impact of direct taxes on the absolute poverty level in Hungary (see Figure 1.13).

<sup>18</sup> The other three countries are Latvia, Estonia, and Poland.

**Figure 1.13: Poverty reductions based on a combination of direct taxes and social benefits**

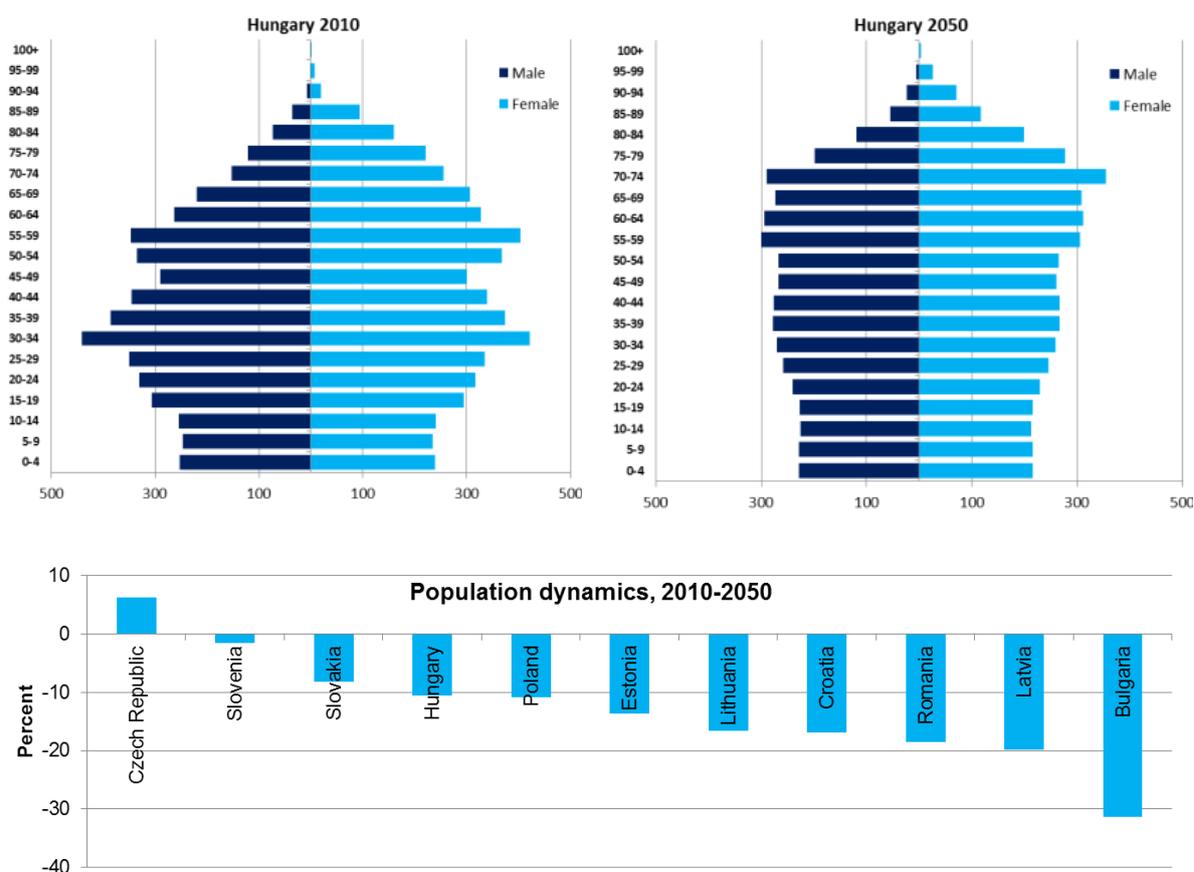


Source: Ridao-Cano and Bodewig 2018.

Note: Welfare distribution ranked by market income and pension. Estimates use EU-SILC updated to 2016 and policy simulations for 2016. The poverty line is set at an absolute threshold of US\$21.7 purchasing power parity (PPP) per day. SIC = social insurance contributions.

**In addition to regional disparities and skills mismatches in the labor market, Hungary’s long-term economic growth prospects are put at risk by the effects of demographic change on the labor market.** Data from the HCSO show that, between 2001 and 2017, the population aged 65 and over in Hungary increased by about 300,000, or 20 percent. The same data show that the population aged 15 and under and the population of working age (15–64) fell by 16 percent and 7 percent, respectively, during the same period. Such aging and population decline is being caused by emigration, lower birth rates, and higher death rates, and is expected to continue: the working age-population is expected to decline by more than 10 percent between 2010 and 2050 (Schwarz et al. 2014) (see Figure 1.14). Fewer people of working age and a larger proportion of elderly puts greater pressure on the sustainability of pension and health care systems, and a greater need to engage as much of the population of working age in employment as possible to ensure sustainable economic growth.

**Figure 1.14: Age distribution and population dynamics in Hungary, 2010–2050**



Source: Karacsony et al. 2017, based on Schwartz et al. 2014.

Note: The bottom panel shows the percent change in the working-age population projected in each country for the period 2010–2050.

**The shrinking working-age population, coupled with increased labor demand from the private sector, have led to a tight labor market, constraining future economic growth.** Hungary’s economic growth accelerated to 4.6 percent in the first half of 2018, driven by strong investment performance and household consumption. At the same time, the number of vacancies registered with the NES in Hungary has reached a historically high level of 84,000 (as of October 2018), out of which about 62,000 represent private sector jobs. Shortages, while felt across the entire spectrum of the economy, are particularly constraining growth in the manufacturing sector which registered the highest number of vacancies (more than 24,000).<sup>19</sup>

**The combination of a tight labor market and population trends (which indicate further decline in the number of individuals of working age) along with evidence of skills and regional mismatches in the labor market require structural improvements and targeted activation measures.** Though unemployment has fully recovered since the financial crisis and is now below 5 percent, activity rates remain relatively low for youth and females, and there are high disparities in unemployment by skill level and region. Efforts should be made to level the playing field through a more equitable education system that aims to equip future labor market entrants with the nonroutine, cognitive analytical and personal skills that are in increasingly high demand. NES also has an important role to play in ensuring

<sup>19</sup> HCSO 2018; Data is available here: [http://www.ksh.hu/docs/hun/xstadat/xstadat\\_evkozi/e\\_qli027a.html](http://www.ksh.hu/docs/hun/xstadat/xstadat_evkozi/e_qli027a.html).

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that more of Hungary's current workforce potential is tapped. This can be done by ensuring that activation and employment support measures are tailored to jobseekers' specific needs and circumstances.

## 2 Analytical framework and methodology

**To ensure continued economic growth, activation and employment support measures must address the labor market barriers that keep individuals from finding (better) jobs or from participating in the labor market altogether.** Given a tight labor market combined with an aging population, evidence of skills mismatches, regional disparities, and persistent inactivity among certain population groups, Hungary must make better use of its human capital, both by increasing the employability of the most vulnerable jobseekers and by engaging more of its inactive population in the labor market. To achieve this, activation and employment support policies must be designed to consider the barriers that keep individuals from either finding (better) jobs or from participating in the labor market altogether. A recent Organization for Economic Co-operation and Development (OECD) and World Bank paper (2016) identifies three main types of employment barriers:

1. ***Insufficient work-related capabilities*** include factors that may limit an individual's ability to perform certain job-related tasks. These include, for example, low education (as a proxy for skills); low level of work experience; caregiving responsibilities; or limitations on daily activities due to health status.
2. ***Weak economic incentives to look for or accept a "good" job***. An individual may decide not to participate in the labor market (or may increase their reservation wage)<sup>20</sup> if they could potentially lose out-of-work benefits that are higher than the wage they could expect to receive should they accept a full-time job, or if they already have a high standard of living due to other income sources. Working also includes financial costs such as those related to transportation, eating at the workplace, and clothing, also raising an individual's reservation wage.
3. ***Scarce employment opportunities*** occur when there is a shortage of vacancies in the relevant labor market segment (geographical area or sector); friction in the labor market due to information asymmetries; skills mismatches; discrimination (e.g., due to gender, age, or ethnic background); lack of social capital, or other tensions present in labor markets.

**When the above barriers are proxied using socioeconomic characteristics, the results show that they are linked to vulnerability from an employment perspective.** Such sociodemographic characteristics include low skills or qualifications (having a low level of education), age (being under the age of 25 or over the age of 50), previous work experience and length of unemployment, residence (small settlements, disadvantaged settlements), health status (disabled), family status (many children, mothers of small children), and receipt of employment substitution benefit, all of which have been shown to significantly increase the probability of remaining long-term unemployed in Hungary (Bördös, Adamecz-Völgyi, and Békés 2018).

**Profiling systems employed by public employment services (PESs) often use similar sociodemographic characteristics to broadly categorize jobseekers according to the level of support**

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<sup>20</sup> An individual's reservation wage refers to the lowest wage they are willing to accept in order to take up employment. When individuals face liquidity constraints, they may have a lower reservation wage. Conversely, an individual with other sources of income may value leisure more and only be willing to take up employment at higher wages.

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**they may need to find employment.** Many PESs statistically profile jobseekers, who at the time of registration are classified according to their likelihood of finding employment. Profiling systems can help PESs channel resources more efficiently, and when properly designed and implemented, they can ensure that costly AMLPs are channeled to jobseekers who may need them most. Those facing fewer barriers are more likely to find employment on their own and can be channeled to basic services. In this way, “deadweight” losses are avoided, while ensuring that those with less likelihood of finding employment on their own are provided with additional support. Profiling can be used as a guide for resource allocation within a PES, as it can help gauge the general level of vulnerability among registered jobseekers and determine the relative need for support.

**The benefits of having a profiling system notwithstanding, more deeply understanding the out-of-work or marginally employed<sup>21</sup> in terms of their labor market barriers can help PESs further tailor ALMPs and services to the needs and circumstances of actual or potential clients.** One limitation of profiling systems is that they tend to only group jobseekers into broad categories (namely three or four at the most, based on their likelihood of finding employment). They thus do not necessarily provide meaningful information about the types of employment barriers faced, how these barriers overlap with each other, or jobseekers’ other socioeconomic characteristics. Understanding the characteristics of the out-of-work and marginally employed, beyond just registered jobseekers, and identifying to what extent the employment barriers they face overlap with each other can enable “big picture” planning and budgeting within the NES and help assess the tailoring of activation and employment support programs to the needs and circumstances of current and potential jobseekers, as well as determine ways to encourage the currently inactive to register.

**In particular, identifying groups of individuals excluded from the labor market who share similar employment barriers and characterizing them in terms of their barriers and socioeconomic characteristics can aid in the design of tailored active labor market and employment support policies and interventions.** Labor market statistics tend to refer to broad target groups, namely youth, women, and low-skilled individuals, among others, without taking into account high levels of labor market barrier heterogeneity within these groups. Given this limitation, identifying groups that share similar employment constraints and socioeconomic characteristics can help make sense of an otherwise broad and heterogeneous population. Such identification can help take a critical look at the range of existing policies, services, and programs and assess their relevance to and appropriateness for the needs and circumstances of the target population and priorities (Karacsony et al. 2017).

**Using the above employment barrier framework, a 2017 World Bank study applied the statistical technique known as latent class analysis to segment the Hungarian out-of-work or marginally employed population into groups according to the labor market barriers they face.<sup>22</sup>** Specifically, the analysis focused on the population aged 18–64 (not including full-time students) who either self-reported being out of work (unemployed or inactive) during the entire survey reference period or who were marginally employed during the reference period because of unstable jobs, restricted working

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<sup>21</sup> Here, the out-of-work are understood as individuals who report being unemployed or inactive during each of the 12 months of the EU-SILC survey’s reference period, in addition to at the time of the survey interview. The marginally employed include individuals with “unstable jobs” (those who report work activity for a maximum of five months during the reference period), individuals with restricted working hours (those who work 20 hours a week or less due to illness or disability, family or care duties, or the absence of other job opportunities), and individuals with very low income from work.

<sup>22</sup> The analysis is included in the country-specific paper for Hungary (Karacsony et al. 2017) and was prepared as part of the *Portraits of Labor Market Exclusion 2.0* exercise, in collaboration with the OECD and funded by the European Commission.

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hours, or very low earnings.<sup>23</sup> The data source was 2013 EU-SILC, where the reference period is equal to the previous calendar year (in this case, 2012). EU-SILC survey data was used instead of data from the Labor Force Survey (LFS) because it offered the ability to observe each individual's labor market status over the course of an entire calendar year, as well as provided rich data on individual and household socioeconomic characteristics. The data thus allowed us to construct proxies for the three types of employment barriers identified in the framework (capabilities, incentives, and opportunities) and also further describe identified groups according to individual and household socioeconomic characteristics.<sup>24</sup>

**The 2013 analysis resulted in the identification of six groups among the out-of-work and marginally employed, with varying degrees and combinations of employment barriers.** The six groups differed significantly in terms of size, characteristics, and labor market barriers. Figure 2.1 provides an overview of the six groups, including their relative size and their most salient characteristics, as identified by their group names.<sup>25</sup> Varying degrees and combinations of barriers, namely health limitations, care responsibilities, and low education make the groups distinct from one another. Most of the individuals in these groups also had little recent work experience, in part due to the definition of the target population as including those who were out of work during the previous calendar year. (Appendix B shows the distribution of employment barriers found among the six identified groups.) Other characteristics that distinguish the groups include their labor market status (mostly varying between being retired, inactive, or unemployed),<sup>26</sup> their age, their sex, and geographic location (region and population density, also referred to as rural or urban).

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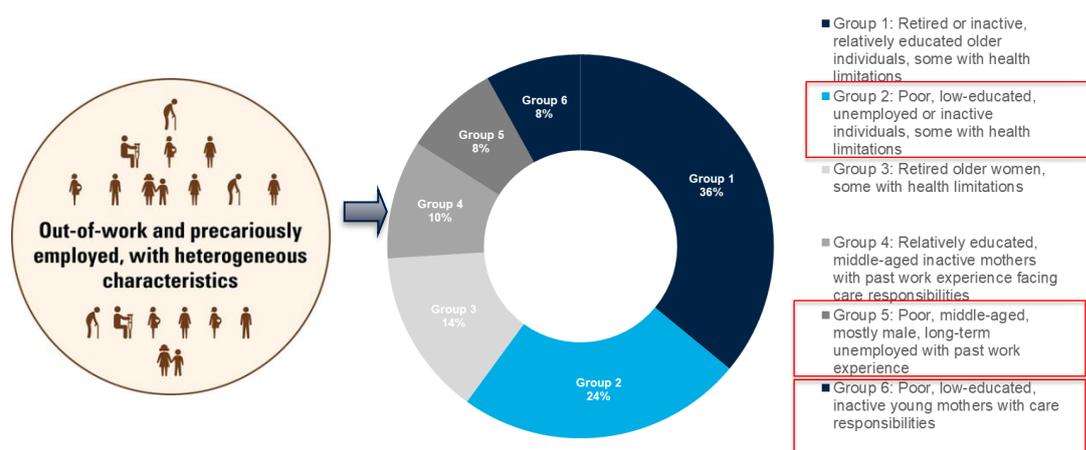
<sup>23</sup> Specifically, those with *unstable jobs* were defined as individuals reporting work activity for a maximum of 45 percent of their potential working time, in addition to those reporting no work activity during the income reference period, but who were employed at the time of the interview; those with restricted working hours were identified as individuals reporting less than 20 hours of work a week, for most or all of the reference period. Excluded from the target population are individuals working 20 hours or less because they were in school or in training programs. Finally, individuals with very low income were identified as those earning less than €67 per month (€120/month in purchasing power parity with EU-28 as the reference) during the reference period (adjusted for hours worked). Notice that the three groups of marginally employed overlap with one another: For example, an individual reporting less than 20 hours of work a week for most of the reference period could also have very low earnings even after adjusting for hours worked. However, individuals are assigned to a category, starting with unstable jobs and ending very low incomes as a residual category.

<sup>24</sup> See Appendix A for the definition of employment barriers according to EU-SILC data.

<sup>25</sup> Naming the groups is more of an art than a science, and is done based on the characteristics that most distinguish the groups from one another.

<sup>26</sup> The marginally employed represented a very small proportion of the target population. This means none of the identified latent groups contained sufficient marginally employed individuals to make employment a distinguishing characteristic.

**Figure 2.1: Latent groups within the Hungarian target population, 2013**



Source: Karacsony et al. 2017.

The above exercise has been updated using the latest available EU-SILC survey data (2016). There have been considerable changes in the Hungarian labor market since 2013, including a substantial increase in employment, reduced unemployment, and increased activity. The segmenting exercise applied to 2013 EU-SILC data therefore warrants an update, as the characteristics of those who remain out of work or marginally employed may have changed. In the following section, we undertake latent class analysis using 2016 EU-SILC data with some adjustments to the target population, with the aim of focusing on the most vulnerable populations within the out-of-work and marginally employed.

### 3 Latent groups among the out-of-work and marginally employed in Hungary in 2016

#### 3.1 Characteristics of the out-of-work and marginally employed

To better reflect the population that could be potentially activated by the NES, the target population in this updated analysis excludes working-age retirees and a subset of individuals receiving disability benefits. The updated analysis focuses on the most vulnerable (potential) jobseekers. Like in the previous exercise, the target population refers to individuals who are out of work and marginally employed and are a subset of the reference population; that is, the population of working age (ages 16–64),<sup>27</sup> excluding individuals up to age 24 who are in full-time education (the reference population is referred to as population of working age, for simplicity). However, unlike in the previous exercise, the target population excludes working-age retirees and a subset of individuals who receive disability benefits. Retirees are excluded mainly because they are not a primary focus of the NES. Furthermore, retirees within the working-age population are generally older and approaching retirement age. Indeed, some self-declared retirees may be willing to engage in work if offered a job, and the reintegration of (early) retirees into the labor market via, for example, flexible working conditions can be important for Hungary given its aging population and shrinking workforce. However, their relatively high education level and high socioeconomic status makes this population lower priority within the

<sup>27</sup> In Karacsony et al. (2017), the population of working age is considered as 18–64. In this updated exercise, however, the population of working age is considered as 16–64 to better reflect the population served by the NES.

scope of this report, which focuses on the vulnerable population with labor market difficulties. Individuals receiving disability benefits who self-report being unfit to work and have severe restrictions on daily activities are also excluded from the analysis, given the fact that people who receive disability benefits are limited in their eligibility to register with the NES.

**Table 3.1 provides an overview of the target and working-age populations; that is, the population that is out of work or marginally employed according to 2016 EU-SILC data.** The working-age population refers to individuals who are 16–64 years old, not including full-time students below the age of 25, and amounts to 5.75 million individuals. Within this population, 3.89 million people, or 67.5 percent, are considered as having no labor market difficulties and are therefore not part of the target population of this analysis. Retirees and a subset of disabled individuals of working age, who represent 10.7 percent of the working-age population, are also not included among the target population.

**The target population considered in this updated analysis of labor market barriers represents 21.7 percent of the working-age population.**<sup>28</sup> Among the target population, 61 percent were persistently out of work during the reference period, and the remaining 39 percent were marginally employed—in unstable jobs (20 percent), working restricted working hours (6 percent), or with very low earnings (12 percent).<sup>29</sup>

**Table 3.1: Composition of working-age and target populations, 2016**

	Number of individuals (thousands)	As percentage of the working-age population	As percentage of the target population
<i>No labor market difficulties*</i>	3,886	67.5%	NA
<i>(Early) retired</i>	491	8.5%	NA
<i>Disabled</i>	127	2.2%	NA
<b>Target population</b>	<b>1,250</b>	<b>21.7%</b>	<b>100.0%</b>
<i>Out of which:</i>			
<i>Out-of-work</i>	765	13.3%	61.2%
<i>Unstable jobs</i>	259	4.5%	20.9%
<i>Restricted hours</i>	74	1.3%	5.9%
<i>Very low earnings</i>	152	2.7%	12.2%
<b>Total working-age population</b>	<b>5,753</b>	<b>100.0%</b>	<b>NA</b>

Source: World Bank staff estimates based on 2016 EU-SILC.

Note: The working-age population refers to individuals (16–64), not including students ages 16–24. *(Early) retired* refers to individuals who report being in retirement at the time of the interview. *Disabled* refers to individuals receiving disability benefits during the reference period who also report having severe limitations in daily activities and being unfit to work at the time of the interview. The categories “unstable jobs,” “restricted hours,” and “very low earnings” are not mutually exclusive. However, individuals are assigned to a category, starting with unstable jobs and ending with very low earnings as a residual category.

\*Individuals with “no labor market difficulties” include about 200,000 individuals employed in public works. In theory, such individuals can be considered as having labor market difficulties, since they are not employed on the primary labor market.

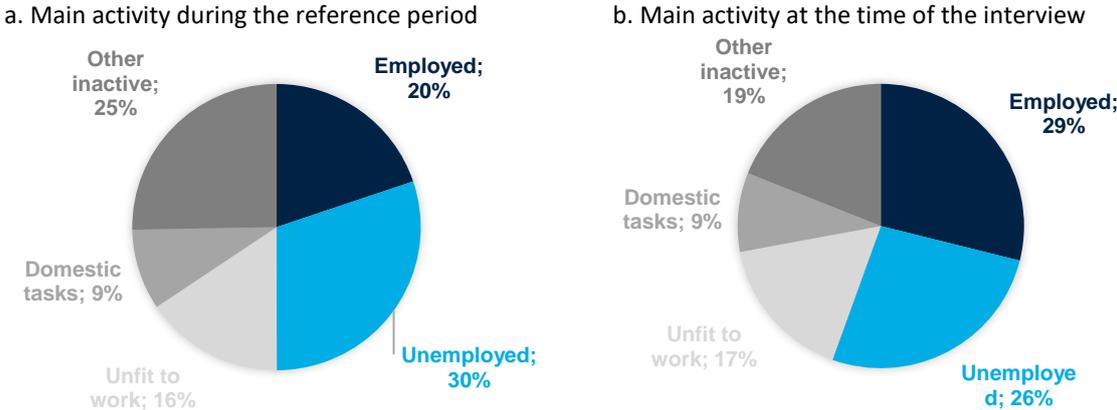
**About one-half of the target population reported being inactive during the reference period and less than one-third reported being unemployed.** Figure 3.1 disaggregates the target population according

<sup>28</sup> In the analysis based on 2013 survey data, the target population represented 38 percent of the working-age population. This is not only because the target population included retired and disabled individuals, but also because the remaining share of the working-age population with no labor market difficulties was lower, according to 2013 EU-SILC data.

<sup>29</sup> The marginally employed are defined in the same way as in the 2013 exercise. However, the threshold for individuals with very low earnings is changed to 40 percent of minimum wage, or HUF 42,000.

to the main activity during the survey reference period and at the time of the interview.<sup>30</sup> With respect to the main activity during the reference period, about one-half of the target population reported being inactive; specifically, 16 percent reported being unfit to work, 9 percent reported being dedicated to domestic tasks, and 25 percent reported being “other inactive.” Another third reported being unemployed during the reference period,<sup>31</sup> and one-fifth reported being employed. It must be noted, however, that at the time of the interview, a significantly larger share reported being employed (29 percent) while only about one-quarter were unemployed, and one-fifth were “other inactive.” This is in contrast to the 2013 exercise, in which the distribution of the main activity reported by the target population during the reference period and during the time of the interview did not differ significantly, and reflects the improved labor market in Hungary.

**Figure 3.1: Target population according to main activity during the reference period and at time of the interview**



Source: World Bank staff estimates based on 2016 EU-SILC.  
 Note: The reference period refers to the previous calendar year (in this case, 2015).

**The target population is more likely to face employment barriers than the general working-age population.** Table 3.2 characterizes the target and working-age populations according to the employment barrier indicators estimated using 2016 EU-SILC data.<sup>32</sup> As expected, employment barriers are more prevalent among the target population than among the population of working age. Incentives barriers, however, are an exception: high nonlabor income is more prevalent among the working-age population, while the prevalence of the high earnings replacement barrier is similar among both populations. This suggests that the target population is not excluded from good jobs due to financial incentives; in fact, as will be seen later, the target population is predominantly low-income even when taking into account income from social benefits.<sup>33</sup> Their low income itself, in addition to being concentrated in rural areas, may also limit their employment opportunities, as they may face

<sup>30</sup> The 2016 EU-SILC survey was fielded between March and April of 2016. The survey reference period refers to the previous calendar year.

<sup>31</sup> Note that reporting to be unemployed does not necessarily imply active job search. In this sense, the term *unemployed* is not equivalent to the standard definition of unemployment, in which active job search and availability to take on a job if offered one are assumed.

<sup>32</sup> For definitions of all employment barrier indicators, see Appendix A.

<sup>33</sup> In part, this is because retirees, who do tend to receive high earnings replacement income, are not included among the target population in this updated exercise.

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transportation and mobility barriers,<sup>34</sup> as well as limited networks, which are important for finding good jobs. Their low socioeconomic standing may also be associated with other factors that limit employability such as substance abuse or discriminatory practices.<sup>35</sup>

**The most common employment barriers found among the target population are lacking recent work experience (though having worked in the past) and having low relative work experience; as expected, these barriers are also much more pronounced among the out-of-work.** Fifty-three percent of the target population has no recent work experience,<sup>36</sup> versus just 21 percent among the population of working age. This proportion rises to 79 percent among the out-of-work; specifically, almost all individuals (94 percent) who reported being unfit to work also faced this barrier. The share that has never worked is considerably lower among the target population, at just 12 percent; the share rises to as high as 28 percent among those who report being “other inactive;” in contrast, among the working-age population, only 3 percent have no work experience. Finally, low relative work experience<sup>37</sup> is also a relatively common barrier, affecting 45 percent of the target population versus 20 percent of the working-age population. Among those who declare being other inactive or being engaged in domestic activities, the affected share reaches at least 60 percent. This means that although these populations may have some work experience, they have spent most of their potential working lives out of work.

**Low education, health limitations, and scarce employment opportunities affect about one-third of the target population.** These proportions are higher than those found among the population of working age, among which about one-fifth are affected by low education<sup>38</sup> and health limitations,<sup>39</sup> and a little over one-fourth are affected by scarce employment opportunities.<sup>40</sup> Among the target population, those who are marginally employed or engaged in domestic activities are less likely to have low education; only about one-quarter of both these groups face this barrier. As expected, the great majority of those who report being unfit to work face health limitations (85 percent). The prevalence of health limitations is relatively low among the other inactive and those engaged in domestic activities (around 15 percent); the proportion of those who are unemployed who report having health limitations is significantly higher (24 percent).

**Close to one-fourth of the target population have caregiving responsibilities; in contrast, only 7 percent of the working-age population faces this barrier.** Caregiving responsibilities are especially concentrated, as expected, among those who report being engaged in domestic activities (66 percent).

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<sup>34</sup> Transportation poses a barrier not only due to economic costs, but also because public transportation is often not adjusted to the typical starting and ending hours of jobs, as noted by NES staff.

<sup>35</sup> A significant proportion of the target population is also of Roma ethnicity, who may face discrimination on the labor market due to prejudice and stereotyping. Eight percent of the target population self-reported being Roma, versus 3 percent of the working-age population.

<sup>36</sup> An individual is considered to lack recent work experience if they have not worked for at least one month in the last semester of the reference year and if they are not working at the time of the interview.

<sup>37</sup> An individual is considered to have low relative work experience if they have worked less than 60 percent of the time since they left full-time education. This barrier was not included in the 2013 analysis due to information missing from the 2013 EU-SILC database.

<sup>38</sup> An individual is considered to face the low education barrier if they have at most completed lower secondary education.

<sup>39</sup> An individual is considered to face the health limitations barrier if they report some or severe limitations in daily activities due to health conditions.

<sup>40</sup> An individual is considered to face the scarce opportunities barrier if they are estimated to have a high probability of being unemployed or involuntarily working part-time due to their age, gender, education, and region of residence.

Among the “other inactive,” the share with care responsibilities is not too different, at 60 percent.<sup>41</sup> Among the unemployed, only 8 percent faced this barrier; the proportion is also low among the marginally employed (13 percent). Those who are unfit to work also tend not to face this barrier; this is in part by construction, since the barrier affects individuals considered to be potential caregivers, and this does not include individuals with health limitations.<sup>42</sup>

**The high nonlabor income barrier is as prevalent among the target population as among the population of working age; however, it is higher among the inactive who do not declare themselves to be unfit to work.** Twenty-three percent of the target population faces the high nonlabor income barrier;<sup>43</sup> this is similar to the proportion found among the working-age population. Overall, relatively high household income does not appear to be keeping the target population from becoming employed, either because they do not feel the need to earn a living, or because they have a high reservation wage. The prevalence of this barrier is significantly higher among the inactive who are engaged in domestic activities (37 percent). This means that a significant proportion of this population may be staying home because they can afford to. A significant proportion of the “other inactive” also face this barrier (31 percent). Among those who declare to be unfit to work, only 16 percent face this barrier.

**Social benefits do not create a high earnings replacement barrier for either the target or the working-age populations.** Only 6 percent of the target population faces the high earnings replacement barrier,<sup>44</sup> a percentage similar to that found among the working-age population (4 percent). The latter indicates that the population that is out of work or marginally employed is not particularly likely to receive high benefits that disincentivize them from working. The unemployed are especially unlikely to face the high earnings replacement barrier: only 2 percent of this population faces this barrier, even though 36 percent receive unemployment benefits. The proportion facing the earnings replacement barrier is higher among the unfit to work (16 percent). Eighty percent of this population receives disability benefits; however, benefit levels do not appear to be so high as to deter their participation in the labor force.

**Table 3.2: Employment barriers among the working-age and target populations**

	Target population (persistently out-of-work and marginally employed)							
	Persistently out-of-work population							Working-age population
	Other inactive	Domestic tasks	Unfit to work	Unemployed	Total out-of-work	Marginally employed	Total target population	
Number of individuals	225,447	97,719	189,463	236,645	764,554	484,952	<b>1,249,506</b>	<b>5,753,232</b>
As a share of working-age population (percent)	3.9	1.7	3.3	4.1	13.3	8.4	<b>21.7</b>	<b>100.0</b>
As a share of target population (percent)	18.0	7.8	15.2	18.9	61.2	38.8	<b>100.0</b>	<b>NA</b>
	Employment barriers (%)							
<i>Capabilities barriers</i>								

<sup>41</sup> It is important to consider that the care responsibilities barrier is not self-declared. See Appendix A for the definition.

<sup>42</sup> Note, however, that the 2016 EU-SILC ad hoc module allows one to identify individuals who provide at least 20 hours of unpaid care to other persons (not including children without disabilities). Such individuals are considered as facing the care responsibilities barrier even if they have health limitations.

<sup>43</sup> An individual is considered to face the high nonlabor income barrier if household income (excluding earnings from the individual’s work-related activities) is more than 1.6 times higher than the median value among the working-age population.

<sup>44</sup> An individual is considered to face the earnings replacement barrier if the value of social benefits received is more than 60 percent of the individual’s estimated potential earnings in work.

Target population (persistently out-of-work and marginally employed)								
Persistently out-of-work population								
	Other inactive	Domestic tasks	Unfit to work	Unemployed	Total out-of-work	Marginally employed	Total target population	Working-age population
Low education	35	25	34	36	34	24	<b>30</b>	<b>17</b>
Care responsibilities	60	66	5	8	30	13	<b>23</b>	<b>7</b>
Health limitations	14	15	85	25	36	22	<b>31</b>	<b>20</b>
No recent work experience—has worked in the past	72	78	94	78	79	11	<b>53</b>	<b>21</b>
No recent work experience—has never worked	28	22	5	22	19	0	<b>12</b>	<b>3</b>
Low relative work experience	64	62	38	54	53	33	<b>45</b>	<b>20</b>
<i>Incentives barriers</i>								
High nonlabor income	31	37	16	18	24	22	<b>23</b>	<b>25</b>
High earnings replacement (benefits)	9	4	16	2	8	3	<b>6</b>	<b>4</b>
<i>Opportunities barrier</i>								
Scarce employment opportunities	33	28	12	64	36	35	<b>36</b>	<b>27</b>

Source: World Bank staff estimates based on 2016 EU-SILC.

Note: The working-age population refers to individuals (16–64), not including students ages 16–24. Labor market status (other inactive, domestic tasks, and unemployed) refers to the self-reported main activity during the previous calendar year. For definitions of employment barrier indicators using EU-SILC data, see Appendix A. For a full list of socioeconomic characteristics of the target population according to labor market status, see Appendix C.

**Although the earnings replacement barrier is generally low, the target population is more likely to receive social benefits than the population of working age.** Eighty-one percent of the target population received at least one form of social benefit (old-age, survivor, sickness, disability, housing, family, or other social exclusion) during the reference period, versus 61 percent of the working-age population. The target population was more likely to receive family benefits, unemployment, disability, housing, and other social exclusion benefits than the population of working age, but less likely to receive old-age benefits.<sup>45</sup> Receipt of family benefits is especially prevalent among the other inactive and those engaged in domestic tasks (92 percent and 86 percent, respectively). As is to be expected, disability benefits are more prevalent among those reporting to be unfit to work (80 percent), and unemployment benefits are more prevalent among those reporting to be unemployed (36 percent). Housing and other social exclusion benefits are also more prevalent among the unemployed (22 percent and 19 percent, respectively). (For the full list of socioeconomic indicators among the target population and the population of working age, see Appendix C).

**Despite higher benefit receipt, the target population remains considerably poorer than the population of working age; this is especially the case for those reporting to be unemployed.** Thirty-seven percent of the target population was at risk of poverty,<sup>46</sup> versus 15 percent of the population of working age. Among those reporting to be unemployed during the reference period, 52 percent were at risk of poverty, and 57 percent were in the first income quintile. The marginally employed are also relatively poor, with 41 percent being at risk of poverty. Individuals among the target population who

<sup>45</sup> The latter is because retired individuals are not considered part of the target population.

<sup>46</sup> At risk of poverty is a standard Eurostat indicator based on EU-SILC survey data. It refers to having an annual equivalized household income that is lower than 60 percent of the median for the population.

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reported to be other inactive, engaged in domestic tasks, or unfit to work had lower at-risk-of-poverty rates, albeit still higher than those found among the population of working age.

**The target population is somewhat concentrated in rural areas, as well as in the Great Plain and North region.** Fifty-two percent of the target population live in thinly populated (rural) areas, compared with 48 percent of the working-age population.<sup>47</sup> People who report being unfit to work are especially concentrated in rural areas (60 percent) as are the marginally employed (54 percent). The target population is also more likely to live in the Great Plain and North region (46 percent, versus 40 percent of the working-age population). People who reported being engaged in domestic tasks, however, are much more likely to live in Central Hungary (44 percent, versus 25 percent among the target population and 30 percent among the working-age population). On the other hand, those who declared themselves as unfit to work are much less likely to live in Central Hungary (15 percent).

**The great majority of the population that does not participate in the labor force is female.** Women are disproportionately represented among the target population: 60 percent of the target population are women, versus 51 percent of the working-age population. More importantly, 90 percent of the “other inactive” population and 97 percent of the population declaring to be engaged in domestic tasks are women. In contrast, just 39 percent of the unemployed are women. Among those who declare themselves to be unfit to work, almost one-half are female, not significantly different from the population of working age.

**Young people are overrepresented among the “other inactive” and the unemployed.** Twelve percent of the target population is young, between the ages of 16 and 24; in comparison, youth comprise only 6 percent of the working-age population.<sup>48</sup> Within the target population, youth are concentrated among the “other inactive” and the “unemployed,” comprising 21 percent and 19 percent of each group, respectively. Older individuals, on the other hand, are concentrated among those who declared themselves as “unfit to work”—67 percent of this group is aged 55–64, versus just 26 percent and 28 percent of the target population and working-age population, respectively. Those who declared themselves as undertaking domestic tasks (almost exclusively women) are predominantly prime-aged (mainly ages 35 to 44).

**Individuals involved in public works are not featured among target population analyzed in this report.** The public works program is one of the main programs accessed by clients of the NES. Jobseekers that are placed in Category 3 according to the profiling system used by the NES tend to be channeled into public works.<sup>49</sup> Category 3 individuals tend to be particularly vulnerable: they have low educational attainment, low work experience, and many have experienced long-term

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<sup>47</sup> Eurostat classifies areas according to population density using the following criteria: Densely populated areas, also referred to as high-density clusters, are contiguous grid cells of 1 square kilometer (km<sup>2</sup>) with a density of at least 1,500 inhabitants per km<sup>2</sup> and a minimum population of 50,000; intermediate areas, also referred to as urban clusters, are clusters of contiguous grid cells of 1 km<sup>2</sup> with a density of at least 300 inhabitants per km<sup>2</sup> and a minimum population of 5,000; thinly populated areas, also referred to as rural areas, are grid cells outside urban clusters.

<sup>48</sup> Recall that individuals ages 16–24 who were full-time students during the reference period are not included as part of the target population.

<sup>49</sup> The current profiling algorithm used by the NES takes into account certain sociodemographic characteristics to categorize jobseekers as Category 1 (independent jobseeker), Category 2 (likely to find a job in the medium term, but also likely to benefit from public employment services and ALMPs), and Category 3 (likely to remain in long-term unemployment). The latter category is officially referred to as “to be assisted by the public works scheme.” For more details on the current profiling system, see Box 5.1.

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unemployment prior to joining public works. The 2016 EU-SILC survey data allows individuals participating in public works at the time of the interview to be identified as such. Such individuals are considered as employed for the purposes of the interview, and the great majority did not meet the criteria for being considered marginally employed, because they either reported that they worked during most of the reference period, did not report to be working part-time, or because their earnings—while relatively low compared to the target population—exceed the threshold of “very low earnings” (i.e., HUF 42,000). According to the 2016 EU-SILC survey data, there were approximately 218,000 individuals participating in public works at the time of the interview, representing 3.8 percent of the population of working age.

**To gain a better understanding of individuals involved in public works, Box 3.1 provides an overview of the employment barriers they face, as well as some of their socioeconomic characteristics.**<sup>50</sup> Appendix D provides the full listing of barriers and individual and household socioeconomic characteristics. For comparison, the barriers and socioeconomic characteristics of the target and working-age populations are also shown on the same table.

***Box 3.1: Characterization of public workers according to labor market barriers and socioeconomic characteristics***

**Compared to the target population, public workers have relatively low educational attainment.** About half of public workers faced the low education barrier, meaning that they had not finished lower secondary schooling; in contrast, only about a third of the target population faced this barrier. Moreover, only 2 percent of public workers reported having tertiary education versus 15 percent of the target population. Because they are working, public workers are considered to have recent work experience; almost one-half, however, have low relative work experience, meaning that they have important gaps in their work histories. This is similar to the share found among the target population.

**Public workers are not likely to face caregiving responsibilities and health limitations are less prevalent in comparison to the target population.** Because they are already involved in work, public workers are not considered to face the care responsibilities barrier. However, they are also less likely to have children at home; just 16 percent had children under age 6, compared to 30 percent of the target population. Public workers are also just as likely to face health limitations as the working-age population (around 20 percent), but less so than the target population (30 percent). They also generally do not face the high nonlabor income barrier or the high earnings replacement barrier, meaning that they are not likely to have financial disincentives to work.

**Public workers are of similar age as the general target population; however, unlike the target population, which is predominantly female, public workers are evenly split by gender.** Most public workers are between 35 and 59 years of age. The average age among public workers is 43; this is similar to the average age among the target population of 42.

**The great majority (83 percent) of public workers live in rural (thinly populated) areas, and the Great Plain and North region (73 percent).** In contrast, the corresponding figures for the target population are 52 percent for rural areas and 46 percent for the Great Plain and North region.

**Public workers have relatively low income.** A large share of public workers (44 percent) are at risk of poverty (versus 37 percent of the target population), and the majority (59 percent) are in the bottom income quintile (versus 46 percent of the target population). They are somewhat more likely to receive social exclusion benefits than the target population (19 percent, versus 12 percent). The average annual equivalized household income of public workers in 2015 was HUF 2.5 million, versus HUF 2.9 million among the target

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<sup>50</sup> The profile of public workers according to age, sex, education, and geographic location is similar to that found in administrative data from the Ministry of Interior, [http://kozfozlalkoztatas.kormany.hu/download/c/7a/32000/Besz%C3%A1mol%C3%B3\\_2017\\_20180621.pdf](http://kozfozlalkoztatas.kormany.hu/download/c/7a/32000/Besz%C3%A1mol%C3%B3_2017_20180621.pdf).

population. The Roma ethnicity is disproportionately represented among public workers: Fourteen percent of public workers self-identified as Roma - versus 8 percent of the target population – whose job prospects might be affected by labor market discrimination.

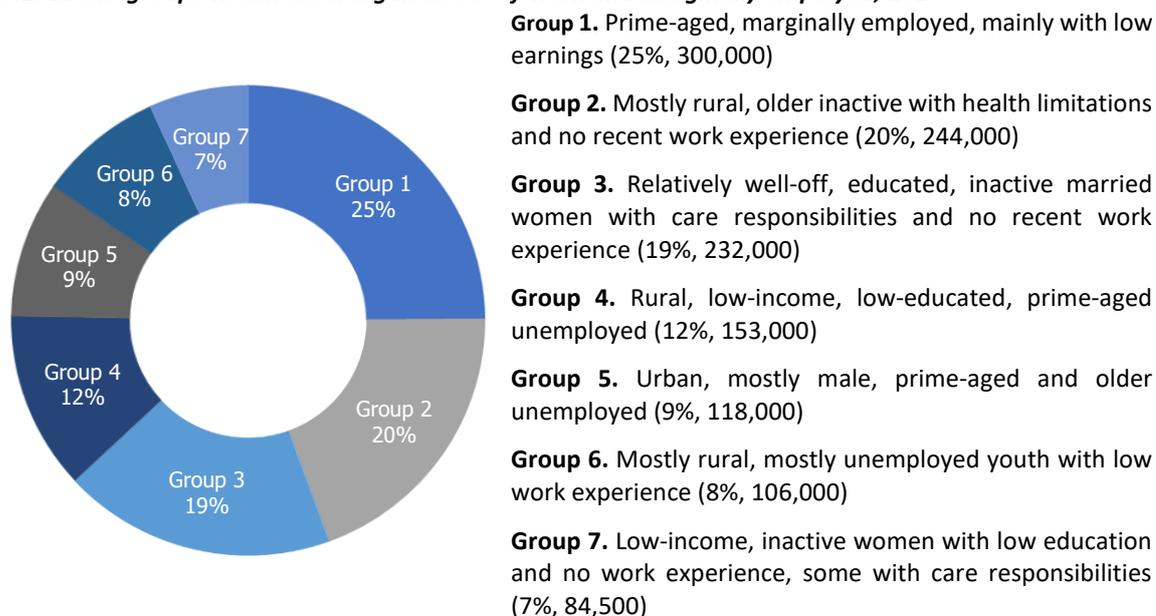
**Overall, the concentration of public workers in rural areas and the Great Plain and North region, their low income, their relatively low skills, and the disproportionate share of individuals who identify as Roma account for a population that faces high barriers to labor market entry.**

### 3.2 Latent groups among the out-of-work and marginally employed

The updated characterization of the Hungarian out-of-work or marginally employed population shows a great degree of diversity in terms of labor market barriers and socioeconomic characteristics, with some similarities to findings from 2013. Seven distinct groups were identified, varying in terms of size, labor market status, socioeconomic characteristics, and the multiple overlapping employment barriers they face. Figure 3.2 shows the breakdown of the target population according to the seven identified latent groups, and Table 3.3 shows the prevalence of employment barriers within each group. The full list of individual and household socioeconomic characteristics can be found in Appendix E. As was the case for the 2013 exercise, the names given to the groups are subjective and attempt to reflect the group’s most salient characteristics. However, there are other characteristics that distinguish these groups, some more than others.

**Labor market attachment is a distinguishing characteristic of the seven latent groups.** Group 1 (prime-aged, marginally employed, mainly with low earnings) is the largest and comprises individuals who were mostly employed during the reference period, as well as at the time of the interview. Given their low income, they are considered marginally employed. There are also three groups of unemployed individuals (groups 4, 5, and 6). Finally, there are two distinct groups of inactive women (groups 3 and 7), and a group of individuals with health limitations (group 2).

**Figure 3.2: Latent groups within the Hungarian out-of-work and marginally employed, 2016**



Source: World Bank staff calculations based on 2016 EU-SILC.

Note: The target population refers to population ages 16–64 not including full-time students ages 16–24, retired individuals, or individuals receiving disability benefits who also report being unfit to work and having severe limitations in daily activities.

**Table 3.3: Labor market barriers among latent groups of out-of-work and marginally employed, 2016**

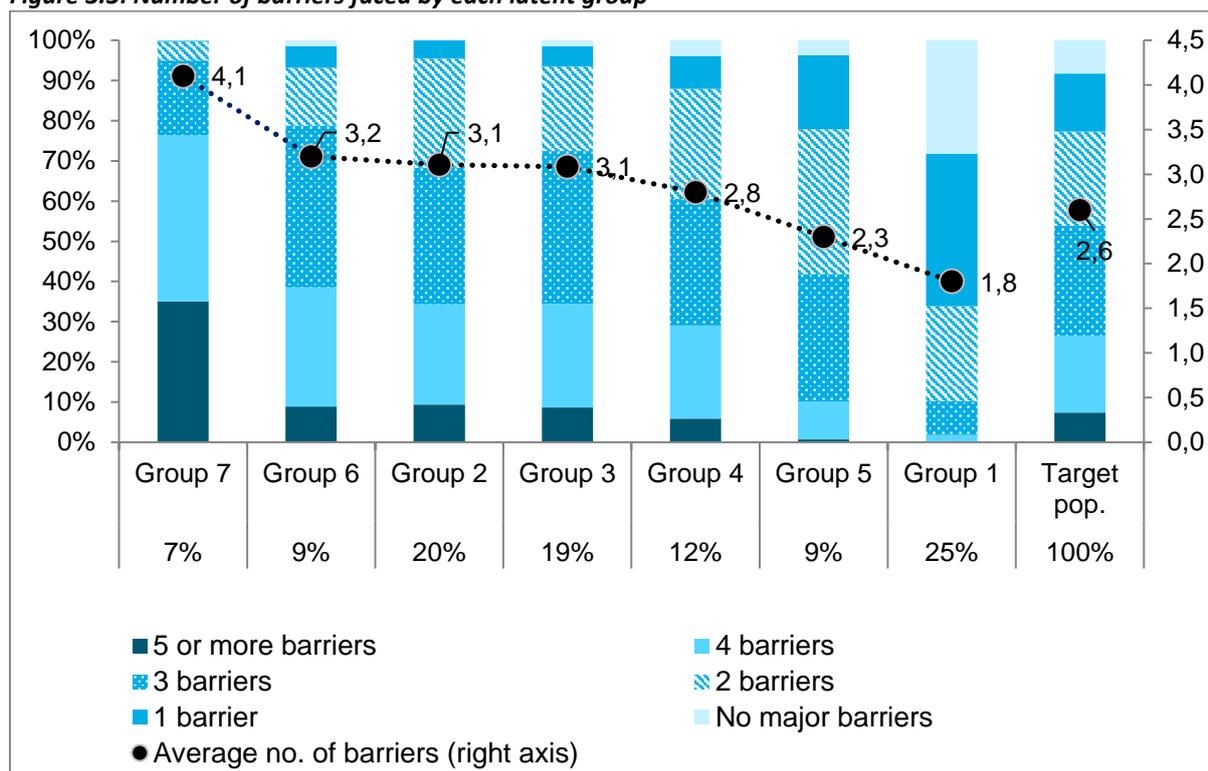
	Group 1: Prime-aged, marginally employed, mainly with low earnings	Group 2: Mostly rural, older inactive with health limitations and no recent work experience	Group 3: Relatively well-off, educated, inactive married women with care responsibilities and no recent work experience	Group 4: Rural, low- income, low educated, prime-aged unemployed	Group 5: Urban, mostly male, prime-aged and older unemployed	Group 6: Mostly rural, mostly unemployed youth with low work experience	Group 7: Low- income, inactive women with low education and no work experience, some with care responsibilities	Target populati
Class size (as a share of target population)	24.9	19.5	18.6	12.2	9.4	8.5	6.8	10
Class size (number of individuals)	311,276	244,047	232,426	152,951	117,837	106,341	84,598	1,249,600
<b>INDICATOR</b>								
<i>Capabilities barriers</i>								
Low education	13	37	9	67	15	28	83	3
Care responsibilities	6	10	82	8	3	1	46	2
Health limitations	24	85	8	20	28	10	6	3
No recent work experience—has worked in the past	0	94	86	60	88	18	13	5
No recent work experience—has never worked	0	3	2	3	0	56	84	3
Low relative work experience	20	40	47	61	32	84	95	4
<i>Incentives barriers</i>								
High nonlabor income	21	15	43	7	24	38	10	2
High earnings replacement (benefits)	2	13	7	5	1	1	12	2
<i>Opportunities barrier</i>								
Scarce employment opportunities	31	15	24	49	36	81	64	3
Average number of barriers per individual	1.8	3.1	3.1	2.8	2.3	3.2	4.1	2

Source: World Bank staff calculations based on 2016 EU-SILC.

Note: The table shows the percentage of each group facing each employment barrier. Color shadings signal high (dark green) and lower (white) frequencies. Target population refers to population ages 16–64 not including full-time students ages 16–24, retired individuals, or individuals receiving disability benefits who also report being unfit to work and having severe limitations in daily activities.

**Groups among the target population face multiple overlapping employment barriers.** Figure 3.3 shows the number of employment barriers faced by each latent group. Group 7 is the most vulnerable group, with 35 percent facing 5 or more barriers. At the other end of the spectrum lies group 1, with 28 percent facing no employment barriers at all. Group 5 is also relatively less vulnerable: on average, it faces 2.3 barriers, versus 2.6 among the target population. Groups 2, 3, 4, and 6 are fairly similar as far as number of barriers are concerned. However, as is seen in the group descriptions that follow, the number of barriers faced hides important differences, as not all barriers represent equal obstacles to surmount, and the types of services needed to address them differ.

**Figure 3.3: Number of barriers faced by each latent group**



Source: World Bank staff calculations based on 2016 EU-SILC.

Note: Groups are ordered according to average number of barriers. The maximum number of barriers a group may face is seven (this is one more than in the 2013 analysis, given the availability of relative work experience). Percentages that appear below group numbers refer to their share of the target population.

#### **GROUP 1. PRIME-AGED, MARGINALLY EMPLOYED, MAINLY WITH LOW EARNINGS (25%, 311,000 individuals)**

This is the largest group among the seven, making up a quarter of the target population. The majority were employed during the reference period, and also at the time of the interview. They are part of the target population mainly because they have very low earnings from work (less than 40 percent of minimum wage, 49 percent); the rest are either in unstable jobs or worked restricted hours). About a quarter have health limitations (which may explain restricted hours) and 20 percent face the high nonlabor income barrier (vs. 23 percent of the target population); they are less likely than the target population to receive social benefits. Overall, this group is the least likely to face employment barriers: they are relatively educated, have recent work experience, and do not have care responsibilities. As such, although almost one-half are at risk of poverty, they could be considered market ready. Though the majority may not come in contact with the NES, at least a quarter of the group faces unemployment from time to time; given their characteristics, most are likely fall in Category 1 according to the profiling algorithm implemented by the NES; they would therefore be considered independent jobseekers.

- Main barriers: 24% have health limitations; 21% have high nonlabor income
- Mostly working: 57% are employed; 22% are self-employed; 11% are inactive; 8% are unemployed
- Types of marginal employment: 49% have very low earnings; 24% have restricted hours; 24% have unstable jobs
- Gender: 50/50 gender split
- Age: 68% are prime-aged (30–55); 25% are older (55–64); 7% are young (16–24); average age is 44
- Ethnicity: Only 2% declare to be of Roma ethnicity (versus 8% of target population)

- Relatively educated: Only 13% face the low education barrier; 65% have upper secondary or post-secondary education; 21% have tertiary education
- Marital status: 49% are married; 35% have never married; 17% are divorced/separated/widowed
- Household labor force: 46% have at least another adult working in the household
- Relatively low income: 51% are in the first quintile; 43% are at risk of poverty (vs. 37% of the target population); 21% have high nonlabor income
- Benefit receipt: 62% receive at least one social benefit; 45% receive family benefits; 2% face the high earnings replacement barrier
- Region: 33% are in Central Hungary; 24% in Transdanubia; 43% in Great Plain and North
- Degree of urbanization: 51% are in thinly populated (rural) areas; 27% are in densely populated (urban) areas
- Number of barriers: On average, individuals face 1.8 barriers (vs. 2.6 for the target population)

#### **GROUP 2. MOSTLY RURAL, OLDER INACTIVE WITH HEALTH LIMITATIONS AND NO RECENT WORK EXPERIENCE (19%; 244,000 individuals)**

This group faces the health limitations barrier and most report being unfit to work; most, however, only face moderate limitations in their daily activities. Most of its members are also above age 55, and though they have no recent work experience, they did work in the past. Though most have completed at least secondary education, 37 percent face the low education barrier (versus 30 percent of the target population), and their health status and older age, together with no recent work experience, make this group difficult to activate. The majority receive disability benefits. This means some of the members of this group may not qualify to register as unemployed.

- Main barriers: 94% have no recent work experience; 85% have health limitations; 40% have low relative work experience; 37% have low education; 13% have high earnings replacement benefits
- Main activity at time of the interview: 71% are unfit to work; 14% are inactive; 12% are unemployed
- Gender: 50/50 gender split
- Age: 60% are older (55–64); 40% are prime-aged (35–54); average age is 54
- Ethnicity: Only 4% declare to be of Roma ethnicity (versus 8% of target population)
- Low education: A significant proportion (37%) face the low education barrier; 59% have upper secondary or post-secondary education; 4% have tertiary education
- Marital status: 48% are married; 18% have never married; 34% are divorced/separated/widowed
- Household labor force: 61% have at least another adult working in the household
- Relatively low income: 41% are in the first quintile; 35% are at risk of poverty (vs. 37% of target population); 15% have high nonlabor income.
- Benefit receipt: 94% receive at least one social benefit; 61% receive disability benefits; 13% face the high earnings replacement barrier
- Region: 16% are in Central Hungary; 30% in Transdanubia; 54% in Great Plain and North
- Degree of urbanization: 61% are in thinly populated (rural) areas; 16% are in densely populated (urban) areas
- Number of barriers: On average, individuals face 3.1 barriers (vs. 2.6 for the target population)

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### **GROUP 3. RELATIVELY WELL-OFF, EDUCATED, INACTIVE MARRIED WOMEN WITH CARE RESPONSIBILITIES AND NO RECENT WORK EXPERIENCE (19%; 232,000 individuals)**

This group is made up of inactive “younger prime-aged” mothers of young children (under age 6) and resembles group 4 from 2013. It is the most educated group, with one-third having tertiary education (vs. 15 percent of the target population). Although the members of this group do not have recent work experience, they have worked before. The group is relatively well-off, with only 16 percent at risk of poverty and 43 percent facing the high nonlabor earnings barrier, meaning they do not have financial incentives for working (most are married, and their husbands are working). A relatively large percentage is also located in Central Hungary, where jobs are more likely to be abundant. Aside from their care responsibilities and time away from the labor market, this group is particularly “employable.” Because they are largely inactive, they are unlikely to come into contact with NES. As their children reach school age, however, it is likely many will reenter the labor force. Aside from their current need for child care, they would likely be characterized as Category 1 (independent jobseekers) if they were to register with the NES.

- Main barriers: 82% have care responsibilities; 86% have no recent work experience; 43% have high nonlabor income; 47% have low relative work experience
- At time of the interview: 54% are inactive; 30% are dedicated to domestic activities; 10% are working; 5% are unemployed
- Gender: 98% are women
- Age: 90% are younger prime-aged (25–44); average age is 35
- Ethnicity: Only 3% declare to be of Roma ethnicity (versus 8% of target population)
- Relatively educated: Only 9% face the low education barrier; 58% have upper secondary or post-secondary education; 33% have tertiary education (most educated group)
- Marital status: 67% are married; 24% have never married; 8% are divorced/separated/widowed
- Household labor force: 86% have at least another adult working in the household
- Relatively high income: 25% are in the first quintile; 16% are at risk of poverty (vs. 37% of target population); 43% have high nonlabor income
- Benefit receipt: 100% receive family benefits; 7% face the high earnings replacement barrier
- Region: 39% are in Central Hungary; 28% in Transdanubia; 33% in Great Plain and North
- Degree of urbanization: 42% are in thinly populated (rural) areas; 34% are in densely populated (urban) areas
- Mothers of very young children: 83% have children under 6 in the household; 64% have children under 3; 45% have no children in formal care
- Number of barriers: On average, individuals face 3.1 barriers (vs. 2.6 for the target population)

### **GROUP 4. RURAL, LOW-INCOME, LOW-EDUCATED, PRIME-AGED UNEMPLOYED (12%; 153,000 individuals)**

This group of prime-aged unemployed is mostly male (57%). It is predominantly rural (70%), mostly concentrated in the Great Plain and North region, where jobs are scarce. As more than half have been unemployed for 12 or more months, most also do not have recent work experience, though almost all have worked in the past. They are one of the least educated groups, with 67% facing the low education barrier. The group has a particularly low-income, with 57 percent at risk of poverty and only 38% having another working adult in the household. A relatively large percentage (20%) report belonging to the Roma ethnicity; it is possible that discrimination in the labor force makes their job search more difficult. 47% receive unemployment benefits. When registering with the NES, most of the members of this group would be categorized as Category 3 individuals due to their low education and long-term unemployment; this means they would likely be assisted via public works. In terms of barriers, the group somewhat resembles group 2 from 2013, but is much smaller, less than one-third the size.

- Main barriers: 67% have low education; 61% have low relative work experience; 60% have no recent work experience; 50% face scarce employment opportunities
- At time of the interview: 75% are unemployed; 18% are working; 52% are long-term unemployed
- Gender: 57% are men
- Age: 72% are prime-aged (25–54); average age is 42
- Ethnicity: 20% declare to be of Roma ethnicity (versus 8% of target population)
- Low educated: 67% face the low education barrier; 31% have upper secondary or post-secondary education; 2% have tertiary education
- Marital status: 36% are married; 49% have never married; 16% are divorced/separated/widowed
- Household labor force: 38% have at least another adult working in the household
- Low income: 68% are in the first quintile; 57% are at risk of poverty (vs. 37% of target population); 7% have high nonlabor income
- Benefit receipt: 87% receive at least one social benefit; 57% receive family benefits; 47% receive unemployment benefits; 5% face the high earnings replacement barrier
- Region: 14% are in Central Hungary; 21% in Transdanubia; 65% in Great Plain and North
- Degree of urbanization: 70% are in thinly populated (rural) areas; none are in densely (urban) populated areas
- Number of barriers: On average, individuals face 2.8 barriers (vs. 2.6 for the target population)

#### **GROUP 5. URBAN, MOSTLY MALE, PRIME-AGED AND OLDER UNEMPLOYED (9%; 118,000 individuals)**

This group of unemployed differs from group 4 in that it is more male (65%), somewhat older (more than half are above age 55), higher income (41% are at risk of poverty), more educated (only 15% face the low education barrier), and more urban (67% in densely populated areas, more than half in Central Hungary). Also, a significant proportion (28%) has health limitations. Like group 4, most are long-term unemployed—their relatively older age and health limitations may explain their unemployment. Almost one-third receive unemployment benefits. The group somewhat resembles group 5 from 2013 but is smaller.

- Main barriers: 88% have no recent work experience; 28% have health limitations; 24% have high nonlabor income; 47% have low relative work experience; 32% have low relative work experience
- At time of the interview: 72% are unemployed; 10% are unfit to work; 10% are dedicated to domestic tasks; 62% are long-term unemployed
- Gender: 65% are men
- Age: 52% are older (55–64); 48% are prime-aged (30–54); average age is 52
- Ethnicity: Only 2% declare to be of Roma ethnicity (versus 8% of target population)
- Relatively educated: Only 15% face the low education barrier; 72% have upper secondary or post-secondary education; 13% have tertiary education
- Marital status: 45% are married; 26% have never married; 28% are divorced/separated/widowed
- Household labor force: 45% have at least another adult working in the household
- Relatively low income: 47% are in the first quintile; 41% are at risk of poverty (vs. 37% of target population); 24% have high nonlabor income
- Benefit receipt: 65% receive at least one social benefit; 30% receive unemployment benefits; 19% receive family benefits; 1% face the high earnings replacement barrier
- Region: 54% are in Central Hungary; 22% in Transdanubia; 24% in Great Plain and North
- Degree of urbanization: 22% are in thinly populated (rural) areas; 67% are in densely populated areas
- Number of barriers: On average, individuals face 2.3 barriers (vs. 2.6 for the target population)

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**GROUP 6. MOSTLY RURAL, MOSTLY UNEMPLOYED YOUTH WITH LOW WORK EXPERIENCE (9%; 106,000 individuals)**

This group of young people has low relative work experience (most have never worked). They are single and living with their parents; most have at least another working adult in the household. Though almost 40% face the high nonlabor income barrier, a significant proportion (over one-third) is at risk of poverty. Most declare to be unemployed, over one-third are long-term unemployed, and 20% receive unemployment benefits. Their lack of work experience and geographical location (rural areas, mostly in the Great Plain and North region) makes their job search difficult; almost one-third also face the low education barrier. If registered with the NES, most would be in Category 3; however, their youth implies they would likely not be channeled into public works.

- **Main barriers:** 56% have never worked before; 84% have low relative work experience; 38% have high nonlabor income; 28% have low education; 81% face scarce employment opportunities
- **At time of the interview:** 57% are unemployed; 18% are working; 12% are inactive; 5% are dedicated to domestic tasks; 35% are long-term unemployed
- **Gender:** 55% are men
- **Age:** 68% are youth (16–24); 29% are younger prime-aged (25–29); average is 24
- **Ethnicity:** 11% declare to be of Roma ethnicity (versus 8% of target population)
- **Education:** 28% face the low education barrier; 59% have upper secondary or post-secondary education; 13% have tertiary education
- **Marital status:** 92% have never married; 81% live with their parents
- **Household labor force:** 82% have at least another adult working in the household
- **Somewhat low income:** 42% are in the first quintile; 35% at risk of poverty (vs. 37% of target population); 38% have high nonlabor income
- **Benefit receipt:** 66% receive at least one social benefit; 42% receive family benefits; 20% receive unemployment benefits; 1% face the high earnings replacement barrier
- **Region:** 16% are in Central Hungary; 27% in Transdanubia; 57% in Great Plain and North
- **Degree of urbanization:** 61% are in thinly populated (rural) areas; 19% are in densely populated (urban) areas
- **Number of barriers:** On average, individuals face 3.2 barriers (vs. 2.6 for the target population)

**GROUP 7. LOW-INCOME, INACTIVE WOMEN WITH LOW EDUCATION AND NO WORK EXPERIENCE, SOME WITH CARE RESPONSIBILITIES (7%; 84,500 individuals)**

This group of inactive women has never worked before and has very low education (83% have at most lower secondary). About half faces care responsibilities, and most have children under the age of 6. This group somewhat resembles group 6 from 2013, though it is less educated and less than half as numerous. Their low education and lack of work experience, together with a high concentration in rural areas and the Great Plain and North region, make it unlikely that they will be able to successfully join the labor market (64% face scarce opportunities). This group faces the greatest number of barriers (4.1 on average, vs. 2.6 for the target population). The group is also low-income (60% are in the bottom income quintile) and a significant proportion (29 %) declare to be of Roma ethnicity, the highest proportion among any group. Given their mostly inactive status, this group is unlikely to come in contact with the NES, though it is possible some could register when their children enter school age. If registering, most would likely fall under Category 2 (“to be assisted for placement”), mainly because they are not (yet) long-term unemployed; however, their need for child care means they would need additional assistance in order to engage in work.

- **Main barriers:** 84% have never worked; 83% have low education; 43% have high nonlabor income; 64% face scarce employment opportunities; 46% have care responsibilities; 12% have high earnings replacement benefits

- At time of the interview: 60% are inactive; 26% are dedicated to domestic tasks; 10% are unemployed
- Gender: 92% are women
- Age: 49% are young (16–24); 51% are prime-aged (25–54); average age is 27
- Ethnicity: 29% declare to be of Roma ethnicity (versus 8% of target population)
- Low educated: 83% face the low education barrier; only 15% have upper secondary education; only 1% have tertiary education
- Marital status: About 63% are never married; 32% are married
- Household labor force: 2/3 have at least another adult working in the household
- Low income: 60% are in the first quintile; 44% are at risk of poverty (vs. 37% of target population); 10% have high nonlabor income
- Benefit receipt: 98% receive family benefits; 12% face the high earnings replacement barrier
- Region: 24% are in Central Hungary; 26% in Transdanubia; 49% in Great Plain and North
- Degree of urbanization: 57% are in thinly populated (rural) areas; 13% are in densely populated (urban) areas
- Mainly mothers: 76% have children under 6; 54% have children under 3; 28% have no children in formal care
- Number of barriers: On average, individuals face 4.1 barriers (vs. 2.6 for the target population)

## 4 Tailoring activation and employment support policies to the needs of the identified latent groups

**A careful look at the barriers and socioeconomic circumstances of the identified groups can serve to better tailor activation and employment support services to the needs of the out-of-work and marginally employed.** The above groups face differing degrees of labor market vulnerability and varying employment barriers. Indeed, given survey data limitations, not all factors that limit employment are taken into account. For example, in consultations undertaken with Hungarian NES caseworkers under the scope of this technical assistance, barriers such as low motivation and difficulty in keeping a job due to, for example, not showing up on time, substance abuse, or lack of mobility were highlighted as common among the hard to employ. With these limitations in mind, this section provides a broad overview of how some of the most salient barriers faced by priority groups could be addressed, given the current supply of ALMPs and the general characteristics of clients served. The institutional constraints along the service delivery chain that must be overcome to address overlapping barriers through the delivery of complex services are also examined.<sup>51</sup>

**The number of registered jobseekers shows there is only partial overlap between the pool of clients currently in the NES Integrated Registry (IR) and the pool of individuals who face barriers in the labor market identified in this analysis.** The IR data refer to approximately 300,000 registered unemployed (Bördös, Adamecz-Völgyi, and Békés 2018), whereas according to EU-SILC data, 1.25 million people of

<sup>51</sup> Appendix F provides a brief overview of ALMPs in Hungary as well as an overview of public works, given that the large proportion of clients in the IR participate in this program. The material is excerpted from Output 3, where additional details are provided. Finally, an overview of Hungary's social and employment cooperatives is also provided, since these can help provide employment opportunities to individuals who are more distant from the labor market.

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working age are out of work or marginally employed, many of whom face key labor market barriers.<sup>52</sup> Among them, approximately 765,000 are either inactive or without a job,<sup>53</sup> while the rest are considered marginally employed. This does not include the 218,000 individuals who are employed in public works according to the same survey data. The NES engages with only a small fraction of the people currently not in the labor market or only on its margins.

**NES provides various instruments under the individual action plans to address the needs of the vulnerable jobseekers.** The instruments are different for individuals who are market ready (i.e., those who fall under Category 1 of the current profiling system), as opposed to those who may require more support (those who fall under Categories 2 and 3). Among the available instruments are referrals to job search tools such as a labor market portal, job fairs, and vacancies. NES also offers provision of information either individually or collectively; counseling (e.g., career counseling, job search techniques, and clubs; mentoring); and placement services (primary labor market, subsidized jobs, or public works). Moreover, there are various labor market programs available, including subsidies for housing, training, mobility, increasing employment, supporting job retention, and supporting self-employment.

**Nonetheless, consultations with caseworkers show that clients often require complex services that are either currently unavailable or only partially delivered with inconsistent results.** Services are often not available in small locations, including public works jobs, specific trainings, individual support, or counseling. There is also a lack of complementary services, such as those that address (mental) health problems or substance abuse, or the need for financial resources for travel or clothing. Within the client pathway, NES staff are responsible for allocating and following up for services and measures. However, according to IR data, many clients are registered repeatedly, which means that they keep returning to the NES for services (Strategopolis Kft 2018).

**Trainings tend to not be targeted toward those who are most likely to benefit from them.** Administrative data from 2016 cited by Strategopolis Kft show that youth were more likely to receive wage subsidies than training, suggesting that those most likely to benefit from training may not be receiving it.<sup>54</sup> The Strategopolis report concludes that the majority of vocational trainings tend to focus on jobseekers who would have likely found employment without assistance (or with very little assistance) (Strategopolis Kft 2018). Box 4.1 summarizes the impact evaluation of ALMPs conducted by Strategopolis.

***Box 4.1: International and Hungarian evidence on the impact of active labor market programs***

In its 2018 impact evaluation of active labor market programs (ALMPs) in Hungary, Strategopolis reported that in terms of participants' long-term employment, outcomes may demonstrate diverging patterns compared to international evidence (Strategopolis Kft 2018). The report highlights that the mechanisms behind these patterns may involve supply-based allocation of services and measures (which are especially relevant in the case of trainings), and with macro-economic cycles of the labor market. For example, in the case of wage subsidies, evidence with respect to the post-2008 crisis period shows that these measures raise the probability of longer employment, but contrary to international evidence, they do not have any impact on wage levels. In the case of trainings, the report finds slight impact on the probability

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<sup>52</sup> This does not include an additional 491,000 individuals who are already retired, or 127,000 who are considered disabled and highly unlikely to be able to register with the NES (see section 3 of this report).

<sup>53</sup> Around 236,000 self-declare to be unemployed (though not necessarily actively seeking work) and 530,000 declare themselves as inactive.

<sup>54</sup> Evidence from Hungarian literature compiled by Strategopolis shows that training tends to be most effective among younger and less educated individuals.

of becoming employed, especially for the crisis period, but the picture changes after that. Based on the comparison of various trainings, the report finds that longer professional training programs and language courses lead to higher salaries. Citing prior evidence from Hungary, the report points out that wage subsidies seem to be ineffective in the Hungarian context among older unemployed, while trainings seem to be rather effective among youth (under 25) and less educated unemployed people. The table below summarizes the findings from the report, along with evidence from the international and Hungarian literature. The report also warns that “ALMPs in Hungary tend to be applied rather improperly, as [a] large proportion of their participants are better skilled who seem to be able to find similar jobs without training, assistance” (Strategopolis Kft 2018, 13).

**Table B4.1.1. Summary of international and Hungarian evidence on impact of training and wage subsidies**

	International evidence	Hungarian literature	Strategopolis 2018
Wage subsidy	Positive impact on long-term employment	Slight but positive impact on long-term employment	Impact on probability of long-term employment
	Slight rise in wages	No evidence on wages	
	Longer (min. of nine months) programs are more effective	The longer the subsidy period (at least six to eight months), the larger the impact	No impact on wages
	Mainly effective among young people with low or no work experience	Rather effective among elder unemployed	
Training	Positive but rather short-term impact on participants’ employment	Very little, close to no impact on employment	Slight impact on the probability of getting employed during crisis years
	Professional trainings are more effective than general trainings	No difference in training programs’ effectiveness	
	Practice-related vocational trainings particularly raise employment probability	No evidence	Longer professional training programs and language courses lead to higher salaries
	The longer the training, the larger the impact	No evidence	
Especially effective among better qualified people over 25	Rather effective among young (under 25) and less educated unemployed people		

Source: Strategopolis Kft 2018.

**Administrative data on public workers show a similar profile to that identified using 2016 EU-SILC survey data.** The data show that public workers are less educated than those who receive training or wage subsidies, and most are also prime-aged (Ignits et al. 2017). Participation in public works, however, does not tend to lead to subsequent entry into the primary labor market, and may otherwise trap individuals in low-skilled, low-wage work. Though not identified in the target population in this analysis, special attention should be given to supporting public workers’ transition into the primary labor market, especially those who lack secondary or tertiary education.

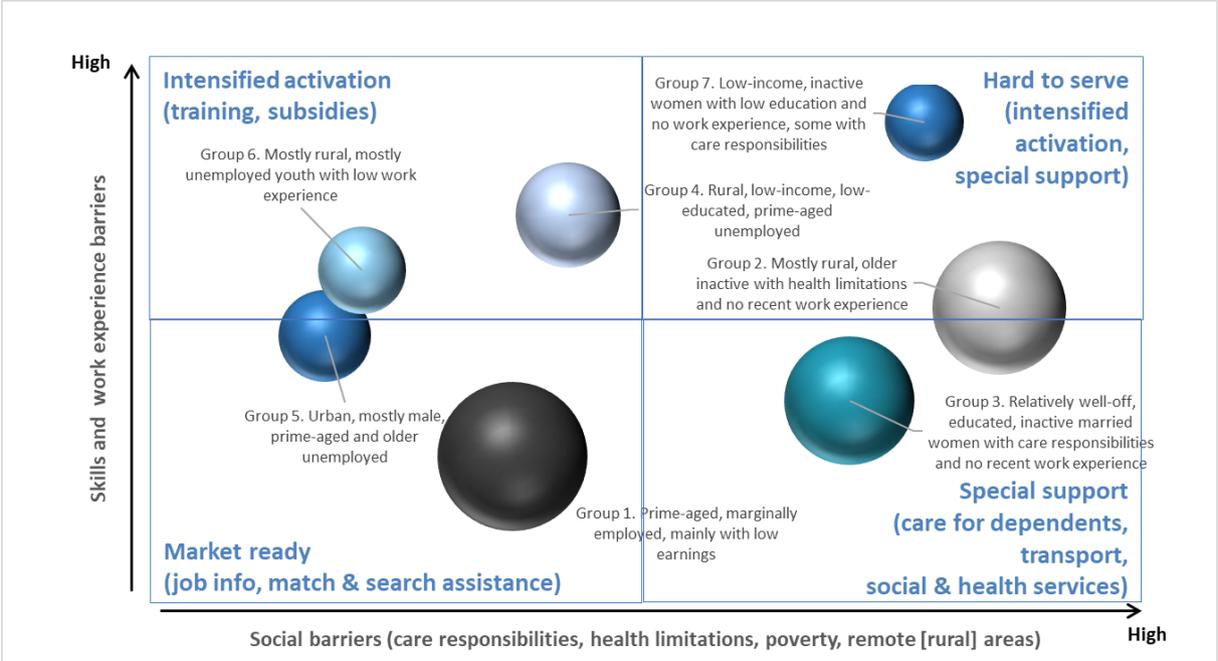
**The seven identified latent groups can be classified according to the type of activation needed to address their most salient barriers.** Figure 4.1 loosely plots the seven groups according to two dimensions. The first dimension, on the x-axis, is related to care responsibilities, health limitations, poverty,<sup>55</sup> and remote areas, which we refer to as “social barriers” given that the interventions necessary to help clients are generally provided by social services and may be beyond the scope of the NES.<sup>56</sup> The second dimension, on the y-axis, refers to capabilities barriers related to skills and work

<sup>55</sup> In particular, an individual’s poverty status may make him or her more vulnerable in terms of finding employment, given, for example, the individual’s lower access to networks, difficult accessing transportation or mobility, or experiencing discrimination.

<sup>56</sup> In the latent class analysis, the barriers are grouped differently considering the various interventions needed to address each barrier. However, the barriers examined are the same. In the employment framework, barriers related to geographic location, poverty, and ethnicity are associated with the “scarce opportunities” barrier,

experience. When these barriers are high, intensified activation measures may be necessary (such as training to enhance skills). On the other hand, when barriers are low, clients may be considered more market ready and may be serviced via information, job matching, and search assistance. The size of the bubbles reflects the relative size of each group.

**Figure 4.1: Activation needs and social barriers of identified latent groups, 2016**



Source: Own elaboration based on Sundaram et al., 2014.  
 Note: The size of each bubble represents the relative group sizes.

**Given employment barriers and socioeconomic conditions, in the following paragraphs, suggested interventions are provided for each group.** The suggested interventions are summarized in Table 4. and take into account consultations with NES workers regarding the types of services needed to address issues that vulnerable jobseekers face. The latent groups are indicative of the most common barrier overlaps that may be encountered as the NES broadens its scope beyond the unemployed, and thus serves as a useful tool for the type of services that may be in demand. It should be remembered that the groups themselves are heterogeneous with respect to employment barriers and individual and household socioeconomic characteristics. The suggested interventions serve to provide only a broad overview of the types of overlapping barriers that caseworkers are likely to encounter, and can also be used for planning purposes, i.e., to assess the current supply of services and provide a better match to the potential demand, with the understanding that the majority of the target population under analysis is not currently under the scope of the NES. Some are not in contact because they are inactive, but may at some point enter the labor force. Others are marginally employed, and may come in contact with the NES due to the instability of their current job. Others may never come in contact, meaning that the NES may need to conduct extensive outreach.

**Table 4.1: Summary of recommended service measures to meet multiple overlapping constraints**

whereas barriers related to skills, work experience, care responsibilities, and health limitations are considered as “capabilities” barriers. The two financial incentives barriers are not taken into account in the figure, since only the barrier related to high nonlabor income is salient in two of the groups (43 percent in group 3 and 38 percent in group 6).

Latent group	Recommended service measures
<b>Group 1. Prime-aged, marginally employed, mainly with low earnings (300,000 individuals)</b>	Job search and career counseling; job orientation
	Referral to the virtual labor market portal
	Participation at job fairs
	Referral to rehabilitation services or protected employment
	Transportation services
	Mobility services
<b>Group 2. Mostly rural, older inactive with health limitations and no recent work experience (244,000 individuals)</b>	Rehabilitation counseling; mental counseling; psychological counseling; health services
	Referral to social cooperatives
	Motivational training
	Protected employment
	Training programs
	Job search counseling
<b>Group 3. Relatively well-off, educated, inactive married women with care responsibilities and no recent work experience (232,000 individuals)</b>	Vocational (re)training
	Participation in jobseeking clubs
	Job search and career counseling; mentoring; job orientation
	Job matching into atypical employment forms (part-time jobs, work from home)
	Training for home-based work
	Wage subsidy for young mothers
<b>Group 4. Rural, low-income, low-educated, prime-aged unemployed (153,000 individuals)</b>	Social work (assistance in organizing care)
	Individual counseling on job searching, motivation
	Referral to social cooperatives
	Finishing primary (ISCED 2) education
	Vocational training, followed by wage subsidies
	Transportation support
<b>Group 5. Urban, mostly male, prime-aged and older unemployed (118,000 individuals)</b>	Mobility and housing allowance
	Public works
	Individual counseling on job searching, motivation
	Entrepreneurship assistance
	For unemployed with health limitations: psychological and mental counseling, rehabilitation counseling, protected employment, and health services
	Transportation support
<b>Group 6. Mostly rural, mostly unemployed youth with low work experience (106,000 individuals)</b>	Public works
	Extensive outreach efforts may necessary
	Individual counseling on job searching, motivation
	Training programs, followed by wage subsidies to ensure employment
	Mobility and housing allowance; transportation support
<b>Group 7. Low-income, inactive women with low education and no work experience, some with care responsibilities (84,500 individuals)</b>	Referral to social cooperatives
	Social work (assistance in organizing care)
	Individual counseling on job searching, motivation
	Finishing primary (ISCED 2) education
	Training, including training in jobs for home-based work
	Referral to social cooperatives
Public works	

**Group 1, Prime-aged, marginally employed, mainly with low earnings (300,000 individuals)**, is largely considered market ready and has relatively few employment barriers. This group is already working but may need to find more permanent, full-time, or higher paying jobs. The fact that they are already working is an asset when seeking employment, and they are also relatively skilled (only 13 percent face the low education barrier). Given their characteristics, most of the individuals in this group would likely

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be categorized in Category 1 (independent jobseeker) if they were to register with the NES. This means they would have access to the virtual labor market portal and be invited to participate in job fairs and apply to vacancies (either in person or electronically), and be placed in the primary labor market. However, their marginal employment may also mean they could benefit from job searching and career counseling or job orientation, or be invited to participate in jobseeking clubs. About one-quarter of this group faces health limitations, so referral to rehabilitation counseling, mental counseling, or protected employment may also be useful. Some members of this group may also be in remote areas (51 percent are in rural areas), and may need transportation and mobility services in order to connect to better jobs. Since this group is already employed, it cannot register with the NES and is thus completely outside of its scope.

**Group 2, *Mostly rural, older inactive with health limitations and no recent work experience*** (244,000 individuals), faces significant social barriers, given their health limitations. Their older age also makes them more difficult to employ, as does their lack of recent work experience. Largely located in the Great Plain and North region and in rural areas, they are likely not connected to jobs. For this group, aside from rehabilitation counseling, mental counseling, psychological counseling, and health services, referral to social cooperatives may be a way to engage them in the labor market, provided they also receive training, which may be needed given their lack of recent work experience. Finally, job search counseling and vocational (re)training may also be beneficial.

**Group 3, *Relatively well-off, educated, inactive married women with care responsibilities and no recent work experience*** (232,000 individuals), is not a particularly vulnerable group. In this sense, they may not be a priority for the NES. Nonetheless, given the current tight labor market, engaging this population in work is important for Hungary's growth prospects. This group can be considered relatively market ready in that it is highly educated (one-third has a tertiary education degree). Their characteristics make it likely that they would fall under Category 1 (independent jobseeker) if one does not take into account the need for child care. Aside from information on available vacancies, participation in jobseeking clubs and career counseling, job orientation, and mentoring may be beneficial for this group, given that they lack recent work experience and may therefore need assistance to reconnect to the labor market (the members of this group have worked before and have likely only temporarily left the labor market). Wage subsidies for young mothers may also help some of the less qualified members of this group. However, this group must first overcome its care responsibilities barrier if it is to reengage on the labor market. This can be achieved via assistance with organizing care. Part-time or home-based work may also be a viable option for this group; training could be provided for the latter, whereas job-matching could also be used. Given that many of the members of this group may not have a financial incentive to work, NES outreach may be necessary to prevent delays in reconnecting to the labor market (the longer mothers remain inactive after having had children, the more difficult it will be to reconnect).

**Group 4, *Rural, low-income, low-educated, prime-aged unemployed*** (153,000 individuals), face high barriers in the skills and work experience dimension. The majority (67 percent) have not completed upper secondary education, and 60 percent do not have recent work experience. Vocational training and programs aimed at finishing primary (i.e., ISCED 2) education would be necessary for this group, as would be following up individual counseling on job searching, motivation, and wage subsidies. On the social barriers dimension, the fact that this group is concentrated in rural areas (mainly in the Great Plain and North region) and is low income means that it may lack transportation to get to jobs or need mobility support. A fifth of this group identifies as Roma, implying that many of its members may face discrimination on the labor market and are need of additional support, possibly via referral to social cooperatives or public works.

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**Group 5, *Urban, mostly male, prime-aged and older unemployed*** (118,000 individuals), is partly market ready. Few of the members of this group face the low education barrier, but they lack recent work experience. Located in urban areas, this group faces few social barriers. Training and wage subsidies or entrepreneurship assistance may benefit this group. They may also benefit from counseling on job searching and motivation, given many members' long-term unemployment status. A significant proportion (28 percent) also faces health limitations, for whom psychological and mental counseling, rehabilitation counseling, protected employment,<sup>57</sup> public works, and health services might be beneficial. Transportation support may also be necessary to connect this group to jobs: they are located in areas with high labor demand but may not have the means to conduct a job search.

**Group 6, *Mostly rural, mostly unemployed youth with low work experience*** (106,000 individuals), face higher skills and work experience barriers than group 5, given slightly lower education levels combined with a large percentage (56 percent) who have never worked before. This group is young, and evidence from Hungary shows that training programs for youth are effective. However, administrative data show that only a third of training recipients are under 25, with most youth receiving wage subsidies instead (Strategopolis Kft 2018). Training programs, followed by wage subsidies, may enable this group to more successfully find long-term employment. Their concentration in rural areas means that they may need assistance with transportation and mobility, and may also benefit from being referred to social cooperatives. Many are unmarried youth who live with their parents, which reduces their financial incentives to find employment; they may thus need individual motivation counseling on job searching.

**Group 7, *Low-income, inactive women with low education and no work experience, some with care responsibilities*** (84,500 individuals), is the most difficult group to serve. They have very low education (83 percent have not completed upper secondary school), no work experience, have caregiving responsibilities, are located in rural areas, and are low income. Members of this group are disproportionately Roma, whose job prospects might be affected by labor market discrimination. They are unlikely to be engaged with the NES, meaning that extensive outreach efforts may be necessary. If the NES can successfully engage this group, social cooperatives may be an appropriate vehicle for linking members to the labor market, if they provide training. Given their very low education level, referrals to programs that allow them to at least finish ISCED 2 would help these women acquire skills to engage on the labor market, while referrals to public works may also be a viable option. At least half of this group will require access to childcare services, but a remaining portion may be resistant to participating in the labor market due to social and community norms around gender and women's labor force participation. Helping these women find part-time opportunities or providing training for home-based work may be a second-best solution.

### ***Institutional constraints along the service delivery chain***

**To successfully address overlapping barriers, it is important to consider the institutional constraints along the service delivery chain.** In the current institutional setting, various ministries are responsible for addressing labor market challenges, barriers of entry to employment, low youth participation, and unemployment in general.<sup>58</sup> The effects of partially overlapping responsibilities are further intensified

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<sup>57</sup> Protected employment refers to placement with accredited employers that receive funding to employ people with disabilities.

<sup>58</sup> Involved ministries include the Ministry of Human Capacities, the Ministry of Finance, the Ministry of Interior, and the Ministry for Innovation and Technology. Stakeholders involve municipalities, NES offices, employers, and

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by the design of resources dedicated to programs, services, and employment-related projects,<sup>59</sup> which results in supply-driven delivery of services and programs. From the client’s perspective, as expressed by caseworkers, this may impact the general effectiveness of the measures.

**A needs-based approach for service delivery is required to fix the existing gaps in the current institutional setting, including making funds more effectively available for selected ALMPs and to support the work of counseling, orientation, and motivation for actual and out-of-reach clients.** The funding mechanisms and split in institutional responsibilities represent a major constraint for achieving a more effective NES system, including client intake, service identification, and service delivery. In terms of client intake, a large pool of the potential labor force—including individuals already in employment, inactive, or unemployed—remains outside the reach of the NES.<sup>60</sup> In terms of service identification, services offered via the IR need to be restructured to a more needs-based pool, which can be only accomplished if a series of structural changes are implemented, including better cooperation across ministries and the state administration. However, case work for the client pathway needs more resources. Whereas profiling may need a relatively small number of indicators to *predict* efficiency, case work with clients requires more refinement—beyond the burdensome administrative rules of the individual actions plans (IAPs)—in order to design the best-fitting service packages to *actual* individual needs. The analysis in the previous section shows that additional barriers beyond those explored in the IR profiling system such as health problems, care responsibilities, and little or no prior work experience are also associated with being further from the labor market. The data also reveal that being of Roma ethnicity is associated with greater labor market vulnerability.

**Table 4. illustrates the multitude of stakeholders that should be considered when delivering services and implementing measures to certain types of clients facing employment barriers, as well as the project-based and temporary nature of delivery solutions.** The types of clients listed are those that NES caseworkers report as the most problematic; the corresponding latent groups that are most likely to include these types of clients are also listed. The table illustrates the potential profiling category in the IR according to the current profiling system (for the client intake phase) and the services that NES staff have identified to address employment barriers. Potentially available services based on the NES regulatory framework are also indicated, and matched with de facto delivery solutions. These are classified as project-based (P), which are funded from the ESF; as seasonally, temporary, or periodically available measures (T); or as a service organized outside the NES (O). Finally, the last column lists the ministries responsible for services that address the relevant labor market barriers.

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NGOs. There are also multiple funding sources, including three ESF-funded operational programs and national budget lines.

<sup>59</sup> Output 3 of this technical assistance concludes that the institutional design impacts both planning and delivery of programs and services, with considerable room for improvement.

<sup>60</sup> EU-SILC data are not unique in showing a vast number of individuals who are out of work or marginally employed and outside the realm of the NES. In a survey conducted by the World Bank team among NES caseworkers, only 30 percent of those surveyed stated that current IR registrants represent the local or regional labor reserves; the large majority thinks it is a different pool of people. The survey took place in August and September 2018; over 300 responses were received that cover all 19 counties and Budapest, and 140 districts out of 174 (with another two responses from the Budapest district office). See Output 3 of this technical assistance for further details on the survey.

**Table 4.2: Service gaps compared to demand of clients and non-registered people facing barriers**

Groups with specific barriers	Client intake	Service identification				Service delivered, potentially	Service delivered, actually	Institutional ministry mandates
<b>Clients with low levels of education (corresponding latent groups: 4 and 7)</b>	IR Category 3 or 2 depending on motivation, social and health conditions	Job orientation	Vocational training	Mentoring	Wage subsidy	Motivational training	T, O	MHC (social and health service, primary education); MoF (ALMPs, incl. GINOP and TOP-funded trainings and services); MoIT (vocational training); MoI (public works); Prime Minister's Office (general management of services through district government offices)
		Individual counseling on job search, motivation	Finishing primary education	Social work	Public works	Vocational trainings	P, T	
				Psychological counseling	Mobility and housing allowance	Individual counseling	P and regular measure	
						Public works	T	
					Mobility and housing allowance	Regular measure		
<b>Clients with small children (especially young mothers with many children) (corresponding latent groups: 3 and 7)</b>	IR Category 3 or 2 depending on motivation, social and health conditions	Job matching to atypical employment forms (part-time jobs, work from home)	Job search counseling	Self-training/e-training	Wage subsidy for young mothers	Motivational training	T, O	MHC (social and health service); MoF (ALMPs, incl. GINOP and TOP-funded trainings and services); MoIT (vocational training); MoI (public works); Prime Minister's Office (general management of services through district government offices)
			Mentoring	Social work (assistance in organizing care)	Training in jobs for home-based work	Vocational trainings	P, T	
			Job orientation			Individual counseling	P and regular measure	
		Public works				Public works	T	
					Job matching	P, O		
<b>Clients with poor health who have been registered for longer in the IR (corresponding latent group: 5)</b>	IR Category 3 (or only keeping them in the registry for social transfer eligibility)	Public works	Job search counseling	Mental counseling	Motivational training	Rehabilitation counseling	T	MHC (social and health service); Prime Minister's Office (general management of services through district government offices); MoI (public works)
		Psychological counseling	Vocational (re)training	Rehabilitation counseling	Protected employment	Psychological counseling	P, O	
		Individual counseling or job searching, motivation				Health services	O	

Source: World Bank staff elaboration based on consultation with NES caseworkers.

Note: The table illustrates results from survey and qualitative field research. Project-based (P); seasonally, temporarily, or periodically available (T); available outside the NES (O); Integrated Registry (IR); Ministry of Human Capacities (MHC); Ministry of Finance (MoF); Ministry for Innovation and Technology (MoIT); Ministry of Interior (MoI).

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**The temporary or project-based nature of many services, as well as the phasing of ESF spending, define and guide how clients are allocated into services and programs, many of which are inadequate, only run for a short amount of time, and/or are not always available.** In the case of multiple barriers, the individual development process cannot be assisted in the long run. The latter also impedes a *rapid response* to unemployment, which is at the core of an effective service system. Reportedly, longer out-of-work periods deteriorate a client’s motivation, health, and adaptability. For example, wage subsidies seem to be more effective in cases of shorter unemployment (Strategopolis Kft 2018), and NES caseworkers report similar experience with youth. In the case of EU-funded activities, project targets define how clients are allocated into temporary services and programs. Consequently, if at other times similar services are needed, project-based funding may not be available, and clients may remain unserved. Due to the pressure to absorb EU funds, sometimes, only inferior quality trainings are available for clients who are unprepared for vocational trainings. This leads employers to lose trust in the NES trainings allocation activity and an inefficient use of financial resources.

**Coordination with and referral to services outside the realm of ALMPs is conducted in an ad hoc manner, at best.** With regards to services like social assistance and case work delivered by family help centers, stakeholders consider the referral process to be relatively uncoordinated, despite previously developed and piloted integrated service delivery mechanisms (established in the mid-2000s from EU funding), which have never been mainstreamed.<sup>61</sup>

## 5 Technical inputs for revising the current profiling mechanism

**This section includes recommendations for possible revisions to the current profiling methodology utilized by the NES in Hungary; the recommendations respond to the analysis undertaken separately by the HÉTFA Research Institute.**<sup>62</sup> While latent class analysis serves to better understand the various groups commonly found among current and potential clients, profiling techniques can help caseworkers channel jobseekers more efficiently toward relevant services. This section provides a brief overview of the NES’s different profiling systems and the HÉTFA Research Institute’s findings and recommendations for reform. It then describes some limitations of the proposed new profiling model and discusses whether jobseeker categories should be further segmented.

### 5.1 First profiling systems: data-assisted models

**Since 2002 Hungary has used two profiling methodologies, both of which have followed a *caseworker discretion model* assisted by an econometric model.** Beginning in 2002, the Poland and Hungary Assistance for the Restructuring of the Economy (PHARE) project aimed to modernize the NES by improving the information technology (IT) system, systematizing the data collection process, and broadening the information stored in the jobseekers’ database. These improvements laid the foundation for a statistical profiling system, and in 2005, under the Human Resources Development Operational Program (EFOP) 1.2, a new profiling model was introduced. In a first step, caseworkers relied on a software

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<sup>61</sup> For more information regarding the coordination of ALMPs and social services, see Output 3.

<sup>62</sup> The Government of Hungary recently commissioned the HÉTFA Research Institute to propose a new algorithm for profiling, as well as provide recommendations for how to implement profiling. See Bördős, Adamecz-Völgyi, and Békés 2018.

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that estimated each jobseeker's chance of reentering the labor market. The probability of finding a job was estimated based on the parameters already recorded by the NES about every jobseeker (gender, age, education, address, reduced capacity, health limitations, reasons for the difficulties of finding a job, International Standard Classifications of Occupations (ISCO) code for the occupation searched, years of experience in the occupation sought, qualification). However, the final decision to classify each worker into a category was left to the caseworker carrying out the registration. The software automatically estimated one's chance of being unemployed, but ultimately, the caseworker used personal impressions from the first interview to finalize the categorization process, assigning a jobseeker one of three categories: (i) jobseekers that needed little help from the NES; (ii) those who needed assistance from the NES to find a job; and (iii) those who were at risk of long-term unemployment. As such, this profiling methodology was a *data-assisted model*, or a combination of high information flow and caseworker discretion.

**The EFOP 1.2 profiling methodology was quickly replaced by the current methodology.** Use of the EFOP 1.2 profiling methodology faded with time, partly services were not differentiated according to the needs of the three categories of clients (all jobseekers were offered similar services by the NES, irrespective of their categorization), and partly because of limitations of the IT system. After a first revision and a pilot, financed under the Social Renewal Operational Program (TÁMOP) 1.3.1, a revised profiling methodology was introduced in 2015 under the framework of Economic Development and Innovation Operational Program (GINOP) 5.1.1. Similar to the EFOP 1.2 model, the new profiling methodology classified workers into the same three categories, according to an algorithm based on six factors used by caseworkers of the district NES agencies. As in the EFOP 1.2 model, the final category assigned to each worker could eventually be modified by the caseworker. The second profiling methodology was thus very similar to the first methodology, the only difference being the variables included in the algorithm (Bördös, Adamecz-Völgyi, and Békés 2018). Box 5.1 provides details on the current profiling system.

**Box 5.1: Profiling methodology currently used by the Hungarian NES (under GINOP 5.1.1)**

**The current profiling methodology used by the NES in Hungary takes into account labor market barriers to categorize jobseekers.** Jobseekers are categorized as either Category 1 (independent jobseeker; about 20 percent of all jobseekers), Category 2 (likely to find a job in the medium term, but also likely to benefit from public employment services and ALMPs; about 60 percent of all jobseekers), and Category 3 (likely to remain in long-term unemployment, "to be assisted by the public works scheme;" about 20 percent of all jobseekers). Specifically, an algorithm is used to determine the category to which a jobseeker should be assigned.

The algorithm assigns a score to individuals based on different weights for the following characteristics:

1. education
2. vocational qualification
3. Employment Substitution Subsidy
4. <25 years old or >50 years old
5. time spent as a registered jobseeker
6. whether the district is to be developed or to developed with complex programs

However, since there may be other barriers to employment the algorithm does not capture, caseworkers can reclassify jobseekers by taking into account barriers that may be more subjective in nature. Caseworkers must record the reason for reclassifying a jobseeker, and may select from among the reasons listed below:

1. health or social reasons
2. the jobseeker is not mobile and has a low chance of finding a job in the place of residence

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3. the jobseeker is not motivated/independent enough
  4. the jobseeker's jobseeking skills need improvement
  5. the jobseeker is independent, motivated, and flexible

A large percentage also record the reason for reclassifying a jobseeker as "other." In such cases, caseworkers should fill in free text justifying recategorization, though this often does not happen. In theory, individuals who face subjective barriers in the labor market (reasons 1–4 above, or other barriers) should be reclassified into a higher category—i.e., those the algorithm originally places in Category 1 may be reclassified into Category 2, and those originally in Category 2 may be reclassified into Category 3. In practice, the current profiling methodology is not always implemented as intended. Both qualitative and quantitative evidence shows that caseworkers often recategorize jobseekers based on placement quotas as opposed to their likelihood of finding employment.

The caseworkers are also obliged to launch an individual action plan<sup>a</sup> (IAP) in accordance with the client's profiling category. The IAP includes a detailed list of services and activities as well as eligible benefits the NES is offering the client. Furthermore, the IAP records which programs/schemes the client participates in, including all job searching activities. All findings and milestones are reviewed after at least six months, and, if needed, the proposed interventions are amended.<sup>b</sup> The IAP serves as a follow-up document and is updated regularly as long as the client is in contact with the NES.<sup>c</sup>

*Notes:* a. The regulatory background of the IAP is the ministerial decree (32/2016, IX. 8) *NGM rendelet: Az állami foglalkoztatási szerv által készített egyéni cselekvési terv részletes szabályairó*; b. Implementation rules of creating the profiles and the individual action plans (NGM/42635-1/2016); c. Implementation rules of Labor Market Services (NGM/39751-1/2017).

## 5.2 New profiling model proposed by HÉTFA

**In 2018 the HÉTFA Research Institute carried out a thorough revision of options for improving the GINOP**

**5.1.1 methodology.** Combining statistical analysis of jobseekers, testing of different econometric models, and qualitative interviews with caseworkers, HÉTFA concluded that: (i) caseworkers had a negative image of the profiling system, especially as it didn't help build an IAP following a client's categorization; and (ii) the availability of ALMPs drove caseworkers' final category choice. Their final recommendation involves an automatic categorization of jobseekers into three groups by a modified statistical profiling model, and caseworkers' final decision regarding which category to assign to each jobseeker. As such, the recommendation is to use a data-assisted profiling system.

The new econometric model was developed by further extending the set of criteria/variables used in the automatic categorization, and by recalibrating the weights assigned to each criterion/variable as well as the thresholds used to determine the three final categories of jobseekers, resulting in a better prediction of unemployment.

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### 5.3 Potential limitations of the proposed profiling model

The work to develop an improved profiling system was thorough, and the recommendations represent significant improvements on the GINOP 5.1.1 model.<sup>63</sup> In what follows, we highlight a few issues that may also be taken into consideration as Hungary works toward a new phase of profiling.

#### 5.3.1 The current model continues to have possible data limitations

**Though it does represent an improvement in the predictability of long-term unemployment, the econometric model developed by HÉTFA is similar to the first two statistical models,** using data available in the jobseekers' database. The profiling variables are thus, by and large, the same as the ones used previously. Some variables in the previous models were removed (such as qualification, as it was shown to have been improperly measured during initial data collection), while some variables were introduced in the model in a slightly different way (for example, education was introduced with five categories instead of the four previously used). Additional variables were introduced in the model, such as gender, population of the place of residence, whether the person has work experience, whether the client is registered in the same district as the place of residence, and whether the client is registered in the same county as the place of residence. The model is based on a probit regression and is better able to predict long-term unemployment.<sup>64</sup>

**Because of the limitation of data in the jobseekers' database, the econometric model may not capture some of the key constraints that explain long-term unemployment.** Many econometric models used by national employment agencies calibrate models using information about living conditions, mobility, health status, and additional country-specific barriers. These may include if the jobseeker is a main caretaker in the household, has a stable address, is mobile or has available transportation, suffers from chronic illness or disability, has literacy/numeracy/computer competency, has relevant skills or qualifications, receives unemployment/social assistance benefits, and has any additional individual barriers (is of Roma ethnicity; has a history of substance abuse, etc.). As an example, Box 5.2 provides the variables and criteria used by Australia's Job-Seeker Classification Instrument (JSCI).

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<sup>63</sup> The HÉTFA report reviews international best practices of profiling systems and the history of profiling systems in Hungary, identifies bottlenecks (methodological and practical, through interviews with caseworkers), offers a detailed analysis of administrative data, simulates new profiling models, and provides recommendations for the implementation of a new profiling model.

<sup>64</sup> Although the previous models took into account factors associated with long-term unemployment, the weights assigned to each were not based on an econometric model per se.

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**Box 5.2: Variables/criteria used in the Australian JSCI Profiling Model**

- ✓ Age (six groups)
- ✓ Older males aged 45 years and over (additional to above)
- ✓ Educational attainment (12 groups)
- ✓ Vocational qualifications (yes/no/no longer useful)
- ✓ Duration of unemployment
- ✓ Work experience over the past five years
- ✓ Family status (family composition)
- ✓ Geographic location and Aboriginal and Torres Strait Islander status
- ✓ Geographic location and Australian-born South Sea Islander status
- ✓ Geographic location and other-Australian
- ✓ Transport
- ✓ Contactability
- ✓ Proximity to labor market
- ✓ Country of birth
- ✓ English language and literacy
- ✓ Disability/medical condition
- ✓ Stability of residence
- ✓ Disclosed ex-offenders
- ✓ Disadvantage resulting from personal factors requiring professional or specialist judgment

Source: JSCI.

**The profiling model presented above builds on the existing set of administrative data, but richer models requiring ad hoc surveys would be needed to identify additional predictive variables.** To refine a model with better predictive power, external data, such as Labor Force Surveys (LFS) that contain more information on which to base the model, could be used, or additional data would need to be collected through a pilot survey. Additional information from the LFS that could be used includes family structure, number of dependents (children, older family members, people with chronic illnesses), and the income/work status of other adult members in the household. Basic econometric models can be built using administrative data held by labor market authorities. When building its econometric model, Denmark relied on administrative data from Danish Register for Evaluation of Marginalization (DREAM) that contained the unemployed individuals' event histories, such as the weekly status of unemployment registration, participation in ALMPs, and receipt of social assistance benefits. Other countries added survey research to their basic administrative data to determine which independent variables their statistical models should include: the Irish PES combined basic administrative data with a 13-week survey of around 60,000 people who walked into social welfare centers to claim assistance. The survey collected a broader array of variables for the statistical model. Eventually, only the variables with the highest predictive power were retained, and these questions were mainstreamed into the regular jobseeker application form. Similarly, to build its statistical model, the Netherlands combined a cross-sectional of the long-term unemployed with registry data.

**Another limitation of the econometric model using jobseekers' data is attrition.** For the econometric model, the length of unemployment before finding a job is used as the dependent variable. However, in NES administrative data, the variable recording the jobseekers' reason for exiting is of limited quality: caseworkers don't always fill it, or they may not verify the information provided by the jobseeker. Hence, in many cases, it is impossible to know the *true* reason for exiting: discouragement, or being hired without

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the help of NES. Though the authors do acknowledge this limitation, it is a major shortcoming that has implications for the algorithm's quality. It would be important to consider follow-up efforts with clients to improve the quality of data that would be used for future iterations of the algorithm.

### 5.3.2 Institutional resistance to a new model

**Given that the new model does not differ much from the previous two profiling models, there is a risk that caseworkers will be reluctant to adopt it.** In some countries, caseworkers have been resistant to automation of the PES's segmentation function. This occurred in Finland, despite evidence that the country's statistical profiling model had high predictive accuracy. Such resistance might have stemmed from the manner in which statistical models are developed and internalized. In Finland, outside contractors developed the model, and such a strategy may have blunted valuable PES buy-in. Another example of caseworker resistance comes from Korea, which initially experimented with a statistical system before abandoning it in favor of caseworker-based profiling using qualitative methods. Switzerland also tried a statistical model, but it ended up being largely sidelined because caseworkers lacked incentives to use it (Loxha and Morgandi 2014).

**Institutional caseworker resistance has been one of the main challenges to successfully mainstreaming statistical profiling.** Loxha and Morgandi (2014) review existing OECD experiences and show that, in certain country contexts, econometric models have been tried but quickly abandoned. (Box 5.3 summarizes the profiling approaches implemented by PES in OECD countries). The authors conclude that statistical profiling alone offers low marginal utility relative to caseworkers' judgment, especially in high-capacity countries. In several of the countries where the profiling systems were tried but never institutionalized (such as Denmark, Germany, and Switzerland), the tool was just one of the many diagnostics available to the caseworker and had no mandatory role in the process. In Switzerland, in particular, a randomized controlled trial found that despite the existence of a statistical system, caseworkers ignored it, especially because no incentives for caseworkers had been put in place for more systematic use.

#### **Box 5.3: Profiling approaches implemented by PES in OECD countries**

**Profiling tools are primarily used to segment clients based on unemployment risk.** High income countries have diverse ways of profiling jobseekers, ranging from discretionary models to automated statistical profiling methods, depending on the overall purpose and use of the screening. Most countries use profiling to segment clients (e.g., Ireland, Netherlands, and Sweden), but some also use such tools for case management planning (e.g., Denmark and Germany). In all cases, caseworkers remain central to the functioning of many Public Employment Services (PESs) in terms of both diagnostics and allocation of services.

Profiling approaches can be classified into four main methodologies, some of which are used in combination:

- **Caseworker-based profiling.** This method, also known as the "caseworker discretion approach," is based on the idea that PES caseworkers are principally responsible for evaluating the jobseeker's employment prospects, developing a plan for reemployment, and making the final judgment about the most appropriate intervention (e.g., Germany, Slovenia).
- **Rules-based profiling (with time-based segmentation).** This basic profiling method refers jobseekers to reemployment services only after crossing a critical threshold in their unemployment spell (e.g., in Ireland, jobseekers who sign up with the social protection department would be referred to the national employment agency only after being unemployed for at least six months).

- **Rules-based profiling (with demographic segmentation).** Some PESs profile their unemployed based on administrative rules that specify those who can be eligible to access specific employment services, on such observable characteristics as age, gender, disability, or other vulnerability (e.g., youth job program in Sweden targeted at individuals aged 16–24).
- **Data-based/statistical profiling.** Statistical profiling is an information-intensive method based on the analysis of quantitative statistical data. The method’s key output is the segmentation of jobseekers based on calculations of their risks of remaining unemployed through econometric modeling (e.g., U.S., Australia, Switzerland). Quantitative methods first developed in Australia and the U.S. are also being used extensively, with new trials being rolled out in a select number of European countries.

**Employment service organizations might use a wide range of additional tools** and administrative processes to deepen their understanding of their customers’ individual or group conditions. Among those are psychometric and attitudinal survey and interview tools that help to better understand the motivations and dispositions of customers. In most cases, such in-depth analytics will only be applied in sequence after an initial profiling has taken place.

**The key question, however, is to discern which of the approaches could be relevant in a lower capacity and resource-constrained context.** In this area, advanced profiling tools may be catalyzers of activation measures by enabling more personalized delivery mechanisms as well as customized active labor market policies based on client characteristics.

Source: Loxha and Morgandi 2014.

### 5.3.3 Lack of connection between categories, individual action plans, and services offered

**Given the workload of NES caseworkers in Hungary, IAPs should be made mandatory for only Categories 2 and 3, and this should take place within the first two months, rather than waiting for 12 months.** While profiling should be conducted upon registration, IAPs should only be offered to jobseekers distant from the labor market. However, the HÉTFA report recommends IAPs be conducted between 12 and 18 months after registration due to the workload of caseworkers; waiting for 12 months is a very long time for the most vulnerable jobseekers. As evidenced in Table 5.1, countries in the OECD tend to conduct IAPs within the first few weeks of registration. In light of international experience and the high workload of caseworkers in Hungary, rather than requiring IAPs of all jobseekers, IAPs could be made mandatory for jobseekers in Categories 2 and 3 within the first two months after registration. Category 1 jobseekers, on the other hand, could only be required to fill in an IAP after they fall into long-term unemployment (i.e., 12 months after registration).

**Table 5.1: Timing of first IAP and frequency of reporting—Select OECD countries**

	Time of first intensive interview and extent of profiling and IAP at that interview	Reporting of status by being regular (R) or not, in-person attendance (P) or not; length of intervals
<b>Australia</b>	Upon registration, often with profiling and IAP	R, P, every two weeks
<b>Finland</b>	Within a month, with profiling	R, every month
<b>Ireland</b>	After one month	R, P (in most cases), once a month
<b>Japan</b>	At registration	R, P, every four weeks
<b>Norway</b>	Within three weeks	R, every two weeks
<b>Switzerland</b>	After 16 days on average	R, P, every month
<b>United Kingdom</b>	Usually within a week	R, P, every two weeks

Source: OECD 2007.

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Note: IAP = individual action plan.

**In addition, some ALMPs should not be offered to the most vulnerable jobseekers (Category 3) as they present multiple barriers to employment.** One such example is the “assistance to becoming an entrepreneur,” which is often seen as a last resort employment opportunity for individuals who will otherwise not be hired as salaried workers. Most often, Category 3 individuals require more assistance and mentorship to start their own business, which may overburden NES caseworkers and may appear to shift unemployment to self-employment.

#### 5.3.4 The need to update existing registries

**During the transition to the new methodology, jobseekers profiled with the current methodology will coexist with jobseekers profiled using the updated model.** While all new prospective jobseekers will be profiled with the new methodology as soon as it is implemented, older cases will remain in the system, categorized with the current methodology, and offered IAPs under it. The profiling of active jobseekers is not retroactive; only newly registered active jobseekers will be profiled, and active jobseekers who were registered prior to the new profiling methodology will remain in the system under the old classification. Consequently, if operation manuals about how to address different types of jobseekers use the new classification, jobseekers from old registries will fall outside the range of these new procedures, and their profiles will need to be updated in order for caseworkers to service them according to updated procedures and guidelines.

#### 5.4 Number of categories of jobseekers

**In most countries, including Hungary, jobseekers are profiled into three categories.** Jobseekers are categorized according to (i) those with low barriers to employment who need little assistance from the PES; (ii) those who are at medium risk of being long-term unemployed and need regular assistance from the PES; and (iii) those who are far outside the labor market and need intensive assistance from the PES, and potentially a combination of interventions from other services (social welfare, etc.). However, some countries have opted for other categorizations. Ireland for instance, segments jobseekers into just two broad categories: high- and low-risk groups. Sweden, on the other hand, segments jobseekers into four different categories, of those who have: (i) very good employment prospects; (ii) good employment prospects; (iii) weak employment prospects; and (iv) high long-term unemployment risk.

**The number of profiling categories should relate to the ability of the PES differentiate services.** Countries with few ALMPs and a rigid legal environment should opt for fewer categories than countries with a wider set of ALMPs and the ability to meet different categories of jobseekers at different frequencies or spend more time during each visit with certain types of clients.

**Hungary should use no more than three categories of profiles, as noted in the HÉTFA report.** An extra category should be only be added if there is space for service differentiation but would most likely be equivalent to, say, dividing the high-risk category into two groups, and leaving one group of jobseekers behind (those *too distant* from the labor market). For instance, in the former Yugoslav Republic of Macedonia, jobseekers can register with the PES as *active* or *passive*. *Active* jobseekers are offered the full set of services and ALMPs that are managed by the national employment agency, and they must show they are actively searching for a job (determined by frequency of visits, applications, job interviews, etc.). On the other hand, *passive* jobseekers have little access to the PES (only a subset of services, and no

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ALMPs). They have no obligations to the employment agency. Such a system effectively accepts that many vulnerable jobseekers who are distant from the labor market register at the PES to access social benefits (social assistance, medical insurance), with little motivation to use the PES to its full potential. While this reduces the caseworkers' workload, as noted in the HÉTFA report, it also institutionalizes a category of jobseekers that will be left behind.

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## 6 Findings and recommendations

**A significant number of vulnerable Hungarians remain excluded from the labor market.** Despite the labor market's impressive rebound from the financial crisis, there are still many people who are outside the scope of the public employment services. Many are inactive, unemployed, or on the margins of the labor market, and a disproportionate number of them live in areas with low labor demand—for example, in rural areas, in the Great Plains, or in the North.

**Clients with multiple labor market entry barriers need targeted and integrated support that is family centered, long term, and able to combine several resources; it is therefore paramount to involve other partners and sectors, in addition to the NES.** Inactive and unemployed clients present a set of complex individual and household challenges, such as care needs, health care problems, lack of marketable trades and skills, as well as transportation and mobility disadvantages. These problems must be resolved, on the one hand with active labor market policies, and on the other with social services. Potential employees who exist on the labor market's margins are more ready to enter the market, and therefore require fewer supporting resources.

**There is no designated agency within the government system responsible for employment policies and institutions.** As a result, existing labor market tools and related services are provided by several distinct actors, with poor coordination between the individual tools and the different services within them. A framework for coordinating the employment policy tools must be created within a single employment policy concept, where competencies are clear and the actions of which are regularly coordinated.

**To shift the NES from an operation focused on authority tasks to a more service-centered one would require restructuring resources and institutional capacities.** For the NES to be able to cooperate and coordinate with other ministries and service providers at the district or county level, the structure and distribution of its current resources need to be redesigned. In addition, the NES needs to be taken out of the government structure and an integrated employment organization should be created.

**All activities along the client service pathway require targeted reforms.** Against the issues and ideas discussed in previous chapters of the report, our conclusions center around the following four links in the client delivery chain: (i) client intake; (ii) client classification; (iii) service identification; and (iv) service delivery. The recommendations are further detailed below.

### 6.1 Recommendations on client intake

**Intensive outreach work is required to contact inactive individuals; this should be done in close coordination with the local municipal governments and NGOs so as to expand the circle of clients.** Cooperating with local NGOs can facilitate contact with marginalized communities. In this process it is essential to consult with local municipal governments to ensure they address the counter-incentives and the retention effect of local public works.

**Outreach activities should pay special attention to inactive women.** For some, providing information about child care may be sufficient to encourage them to take up a job, whereas for others, their lack of required skills and work experience can pose further barriers. This population is of working age and consists of some 300,000 individuals who are not looking for a job and are either retired or have

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disabilities, and are almost entirely women. The LCA indicates that a significant number of these women (about 84,000) have only lower secondary education and have never worked.<sup>65</sup> The majority of women in this group live in the Great Plains or in the North, where there is weaker labor demand. About 50 percent of them need child care provision, and as a result it is very likely that—in line with the country's strong gender norms—they have to stay at home. Furthermore, one-third of them describe themselves as Roma, implying they may be subject to discrimination on the labor market.<sup>66</sup> The social and community norms related to their residence, ethnicity, and gender probably affect their educational attainment. If schools—which are primarily in remote areas and have Roma pupils—can address the social expectations related to gender roles, it can encourage more girls and women to continue their education and obtain work experience so they can ultimately enter the labor market (this process would be reinforced by raising the compulsory schooling age to 18). The other group of women—amounting to two-thirds—have higher qualifications and previous work experience, but are mothers of young children.<sup>67</sup> Some cannot be financially incentivized to find a job while their children are small because their husbands already work. The successful return of mothers to the labor market can be facilitated if, before they go on maternity leave, they receive information about the basic job search services and the opportunities for child care, and on the importance of being in touch with the labor market on an ongoing basis, since without the above their contacts shrink and their skills dissipate.

**NES portfolio should be re-designed so as to address—in addition to registered jobseekers—the potential labor force reserve, and this requires increasing its capacities and clarification of its tasks.** The national services and employment-related projects are primarily based on the registered unemployed. Therefore, despite the fact that the objective is to efficiently help jobseekers find suitable employment, a significant number of them continue to remain outside the scope of the NES, including potential jobseekers who are inactive at the time or who are active on the black market. For the NES to be able to perform this task, its administrative burden must be decreased, to guide clients to the most appropriate service delivery channel based on the segmentation of clients, and to improve job matching efficiency, e.g., by improving job offerings.

**Those employed on the margins of the labor market (some 500,000 people) may register with the NES for job search services that could improve their situation, but in practice they would not be served effectively.** The existing labor market tools only cover a certain portion of those clients who face barriers, and only some of these barriers can be addressed with the above-mentioned tools. Those who are currently employed - but still marginalized - should be encouraged, to try to find a better or more stable job, because based on their work experience and education, they can probably change jobs.

## 6.2 Recommendations on client classification

**Relying on a revamped IR, the NES must identify and systematically take stock of those barriers—such as those related to nursing/caregiving tasks, mobility obstacles, or physical or mental health**

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<sup>65</sup> Classified into group 7 (*low-income, inactive women with low education, some with care responsibilities*), which is made up of about 84,500 women.

<sup>66</sup> Because people of Roma origin often prefer not to self-declare as Roma in household surveys, it is possible this proportion is even higher.

<sup>67</sup> These women are a part of group 3 (*relatively well-off, educated, inactive married women with care responsibilities and no recent work experience*), which consists of about 232,000 women.

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**problems—in which solutions go beyond the scope of labor market services.** At the individual and family level, the barriers to employability and taking a job are difficult to interpret in the current IR system (as revealed based on data from the EU-SILC 2016 and case managers’ practices). For this reason, the IR needs to be reviewed. However, the difficulties can be mitigated or overcome altogether with interventions that go beyond the employment services’ current portfolio.

**There is no need to further break down the current three categories used in the labor market profiling system.** In accordance with the recommendations of the HÉTFA Research Institute, there is no need to further segment the currently existing three categories that reflect the probability of a successful job search (high/medium/low).<sup>68</sup> At the same time, it is important to collect further data so as to accurately calibrate a client categorization system, which also supports case management and employment mediation work with several variables (e.g., child care obligations or need for health care provision). Based on the history of Hungary’s profiling system, and in line with the different consultations conducted, the NES should aim to put into practice the following measures, either in the framework of the model proposed by the HÉTFA Research Institute or in the framework of the profiling methods to be introduced by the NES in the future.

- If a new profiling system is introduced: collect further data to be able to calibrate such a statistical profiling system, which will consist of more variables in the future (e.g., the need for child care or health care).
- Minimize the ability to reclassify a jobseeker into a different category after statistical profiling is conducted (e.g., automatically flag NES agents who reclassify more than a given percentage of jobseekers).
- Additional trainings and measures to reduce the administrative burden can help minimize the risk that case managers will refuse to use the profiling system. Further measures may include involving case managers in designing and updating the profiling system, and introducing incentives to use the profiling system.
- To decrease the administrative burden, restrict the IAP to jobseekers with high (compulsory IAP) and medium (voluntary IAP) barriers to employment, and introduce clear rules for retroactive profiling.
- Identify overlaps between social services and the NES (with special emphasis on Category 3, likely to remain in long-term unemployment, clients of the profiling system): many of the most vulnerable clients do not only need the help of NES, but need other services as well. Case managers should be responsible for coordinating with other agencies—social services, included—to ensure that the most disadvantaged clients have access to several such programs (social benefits, housing allowance, child benefits, etc.).

### 6.3 Recommendations on service identification

**Over the course of designing the activation and employment support programs, the NES should strive to adopt a demand-driven approach, bearing in mind the labor market barriers for its target groups, including registered and potential jobseekers.** The data analysis has revealed that the composition of people with labor market difficulties—which consists of those unemployed, inactive, and on the fringes

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<sup>68</sup> The current profiling algorithm used by the NES takes into account certain socio-demographic characteristics to categorize jobseekers as Category 1 (independent jobseeker), Category 2 (likely to find a job in the medium term, but also likely to benefit from public employment services and ALMPs), and Category 3 (likely to remain in long-term unemployment). The latter category is officially referred to as “to be assisted by the public works scheme.”

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of the labor market—is mixed and includes at least seven distinct groups from the perspective of labor market barriers. Certain groups are mainly concentrated in regions with a low labor demand (rural areas, in the Great Plains, and in the North) and can be characterized by having low qualifications and limited work experience. Women make up almost all of the inactive individuals who are able to work, many of whom need child care and a part-time job or home-based work in order to connect to the labor market. The group of low-skilled unemployed living in rural areas also comprises a significant proportion of individuals declaring to be of Roma origin. The results of the LCA exercise can help evaluate the currently available ALMPs and supplementary services.

**The design of services and programs should be primarily dictated by demand, considering that the jobseeker should indeed have a better chance of entering or reentering the primary labor market through targeted interventions.** The majority of labor market services are not effective because in the current setting, the programs are tied to resources; that is, completing the services and programs is supply-driven rather than demand-driven, and in the given case the programs and services consider the characteristics of the open labor market only to a limited extent.

**The NES must prepare to refer its clients to outside service channels.** The NES has to explore and systematically identify those barriers—e.g., nursing/care responsibilities, mobility obstacles, or physical or mental health problems—whose solution goes beyond the scope of the labor market services. Then it will have to contact the appropriate service providers at the district or county level to assess the necessity of and opportunities for cross-sectorial cooperation and coordination. Clients facing multiple barriers in the labor market need complex, flexible, family-centered, and long-term support, which make it indispensable to involve other partners, in addition to the NES. It is of vital importance for Hungary to deal with the needs of clients who face multiple barriers and make use of its potential labor resources.

**Increased efforts and allocated resources are required to obtain improved results from Category 3 clients.** Many of the most vulnerable jobseekers—that is, clients channeled to public works—need further services to facilitate their entry to the primary labor market. Case managers who work with Category 3 clients need to contact and coordinate with actors in the other professional branches— social services providers, among others—to ensure access for the most disadvantaged clients to several programs (social services, housing allowance, disability benefits, etc.). Customized service packages are also needed to make clients more flexible and adaptable vis-à-vis structural changes in the future—which go beyond the tasks currently performed—so operating them requires more resources. Along with efforts to overcome employment barriers, job matching activity aimed at finding employment for people doing public works should also be strengthened.

#### 6.4 Recommendations on service delivery

**The institutional model of the NES should be decentralized so it can effectively adjust the processes in the local and regional labor market.** A decentralized organizational model, based on and in-depth organizational assessment, that provides more scope to local initiatives can contribute—under a comprehensive umbrella—to making the NES more efficient and balanced. In areas with high labor demand, employers should receive head hunting and advisory services. In developing areas, trainings and services should be provided to increase the flexibility of jobseekers, ensuring potential for mobility; and

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integration of labor market and social services (including, among others, the inclusion of the health care and educational sectors). Their integration should be supported with long-term mentoring.

**In order to effectively manage labor market barriers, institutional mandates must be strengthened, and cooperation mechanisms introduced.** To better manage the problem of limited labor force supply and the high registration retention rate in the IR, in cooperation with the ministries, NES services and measures should be better coordinated and supplemented with tailor-made, project-based, temporary outside services and measures that provide solutions at the local level. To achieve this, the strategic distribution of such mandates should be defined in accordance with the main objectives. Through its district and county level sections (which are currently under the Office of the Prime Minister) the NES should play a greater role in organizing the provision of services based on *actual demand*. For this to occur, however, the current system, which transfers clients to other services, should be further developed.

**Better coordination within the organization is indispensable to improve the provision of services. The NES can be enabled to coordinate the multiple parallel employment programs and projects through stronger decision making and resource planning mandates delegated at the local level.** The target groups of programs operated by the individual agents—municipal governments, the employment sections of district government offices, employers, NGOs—often overlap. On the other hand, the project-based, temporary character of certain services creates supply breaks that compromise the efficiency and effectiveness of services. Coordination processes play an important role in maximizing the impact of these programs.

**Financing mechanisms should be coordinated more effectively to better manage the different parallel labor market challenges.** One of the most basic obstacles to effective client management has been pointed out as the budget fragmentation at NES. In the case of activities financed by the EU, the project aims channel clients into actually ongoing services and programs within in predefined time periods. As a result, it may happen that if the same services are required at a different point in time, no project-based subsidy may be available, and the clients cannot be served.

**To prevent the long-term harmful effects of unemployment on an individual level, services should focus on preventing gaps in labor market participation.** Services that help with the transition from unemployment to employment are more effective if priority is given to preventing or mitigating personal issues that can reduce motivation or increase stress. Services can also be enhanced with synergies. The service facilitating a client's transition from unemployment to employment is more effective if they — based on the needs of the clients—supplement each other. For example, training for youth in the youth guarantee schemes may be more impactful if available wage subsidies are offered to employers that can employ newly trained youth with no job experience immediately after the trainings, so as to avoid a break in individual pathways which may lead to diminishing motivation and increased stress. Jobseekers' motivation can be increased by providing supplementary counseling and mentoring, while job retention can be assisted by following up with employers and jobseekers—for example, in the case of young people or groups affected by discrimination, e.g., Roma or those with disabilities.

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**To resolve regional and at times local unemployment, the mobility support system must be completely re-designed, including more effective support for housing and travel costs, and the development of the transport infrastructure.** People living in areas with a low labor demand are likely to have fewer resources, so they will need additional or longer-term support to stabilize their position in the labor market. At the same time, in regions characterized by high labor demand, the NES must be prepared to meet the needs of the workforce coming from other regions and to provide ongoing support and follow-up during the resettlement process. At the subregional and local level, it is necessary to mitigate the difficulties of reaching the workplace by developing the transport infrastructure and supporting commuting.

**To facilitate exit from public work to the primary labor market, resources must be provided on the employee side to compensate for the extra costs of employment. Incentives should be put in place for local public work providers backed by a changed municipal financing system for the operation of settlements.** The efficiency of the labor market programs is hindered by barriers and counter-incentives coming from the setup and the government funding of municipal governments. Previous commitments undertaken for public works and the challenges of relocation further hamper efficient organization of ALMPs. The additional costs of employment (transport, meals, clothing) and the difficulty of providing child care during working hours limit an employee's position on the primary labor market.

**It is necessary to strengthen basic competences and to improve the adult and vocational training system in order to prepare for the expected changes in the labor market that are driven by technological development.** With the introduction of new technologies, labor markets are expected to increasingly reward cognitive and interpersonal skills rather than those that pertain to manual and routine tasks. As rapid technological developments change the skills employers require, a review of the adult and vocational training systems is needed. This requires review efforts at the level of the public education system too as young people often graduate without basic competencies. Within this framework, it is recommended to develop a results measurement system for trainings along with modalities of performance-based financing<sup>69</sup>.

**It is necessary to coordinate with other service providers to complement existing ALMPs.** The (re)organization of services should focus on an integrated approach to include the provision of training, social and healthcare programs to address the needs of the vulnerable. In the opinion of the relevant actors, the coordination and use of these services—even in a best-case scenario—is random, despite the fact in the mid-2000s integrated service-providing mechanisms, supported by EU funds, had been worked out and tested. However, these have never been incorporated into the processes at a system level.<sup>70</sup> The cross-sectorial coordination is especially indispensable in those parts of the country where the employment ratio is lower, where—in addition to wage subsidies—the aim of developing a regional labor market is the facilitation of job creation and of a new entrepreneurial spirit and business environment.

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<sup>69</sup> Hungary is currently revamping its vocational training system. The attempt to get the responsible ministry to participate in the on-site activities of the RAS mission was unsuccessful.

<sup>70</sup> Further information on coordination of the ALMPs and social services can be found in Output 3 of the current technical assistance.

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## Appendix A. Definitions of employment barrier indicators using EU-SILC data

Eight indicators are constructed using EU-SILC data in order to proxy for the three broad types of employment barriers—capabilities, incentives, and scarce employment opportunities. The definition of each of these indicators is provided below.<sup>71</sup>

Five indicators are used to proxy for *capabilities barriers*:

1. **Low education:** if an individual has an education level lower than upper secondary education in the ISCED-11 classification;
2. **Care responsibilities:** if an individual lives with someone who requires care (i.e., of children 12 and under who receive less than 40 hours of care a week, or of elderly with health limitations) and is either the only potential caregiver in the household or is reported as inactive or working part-time because of care responsibilities; additionally, a person is considered to have care responsibilities if they report that they provide 20 or more hours of voluntary (unpaid) care per week to other persons (not including child care unless it is care provided to children due to their long-term health).<sup>72</sup>
3. **Health limitations:** if an individual reports some or severe limitations in daily activities due to health conditions;
4. **No recent work experience:**  
The indicator may represent one of two situations:
  - (i) those who have worked in the past but have no recent work experience (have not worked for at least one month in the last semester of the reference year and are not working at the time of the interview);
  - (ii) those who have never worked;
5. **Low relative work experience:**<sup>73</sup> individuals who have worked less than 60 percent of the time since they left full-time education.

Two indicators are used to proxy for *incentives barriers*:

1. **High nonlabor income:** if household income (excluding earnings from the individual's work-related activities) is more than 1.6 times higher than the median value among the working-age population;
2. **High replacement benefits:** if earnings replacement benefits are more than 60 percent of an individual's estimated potential earnings in work.

One indicator is used to proxy for *scarce employment opportunities*:

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<sup>71</sup> More details on how each indicator is estimated using EU-SILC data can be found in the methodological paper written by the OECD and World Bank (2016).

<sup>72</sup> Information on whether the person provides 20 or more hours of care per week is included in the ad hoc module on access to services of the 2016 EU-SILC survey.

<sup>73</sup> Due to lack of available data in the 2013 EU-SILC database, this indicator was not included in the Karacsony et al. (2017) analysis of 2013 data.

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1. **Scarce employment opportunities:**<sup>74</sup> if an individual is estimated to have a high probability of being unemployed or involuntarily working part-time due to their age, gender, education, and region of residence.

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<sup>74</sup> The scarce employment opportunities indicator does not take into account the fact that inactive individuals who are not unemployed may nonetheless face scarce opportunities if they were to search for a job.

## Appendix B. Employment barriers and socioeconomic characteristics of out-of-work and marginally employed individuals according to latent classes, 2013 EU-SILC

	<b>Group 1: Retired or inactive, relatively educated older individuals, some with health limitations</b>	<b>Group 2: Poor, low-educated, unemployed or inactive individuals, some with health limitations</b>	<b>Group 3: Retired older women, some with health limitations</b>	<b>Group 4: Relatively educated, middle-aged inactive mothers with past work experience facing care responsibilities</b>	<b>Group 5: Poor, middle-aged, mostly male, long-term unemployed with past work experience</b>	<b>Group 6: Poor, low-educated, inactive young mothers with care responsibilities</b>	<b>Target population</b>	<b>Working-age population</b>
Class size (as a share of target population)	36	24	14	10	8	8	100	
<b>INDICATOR</b>	<b>Share of individuals facing each barrier, by group</b>							
<i>Capabilities barriers</i>								
Low education	2	68	48	0	37	64	31	18
Care responsibilities	5	4	7	71	8	48	15	5
Health limitations	47	38	51	6	24	11	37	20
No recent work experience—has worked in the past	82	50	93	79	87	51	73	28
No recent work experience—has never worked	1	21	3	1	3	40	9	3
<i>Incentives barriers</i>								
High nonlabor income	21	13	29	33	11	8	19	21
High earnings replacement (benefits)	28	10	4	2	3	8	14	6
<i>Opportunities barrier</i>								
Scarce employment opportunities	0	100	2	9	100	100	41	33

Source: Karacsony et al. 2017.

Note: The table shows the percentage of each group with each characteristic. Color shadings signal high (red) and lower (white) frequencies. Target population refers to population ages 18–64 who are out of work and marginally employed, not including full-time students ages 18–24, retired individuals, or individuals receiving disability benefits who also report

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being unfit to work and having severe limitations in daily activities. Working-age population is ages 18–64, not including full-time students ages 18–24. For definitions of employment barrier indicators using EU-SILC data, see Appendix A.

## Appendix C. Employment barriers and socioeconomic characteristics of target population according to labor market status

Target population (persistently out-of-work and marginally employed)								
Persistently out-of-work population								
	Other inactive	Domestic	Unfit to work	Unemployed	Total out-of-work	Marginally employed	Total target population	Working-age population
Number of individuals	225,447	97,719	189,463	236,645	764,554	484,952	1,249,506	5,753,232
As a share of reference population	3.9	1.7	3.3	4.1	13.3	8.4	21.7	100.0
As a share of target population	18	8	15	18.9	61.2	38.8	100	NA
Capabilities barriers								
Low education	35	25	34	36	34	24	30	17
Care responsibilities	60	66	5	8	30	13	23	7
Health limitations	14	15	85	25	36	22	31	20
No recent work experience—has worked in the past	72	78	94	78	79	11	53	21
No recent work experience—has never worked	28	22	5	22	19	0	12	3
Low relative work experience	64	62	38	54	53	33	45	20
Incentives barriers								
High nonlabor income	31	37	16	18	24	22	23	25
High earnings replacement (benefits)	9	4	16	2	8	3	6	4
Opportunities barrier								
Scarce employment opportunities	33	28	12	64	36	35	36	27
Women	90	97	47	39	64	54	60	51
Children 12 and younger in household	82	77	12	24	45	36	41	28
Age group								
Youth (16–29)	37	20	2	28	23	20	22	15
Middle-aged (30–55)	57	71	37	48	51	62	55	60
Older (56–64)	6	9	60	24	26	17	23	25
Region								
Central Hungary	25	44	15	32	27	30	28	30
Transdanubia	33	26	32	19	28	23	26	30
Great Plain and North	42	31	53	49	45	47	46	40
Degree of urbanization								
Densely populated	21	30	19	31	25	25	25	30
Intermediate	25	28	21	23	24	21	23	22
Thinly populated	54	42	60	46	51	54	52	48
Target population group								
Out-of-work	100	100	100	100	100	0	61	24
Unstable jobs	0	0	0	0	0	15	21	5

Target population (persistently out-of-work and marginally employed)								
Persistently out-of-work population								
	Other inactive	Domestic	Unfit to work	Unemployed	Total out-of-work	Marginally employed	Total target population	Working-age population
Restricted hours	0	0	0	0	0	53	6	1
Near-zero income	0	0	0	0	0	31	12	3
Main activity during reference period (more disaggregated)								
Employed full-time	0	0	0	0	1	18	8	62
Employed part-time	0	0	0	0	1	15	6	3
Self-employed full-time	0	0	0	0	0	11	4	7
Self-employed part-time	0	0	0	0	0	3	1	1
Unemployed	0	0	0	100	31	28	30	7
Retired	0	0	0	0	0	1	1	8
Unfit to work	0	0	100	0	25	1	16	6
Domestic tasks	0	100	0	0	13	3	9	2
Other inactive	100	0	0	1	29	18	25	4
Main activity at onset of interview								
Employed full-time	0	0	0	0	0	42	16	61
Employed part-time	0	0	0	0	0	17	7	2
Self-employed full-time	0	0	0	0	0	12	5	7
Self-employed part-time	0	0	0	0	0	3	1	0
Unemployed	3	1	0	97	31	19	26	8
Retired	0	0	0	0	0	0	0	9
Unfit to work	1	0	99	1	27	0	17	6
Domestic tasks	4	97	0	1	14	1	9	2
Other inactive	91	1	1	1	27	5	19	4
Student	1	1	0	1	1	0	1	0
Employed in public works at time of interview	0	0	0	0	0	7	3	4
Months in unemployment								
0 months	95	97	99	0	67	64	66	88
1–5 months	4	3	1	0	2	7	4	5
6–11 months	1	0	0	14	5	24	12	3
12 months or more	0	0	0	86	27	6	19	4
Actively searching for a job at time of interview	6	3	2	56	20	13	18	5
At risk of poverty (60% of median income)	27	31	26	52	35	41	37	15
At risk of poverty (40% of median income)	10	16	6	25	14	21	17	5
Income quintile								
Poorest	38	39	34	57	42	51	46	20

Target population (persistently out-of-work and marginally employed)								
Persistently out-of-work population								
	Other inactive	Domestic	Unfit to work	Unemployed	Total out-of-work	Marginally employed	Total target population	Working-age population
2	25	19	34	20	25	20	23	18
3	13	13	17	10	13	13	13	19
4	14	20	8	9	12	7	10	21
Richest	10	10	6	4	7	8	8	23
Education level								
Primary or less	4	2	3	4	3	2	3	1
Lower secondary	31	23	31	32	30	21	27	15
Upper secondary	40	48	58	50	49	48	49	53
Postsecondary	5	6	2	7	5	9	7	7
Tertiary	20	21	5	8	12	19	15	23
Participated in training related to professional activity in last 12 months	2	1	0	5	2	15	7	16
Main reason for not participating								
Cannot afford it	3	7	4	13	7	7	7	4
Not interested	52	58	60	48	54	53	54	54
Time constraints	15	12	1	1	6	5	6	9
No suitable courses or programs available	2	2	1	5	3	10	5	9
Not provided by employer	1	0	0	0	0	6	2	5
Other reasons	28	21	34	33	30	19	26	20
Age groups (more disaggregated)								
16–19 years	6	1	1	6	4	2	3	1
20–24 years	15	7	1	13	10	9	9	5
25–29 years	17	12	0	9	9	9	9	9
30–34 years	23	19	2	7	12	11	11	10
35–44 years	26	39	7	13	19	27	22	23
45–54 years	7	13	23	25	18	22	19	24
55–59 years	3	4	34	12	14	14	14	14
60–64 years	3	5	33	14	15	7	12	14
Average age	33.6	38.2	54.5	41.9	42.4	41.4	42.0	44.4
Severe limitations in daily activities	4	4	8	7	6	3	5	5
Children under 6 in household	72	62	5	14	35	23	30	16
Children under 3 in household	57	44	3	8	26	12	20	9
Children under 13 in formal child care								
None	33	33	5	8	18	9	14	8
Some	34	25	1	6	15	6	12	6

Target population (persistently out-of-work and marginally employed)								
Persistently out-of-work population								
	Other inactive	Domestic	Unfit to work	Unemployed	Total out-of-work	Marginally employed	Total target population	Working-age population
All	15	20	6	9	11	21	15	15
NA	18	23	88	76	55	64	59	72
Elderly in the household	8	13	15	14	12	11	12	11
Live with parents	23	16	14	38	24	23	24	18
At least one working adult in the household	77	78	47	51	61	60	61	62
Marital status								
Married	49	68	49	31	46	44	45	50
Never married	40	21	20	51	35	40	37	31
Divorced/separated/widower	11	11	30	18	19	16	17	19
Labor market status of spouse/partner								
Working	63	69	31	24	43	43	43	45
Unemployed	3	5	3	6	4	6	5	3
Retired	2	4	13	5	6	3	5	6
Unfit to work	3	1	6	3	4	2	3	3
Domestic tasks	1	0	0	2	1	2	1	2
Other inactive	1	4	4	3	3	4	3	4
No spouse/partner	28	17	44	57	40	40	40	38
Ethnicity								
Magyar	90	90	97	90	92	93	92	97
Roma	10	10	3	10	8	7	8	3
Home ownership								
Owner	78	80	88	79	81	84	82	86
Tenant	5	5	1	7	5	4	4	5
Reduced rate	6	4	7	10	7	5	6	4
Free	10	11	3	4	7	7	7	5
Receives family benefits	92	86	25	39	57	49	54	40
Average annual value*	1,082,802	999,828	411,156	531,164	867,852	616,673	778,925	554,710
Receives social exclusion benefits	14	12	10	19	14	10	12	6
Average annual value*	144,348	175,666	120,948	161,499	150,763	102,505	135,753	104,646
Receives unemployment benefits	3	1	1	36	12	17	14	5
Average annual value*	---	---	---	408,425	401,583	275,129	342,237	274,748
Receives old-age benefits	0	0	14	0	4	2	3	9
Average annual value*	---	---	833,300	---	830,285	---	901,877	1,240,495
Receives survivor benefits	1	1	4	1	2	1	1	1
Average annual value*	---	---	---	---	470,423	---	441,570	468,782

Target population (persistently out-of-work and marginally employed)								
Persistently out-of-work population					Total out-of-work	Marginally employed	Total target population	Working-age population
Other inactive	Domestic	Unfit to work	Unemployed					
Receives sickness benefits	0	0	0	0	1	4	2	5
Average annual value*	---	---	---	---	---	193,513	275,320	129,659
Receives disability benefits	3	0	80	4	23	6	17	7
Average annual value*	---	---	694,599	---	658,143	447,060	626,987	635,258
Receives housing benefits	14	10	12	22	15	14	15	7
Average annual value*	48,885	64,494	43,563	47,024	47,920	45,514	47,033	44,836
Receives any social benefits	96	90	99	76	89	69	81	61
Average annual household income from:								
Labor	2,337,918	2,531,966	1,613,152	1,701,636	1,995,077	1,934,192	1,971,447	3,496,383
Other	47	35	37	37	39	42	41	33
Benefits	1,341,098	1,210,908	1,228,517	832,905	1,130,312	717,220	969,985	731,284
Average annual equivalized household income	3,678,192	3,741,334	2,838,974	2,533,963	3,124,090	2,650,868	2,940,425	4,227,029

Source: World Bank staff estimates based on 2016 EU-SILC data.

Note: The table shows the percentage of each group with each characteristic. Target population refers to population ages 16–64 who are out of work or marginally employed not including full-time students ages 16–24, retired individuals, or individuals receiving disability benefits who also report being unfit to work and having severe limitations in daily activities. The working-age population is ages 16–64, not including full-time students ages 16–24. For definitions of employment barrier indicators using EU-SILC data, see Appendix A.

\*All amounts in HUF. Averages based on fewer than 30 observations are omitted.

## Appendix D. Employment barriers and socioeconomic characteristics of public workers, target and working-age populations

	Public workers	Target	Working age
Number of individuals	217,931	1,249,506	5,753,232
As a share of reference population	4	22	100
As a share of target population	NA	100	NA
<b>Capabilities barriers</b>			
Low education	52	30	17
Care responsibilities	3	23	7
Health limitations	21	31	20
No recent work experience—has worked in the past	0	53	21
No recent work experience—has never worked	0	12	3
Low relative work experience	46	45	20
<b>Incentives barriers</b>			
High nonlabor income	8	23	25
High earnings replacement (benefits)	2	6	4
<b>Opportunities barrier</b>			
Scarce employment opportunities	33	36	27
<b>Women</b>			
Children 12 and younger in household	33	41	28
<b>Age group</b>			
Youth (16–29)	20	22	15
Middle-aged (30–55)	62	55	60
Older (56–64)	18	23	25
<b>Region</b>			
Central Hungary	5	28	30
Transdanubia	23	26	30
Great Plain and North	73	46	40
<b>Degree of urbanization</b>			
Densely populated	5	25	30
Intermediate	12	23	22
Thinly populated	83	52	48
<b>Target population group</b>			
Out-of-work	0	61	24
Unstable jobs	11	21	5
Restricted hours	0	6	1
Very low income	4	12	3
<b>Main activity during reference period (more disaggregated)</b>			
Employed full-time	86	8	62
Employed part-time	3	6	3
Self-employed full-time	0	4	7
Self-employed part-time	0	1	1
Unemployed	8	30	7
Retired	1	1	8
Unfit to work	3	16	6
Domestic tasks	0	9	2

	Public workers	Target	Working age
Other inactive	0	25	4
Main activity at time of interview			
Employed full-time	98	16	61
Employed part-time	2	7	2
Self-employed full-time	0	5	7
Self-employed part-time	0	1	0
Unemployed	0	26	8
Retired	0	0	9
Unfit to work	0	17	6
Domestic tasks	0	9	2
Other inactive	0	19	4
Student	0	1	0
Employed in public works at time of interview	100	3	4
Months in unemployment			
0 months	67	66	88
1–5 months	23	4	5
6–11 months	9	12	3
12 months or more	2	19	4
Actively searching for a job at time of interview	0	18	5
At risk of poverty (60% of median income)	44	37	15
At risk of poverty (40% of median income)	8	17	5
Income quintile			
Poorest	59	46	20
2	26	23	18
3	10	13	19
4	4	10	21
Richest	1	8	23
Education level			
Primary or less	7	3	1
Lower secondary	45	27	15
Upper secondary	43	49	53
Post-secondary	3	7	7
Tertiary	2	15	23
Participated in training related to professional activity in last 12 months	7	7	16
Main reason for not participating			
Cannot afford it	4	7	4
Not interested	61	54	54
Time constraints	2	6	9
No suitable courses or programs available	11	5	9
Not provided by employer	9	2	5
Other reasons	13	26	20
Age groups (more disaggregated)			
16–19 years	1	3	1
20–24 years	9	9	5
25–29 years	11	9	9
30–34 years	8	11	10
35–44 years	23	22	23
45–54 years	28	19	24

	Public workers	Target	Working age
55–59 years	15	14	14
60–64 years	6	12	14
Average age	42.7	42.0	44.4
Severe limitations in daily activities	3	5	5
Children under 6 in household	16	30	16
Children under 3 in household	7	20	9
Children under 13 in formal child care			
None	6	14	8
Some	7	12	6
All	20	15	15
N/A	67	59	72
Elderly in the household	9	12	11
Live with parents	19	24	18
At least one working adult in the household	54	61	62
Marital status			
Married	37	45	50
Never married	39	37	31
Divorced/separated/widower	24	17	19
Labor market status of spouse/partner			
Working	38	43	45
Unemployed	5	5	3
Retired	2	5	6
Unfit to work	2	3	3
Domestic tasks	2	1	2
Other inactive	5	3	4
No spouse/partner	45	40	38
Ethnicity			
Magyar	86	92	97
Roma	14	8	3
Tenure status			
Owner	83	82	86
Tenant	2	4	5
Reduced rate	8	6	4
Free	7	7	5
Receives family benefits	46	54	40
Average annual value*	497,950	778,925	554,710
Receives social exclusion benefits	19	12	6
Average annual value*	100,194	135,753	104,646
Receives unemployment benefits	20	14	5
Average annual value*	166,852	342,237	274,748
Receives old-age benefits	0	3	9
Average annual value*	---	901,877	1,240,495
Receives survivor benefits	2	1	1
Average annual value*	---	441,570	468,782
Receives sickness benefits	8	2	5
Average annual value*	28,030	275,320	129,659
Receives disability benefits	1	17	7
Average annual value*	---	626,987	635,258
Receives housing benefits	30	15	7

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	<b>Public workers</b>	<b>Target</b>	<b>Working age</b>
Average annual value*	43,009	47,033	44,836
Receives any social benefits	71	81	61
Average annual household income from:			
Labor	1,970,972	1,971,447	3,496,383
Other	41	41	33
Benefits	545,493	969,985	731,284

*Source:* World Bank staff estimates based on 2016 EU-SILC data.

*Note:* The table shows the percentage of each group with each characteristic. Target and working-age populations are shown for comparison. Working-age population refers to population ages 16–64 not including full-time students ages 16–24. Target population refers to population ages 16–64 not including full-time students ages 16–24, retired individuals, or individuals receiving disability benefits who also report being unfit to work and having severe limitations in daily activities; it is further limited to out-of-work individuals and marginally employed individuals. Public workers refer to individuals who were employed in public works at the time of the interview. They are all considered of working age, but only 15 percent are included in the target population. For definitions of employment barrier indicators using EU-SILC data, see Appendix A.

\*All amounts in HUF. Averages based on fewer than 30 observations are omitted.

## Appendix E. Employment barriers and socioeconomic characteristics of out-of-work and marginally employed individuals according to latent classes, 2016 EU-SILC

	Group 1: Prime-aged, marginally employed, mainly with low earnings	Group 2: Mostly rural, older inactive with health limitations and no recent work experience	Group 3: Relatively well- off, educated, inactive married women with care responsibilities and no recent work experience	Group 4: Rural, low- income, low educated prime-aged unemployed	Group 5: Urban, mostly male, prime- aged and older unemployed	Group 6: Mostly rural, mostly unemployed youth with low work experience	Group 7: Low- income, inactive women with low education and no work experience, some with care responsibilities	Target population	Working- age population
Class size (as a share of target population)	24.9	19.5	18.6	12.2	9.4	8.5	6.8	100.0	5753232.0
Class size (number of individuals)	311,252	244,029	232,408	152,940	117,828	106,333	84,592	1,249,506	100
Share of individuals facing each barrier, by group									
Capabilities barriers									
Low education	13	37	9	67	15	28	83	30	17
Care responsibilities	6	10	82	8	3	1	46	23	7
Health limitations	24	85	8	20	28	10	6	31	20
No recent work experience—has worked in the past	0	94	86	60	88	18	13	53	21
No recent work experience—has never worked	0	3	2	3	0	56	84	12	3
Low relative work experience	20	40	47	61	32	84	95	45	20
Incentives barriers									
High nonlabor income	21	15	43	7	24	38	10	23	25
High earnings replacement (benefits)	2	13	7	5	1	1	12	6	4
Opportunities barrier									
Scarce employment opportunities	31	15	24	49	36	81	64	36	27
Women*	52	52	98	43	35	45	92	60	51
Children 12 and younger in household*	27	10	99	47	3	16	99	41	28
Age group*									
Youth (16–29)	14	0	18	15	0	97	71	22	15
Prime-aged (30–55)	66	45	81	67	52	2	29	55	60

	Group 1: Prime-aged, marginally employed, mainly with low earnings	Group 2: Mostly rural, older inactive with health limitations and no recent work experience	Group 3: Relatively well- off, educated, inactive married women with care responsibilities and no recent work experience	Group 4: Rural, low- income, low educated prime-aged unemployed	Group 5: Urban, mostly male, prime- aged and older unemployed	Group 6: Mostly rural, mostly unemployed youth with low work experience	Group 7: Low- income, inactive women with low education and no work experience, some with care responsibilities	Target population	Working- age population
Older (56–64)	20	55	1	17	48	2	0	23	25
Region*									
Central Hungary	33	16	39	14	54	16	24	28	30
Transdanubia	24	30	28	21	22	27	26	26	30
Great Plain and North	43	54	33	65	24	57	49	46	40
Degree of urbanization									
Densely populated	27	16	34	0	67	19	13	25	30
Intermediate	22	23	23	29	11	20	30	23	22
Thinly populated	51	61	42	70	22	61	57	52	48
Target population group									
Out-of-work	4	94	81	52	84	70	96	61	24
Restricted hours	24	0	0	0	0	0	0	6	5
Unstable jobs	24	6	19	48	16	30	4	21	1
Very low income	49	0	0	0	0	0	0	12	3
Main activity during reference period									
Employed full-time	31	0	0	0	0	0	0	8	62
Employed part-time	26	0	0	0	0	0	0	6	3
Self-employed full-time	18	0	0	0	0	0	0	4	7
Self-employed part-time	5	0	0	0	0	0	0	1	1
Unemployed	8	12	4	91	77	72	8	30	7
Retired	1	1	0	0	0	0	0	1	8
Unfit to work	0	70	1	2	10	2	3	16	6
Domestic tasks	0	1	32	0	11	6	20	9	2
Other inactive	11	16	63	7	2	20	68	25	4
Main activity at time of interview									
Employed full-time	42	1	9	17	5	18	2	16	61
Employed part-time	24	1	1	1	1	0	0	7	2
Self-employed full-time	19	0	0	0	0	0	0	5	7
Self-employed part-time	4	0	0	0	0	0	0	1	0

	Group 1: Prime-aged, marginally employed, mainly with low earnings	Group 2: Mostly rural, older inactive with health limitations and no recent work experience	Group 3: Relatively well- off, educated, inactive married women with care responsibilities and no recent work experience	Group 4: Rural, low- income, low educated prime-aged unemployed	Group 5: Urban, mostly male, prime- aged and older unemployed	Group 6: Mostly rural, mostly unemployed youth with low work experience	Group 7: Low- income, inactive women with low education and no work experience, some with care responsibilities	Target population	Working- age population
Retired	0	0	0	0	0	0	0	0	8
Unemployed	7	12	5	75	72	57	10	26	9
Unfit to work	4	71	1	2	10	2	1	17	6
Domestic tasks	0	1	30	0	10	5	26	9	2
Other inactive	1	14	54	4	2	12	60	19	4
Student	0	0	0	0	0	5	1	1	0
Employed in public works at time of interview	5	0	1	7	2	3	1	3	4
Months in unemployment									
0 months	82	86	93	8	22	25	87	66	88
1–5 months	8	2	2	1	1	3	4	0	5
6–11 months	7	3	3	39	15	37	4	4	3
12 months or more	3	9	2	52	62	35	4	12	4
Actively searching for a job at time of interview	5	9	6	48	36	41	10	18	5
At risk of poverty (60% of median income)	43	35	16	57	41	35	44	37	15
At risk of poverty (40% of median income)	24	12	7	26	18	14	15	17	5
Income quintile									
Poorest	51	41	25	68	47	42	60	46	20
2	19	32	22	22	15	24	30	23	18
3	13	14	17	6	16	16	5	13	19
4	9	8	20	3	13	12	4	10	21
Richest	8	5	16	1	9	6	2	8	23
Education level									
Primary or less	1	3	1	8	1	2	11	3	1
Lower secondary	12	34	8	59	14	26	72	27	15
Upper secondary	55	56	48	28	68	49	15	49	53
Post-secondary	10	3	10	3	4	10	0	7	7
Tertiary	21	4	33	2	13	13	1	15	23

	Group 1: Prime-aged, marginally employed, mainly with low earnings	Group 2: Mostly rural, older inactive with health limitations and no recent work experience	Group 3: Relatively well- off, educated, inactive married women with care responsibilities and no recent work experience	Group 4: Rural, low- income, low educated prime-aged unemployed	Group 5: Urban, mostly male, prime- aged and older unemployed	Group 6: Mostly rural, mostly unemployed youth with low work experience	Group 7: Low- income, inactive women with low education and no work experience, some with care responsibilities	Target population	Working- age population
Participated in training related to professional activity in last 12 months	18	1	4	6	2	9	1	7	16
Main reason for not participating									
Cannot afford it	6	4	5	9	11	16	5	7	4
Not interested	56	61	48	57	47	38	64	54	54
Time constraints	6	1	18	1	1	1	7	6	9
No suitable courses or programs available	10	1	2	7	6	10	2	5	9
Not provided by employer	5	0	1	4	0	4	0	2	5
Other reasons	18	32	26	23	34	32	22	26	20
Age groups (more disaggregated)									
16–19 years	1	0	0	1	0	20	15	3	1
20–24 years	6	0	4	7	0	48	34	9	5
25–29 years	7	0	15	7	0	29	22	9	9
30–34 years	8	3	31	13	7	0	12	11	10
35–44 years	26	9	44	23	14	1	14	22	23
45–54 years	27	28	6	28	27	0	3	19	24
55–59 years	15	32	1	14	23	1	0	14	14
60–64 years	10	29	0	6	29	1	0	12	14
Average age	44.0	54.2	35.1	42.3	52.1	23.6	26.8	42.0	44.4
Severe limitations in daily activities	4	11	2	3	7	3	2	5	5
At least one working adult in the household	61	46	86	38	45	82	67	61	16
Elderly in the household	12	15	5	12	21	11	9	12	9
Children under 6 in household	17	6	83	26	3	11	76	30	
Children under 3 in household	7	4	64	12	2	7	54	20	8
Children under 13 in formal child care									
None	5	5	45	13	1	5	28	14	15

	Group 1: Prime-aged, marginally employed, mainly with low earnings	Group 2: Mostly rural, older inactive with health limitations and no recent work experience	Group 3: Relatively well- off, educated, inactive married women with care responsibilities and no recent work experience	Group 4: Rural, low- income, low educated prime-aged unemployed	Group 5: Urban, mostly male, prime- aged and older unemployed	Group 6: Mostly rural, mostly unemployed youth with low work experience	Group 7: Low- income, inactive women with low education and no work experience, some with care responsibilities	Target population	Working- age population
Some	4	1	31	9	2	3	43	12	72
All	18	4	23	25	0	7	29	15	11
NA	73	90	1	53	97	84	1	59	18
Live with parents	20	12	15	23	19	81	33	24	62
Marital status									
Married	49	48	67	36	45	7	32	45	50
Never married	35	18	24	49	26	92	63	37	31
Divorced/separated/ widower	17	34	8	16	28	1	6	17	19
Labor market status of spouse/partner									
Working	44	32	80	27	34	9	48	43	45
Unemployed	5	3	2	12	5	3	12	5	3
Retired	5	11	1	3	11	1	0	5	6
Unfit to work	3	7	1	3	4	0	2	3	3
Domestic tasks	2	0	0	5	0	0	2	1	2
Other inactive	4	3	2	7	1	2	2	3	4
No spouse/partner	38	44	15	43	45	85	33	40	38
Ethnicity									
Magyar	97	95	97	80	98	89	71	92	97
Roma	2	4	3	20	2	11	29	8	3
Other/missing	0.9	0.3	0.1	0.0	0.1	0.0	0.0	0.3	0.2
Tenure status									
Owner	86	86	77	82	84	83	74	82	86
Tenant	3	2	7	3	6	8	5	4	5
Reduced rate	4	7	5	8	8	7	12	6	4
Free	7	5	12	7	2	3	9	7	5
Receives family benefits	45	29	100	57	19	42	98	54	40
Average annual value**	498,087	446,933	1,133,072	574,496	461,803	464,156	1,009,663	778,925	554,710
Receives social exclusion benefits	5	13	8	27	10	12	25	12	6

	Group 1: Prime-aged, marginally employed, mainly with low earnings	Group 2: Mostly rural, older inactive with health limitations and no recent work experience	Group 3: Relatively well- off, educated, inactive married women with care responsibilities and no recent work experience	Group 4: Rural, low- income, low educated prime-aged unemployed	Group 5: Urban, mostly male, prime- aged and older unemployed	Group 6: Mostly rural, mostly unemployed youth with low work experience	Group 7: Low- income, inactive women with low education and no work experience, some with care responsibilities	Target population	Working- age population
Average annual value**	100,934	125,549	144,687	139,213	105,221	137,193	180,591	135,753	104,646
Receives unemployment benefits	7	9	3	47	30	20	3	14	5
Average annual value**	219,124	379,430	259,879	348,279	447,174	262,179	271,385	342,237	274,748
Receives old-age benefits	4	11	0	0	1	0	0	3	9
Average annual value**	1,323,629	1,169,738	--	--	--	--	--	1,270,132	1,240,495
Receives survivor benefits	1	4	1	1	0	0	0	1	1
Average annual value**	--	--	--	--	--	--	--	441,570	468,782
Receives sickness benefits	5	0	3	1	0	1	0	2	5
Average annual value**	--	--	--	--	--	--	--	275,320	129,659
Receives disability benefits	10	61	1	4	12	3	1	17	7
Average annual value**	425,136	669,901	--	--	796,064	--	--	626,987	635,258
Receives housing benefits	8	16	6	35	14	16	26	15	7
Average annual value**	44,281	42,748	45,993	53,307	28,827	44,333	58,655	47,033	44,836
Receives any social benefits	62	94	100	87	65	66	98	81	61
Average annual household income from:									
Labor	1,857,248	1,533,319	2,916,698	1,221,048	1,840,875	2,749,754	1,619,421	1,971,447	3,496,383
Other	42	37	45	34	43	35	51	41	33
Benefits	626,401	1,105,502	1,381,973	914,527	848,783	660,589	1,369,954	969,985	731,284
Average annual equalized household income	1,065,228	1,211,587	1,494,558	848,493	1,240,881	1,192,054	955,498	1,167,056	4,227,029

Source: World Bank staff estimates based on 2016 EU-SILC data.

Note: The table shows the percentage of each group with each characteristic. Color shadings signal high (red) and lower (white) frequencies. Target population refers to population ages 16–64 not including full-time students ages 16–24, retired individuals, or individuals receiving disability benefits who also report being unfit to work and having severe limitations in daily activities; it is further limited to out-of-work individuals and marginally employed individuals. For definitions of employment barrier indicators using EU-SILC data, see Appendix A.

\*Included in the latent class analysis model as active covariates.

\*\*All amounts in HUF. Averages based on fewer than 30 observations are omitted.

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## Appendix F. Brief overview of ALMPs, public works, and social and employment cooperatives in Hungary

### *ALMPs in the Hungarian NES delivery system*

**Hungary’s ALMPs seek to address entry barriers faced by disadvantaged or at-risk jobseekers.**<sup>75</sup> Public employment statistics refer to eight distinct main thematic groups—training subsidies; subsidies for increasing employment; supporting job retention; supporting self-employment; mobility subsidies; subsidies for labor market programs; labor market subsidies; and housing subsidies—that are funded under a variety of schemes and programs. The core thematic focus is on increasing opportunities to enter or stay in the labor market by funding employment service activities that support job searching or job retention, and support self-employment. Over the past seven years, the total available pool of funds increased by over 50 percent, despite a considerable reduction in the resources made available for public works. As of 2018, the funding pool for active measures was planned to reach HUF 436.13 billion.

**EU structural funds implemented through various operational programs are a core element of addressing challenges in the labor market, and the available resources are sizable.** Altogether between 2014 and 2020 HUF 462.8 billion is available from the ESF for employment programs. Four operational programs have dedicated distinct funding strands (so-called priorities) to fund employability, training and specialized service provision and coordination mechanisms. For example, youth programs are funded from the Economic Development and Innovation Operative Program (GINOP); while reemployment or entrepreneurship facilitation of the long-term unemployed and inactive in the Central Hungarian region is funded from the Competitive Central Hungary Operative Program (VEKOP). Other interventions aim to help public workers enter the primary labor market and support vocational trainings for jobseekers, transit employment schemes, and social economy initiatives. The Human Resource Development Operational Program (EFOP) targets the most vulnerable jobseekers and rehabilitates people with disabilities, and to address discrimination or multiple vulnerabilities. The Territorial and Settlement Development Operational Program (TOP) supports local and regional cooperation and coordination of services to tackle labor market challenges: to this end, approximately 120 regional employment cooperation (pacts) have been established, with the objective of addressing regional disparities in job opportunities and improving the employability of disadvantaged jobseekers via a variety of instruments (wage subsidies, training, support for self-employment, mobility support, and housing allowances). Additionally, the Social Renewal Operational Program (TÁMOP)—which was implemented in the 2007–13 period and was closed in 2015—supported the employment of disadvantaged individuals through complex interventions. As of October 2018, only a portion of available EU funding has been used, though a large number of projects had already been contracted under the Operational Programs (OPs).

**Supply-side incentives are affecting NES service quality.** Qualitative research finds that allocation of NES resources and services is primarily driven by supply, impacting profiling outcomes at the local caseworker level. Interviews and focus groups with NES staff conducted during World Bank missions revealed that the needs of clients and the demands of employers are often secondary aspects when caseworkers make profiling decisions, so as to maximize the use of available resources. According to the established profiling

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<sup>75</sup> This section includes excerpts from Output 3 of this technical assistance.

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practice, clients in the most vulnerable situations (Category 3) should be oriented toward public works; Category 2 clients should get trainings and other services; whereas Category 1 clients should find jobs independently after having used available benefits. However, there is a tendency to “reclassify” registered jobseekers<sup>76</sup>—especially within Category 3. Furthermore, qualitative evidence suggests that clients’ needs are generally not individually addressed under the pressure to spend temporarily available resources, such as funds from EU OPs.

### **Public works in Hungary**

**Since its 2013 scale-up, the public works program has been the single largest government intervention on the Hungarian labor market.**<sup>77</sup> The public works program involved three subprograms in 2015: national public works,<sup>78</sup> longer-term public works,<sup>79</sup> and “start-work” pilots.<sup>80</sup> Most of the programs’ clients are *jobseekers with past work experience but no recent employment history*. Additionally, many public works clients who have been previously inactive and lost their income as a result of changes in the benefit system are from poor and vulnerable households.

**Public works reached the largest number of yearly participants in 2014 (375,000 individuals).**<sup>81</sup> Participation somewhat dropped after 2014 and then began to stagnate, but due to the longer public work periods, the average number of public workers grew steadily until 2016. Vulnerable youth no longer participate in the public works program, which is not generally aimed at promoting youth employment except in specific circumstances, such as when heads of households participate in regions with low local labor demand.

**Since 2017, the public works scheme has been undergoing considerable reform.** Policy changes have been introduced on the basis of the European Commission’s country-specific recommendations. The new focus encourages job searching (e.g., a public worker’s local and intercity public transportation travel expenses related to job-seeking should be reimbursed). Moreover, a gradual decrease of funds spent on public works should be achieved by reducing the number of public workers.

**Employment outcomes of the public works program are highly differentiated by the profile of participants.** At the end of 2015, the mean rate of reemployment in the primary labor market within 180 days of exiting a program stood at 12.2 percent. The reemployment rate is gender-balanced, with a higher reemployment rate for younger age cohorts (18.2 percent for 25-year-olds and younger) as well as for

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<sup>76</sup> In theory, caseworkers are expected to reclassify jobseekers if profiling fails to take into account subjective factors that may influence the chances they will find employment. However, quantitative and qualitative evidence shows that reclassification is often not justifiable by such subjective factors.

<sup>77</sup> This section includes excerpts from section 2.3 of Output 3 of this technical assistance. Output 3 is available to readers upon request.

<sup>78</sup> These are programs that operate for (mostly) skilled labor, and they are driven by multisectoral, large-scale investment priorities, such as road or railway development, forestry, and the digital agenda.

<sup>79</sup> The most frequently used form of public works is for six to eight hours of daily work, and is typically run by municipalities to address local unemployment.

<sup>80</sup> These are investments that target disadvantaged localities; the objective is to ensure self-sufficient and sustainable municipal operations.

<sup>81</sup> Annual participation in the program.

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those with upper secondary education (16.2 percent) or a tertiary degree (30.4 percent).<sup>82</sup> This indicates that additional services may be needed to increase the success rates of transits from public works schemes.

**While originally intended to boost employment outcomes at the local level, public works has left municipalities and participants significantly dependent upon each other.** With the introduction of the new Municipal Government Act<sup>83</sup> in 2011, municipal governments lost a significant portion of their administrative and authority functions, as well as funding. Since 2013 the central government has not provided financing for public tasks to be performed locally based on the separately calculated financing needs, but instead disburses normative subsidies minus the local tax paying capacity (Bordás 2017). In parallel with the loss of tasks and the continuous decrease of the budget—especially in settlements with hardly any or with no revenue of their own—the significance of the public works program has grown. In the past couple of years—especially in the small settlements of disadvantaged regions—the most important task of the municipal governments has become to organize and operate public works (Molnár et al. 2018). In settlements with practically no revenue of their own, public works is currently the only way to perform municipal operations.

### *Social and employment cooperatives in Hungary*

Social and employment cooperatives—the most common legal form for social enterprises, part of the social economy in Hungary—are mostly used as vehicles to employ persons who have trouble entering the labor market. There is no legislative framework defining “social economy” or “social enterprises” in Hungary,<sup>84</sup> but research points to the fact that social economic activities are the most prevalent in not fully employed, older households in the middle-income groups (where experience, skills, time, and some money to invest are present) in rural, underdeveloped areas and smaller settlements, where land is available for household production and the economic situation makes it necessary (Papp 2011).

EU funding has been provided to support social enterprises under TÁMOP 2007–2013, creating around 3,000 jobs for vulnerable people. Support will continue during the current EU programming period (2014–20) under the framework of the GINOP, with the overall goal to allocate €65 million and additional loans for 500 social enterprises to create a minimum of 4,000 new jobs.

Available HCSO data reveals that there were 2,976 cooperatives by 2014, of which 293 registered (for-profit) social cooperatives are the most relevant, offering employment to their disadvantaged members and services that improve their living conditions. Social and employment cooperatives have increased in numbers due to EU grant programs for their establishment and operation.

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<sup>82</sup> Karacsony et al. 2017.

<sup>83</sup> According to Act CLXXXIX of 2011 on the local municipal governments of Hungary.

<sup>84</sup> Foundations, associations, and other nonprofit organizations working under different legal statutes may form part of the broader “social economy” ecosystem, but they are also often referred to as social enterprises, although their business model might be entirely dependent on government grants/subsidies and not feature commercial activity.

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## Appendix G. Delphi Method Online Consultation

The purpose of the consultation was to provide an opportunity to comment on the findings and suggestions of the World Bank team of experts on the current state of labor market services in Hungary, and in order for the key findings and proposals to reflect the knowledge and positions on the key findings and proposals of a range of people as wide as possible. The consultation has been conducted in two rounds, with the assistance of invited experts. The first-round questionnaire contained statements and suggestions to be reviewed, and for each statement we requested comments and opinions in an editable textbox, in addition to the seven point grading scale measuring the statements where 1=fully disagrees, and 7 = fully agrees. The grading scale was used as a single opinion tool for the second round, where we were asking for comments on an open closing question as well.

We have made the written article available for the respondents on the link below , where we briefly summarize the main findings of the analysis work on which our findings are based. <https://drive.google.com/file/d/1i3NRbhhGIYZb8pcUfmXM2QRrZOrHfJxC/view?usp=sharing>

The key findings collected and enhanced with comments in the first phase of the review have been finalized with the help of the review of the opinions in the second round, and incorporated into component A of the closing section of the proposal section of the final deliverable.

We requested the collaboration of colleagues we consulted during the process of work. They are people who work for the NES, ministries, the chamber, municipal governments, researchers, professional workshops, foundations. We sent the instructions and the links to them in a circular e-mail, altogether to 416 addresses. Out of this number we sent 124 mails to the National Employment Service Departments of the district and county government agencies, and 147 mails have been sent – based on a list used in a previous coordination process – to municipal governments with less than 2000 residents.

The opinions are anonymous, and the comments have been summarized.

The deadline of replies for the first round was 10.00 pm. on February 13, 2019. The experts invited were able to provide their opinions on the key findings, which we used to correct the statements put out to poll in the second round of the consultation between February 14 and 19, 2019.

In the first round the number of respondents was 57. Out of these 28 – essentially half of the responses – came from NES experts, and only 2 municipal governments responded. Another sizeable group of the respondents were the employees of the NEF (9 responses). To each question 20-28 respondents provided their opinion and explanation in an editable textbox.

In the second round we received feedback from 76 respondents, out of them 51, that is two-thirds of the responses came from the experts of the NES. In this round only 3 municipal governments responded. 7 responses came from the employees of the NEF, and 5 responses came from different ministries. There was only one closing question asking for an opinion in this round– altogether 11 respondents sent some kind of supplementary information or comment.

The difference between the averages of the groups of respondents is not significant. The responses from the employees of the NES – given the changes in the average values of the responses supplemented by the second round and their high respondent ratio – represent an important part. In the case of questions 1., 2., 3., 4., 5., 14. their responses improved the average value whereas their scores given to questions 6., 7., 8. and 9., 10., 11., 12., 13.- lower than the average of the whole second round - worsened the total average, thus the level of consensus in these questions slightly went down. In the case of question 15. the increased average value is only partly due to the higher scores of the responses from the NES.

In the paragraphs below the changes to the statements and proposals in the original first round have been indicated with track changes. Below each statement you can read the average, deviation, median and modus of the first and second round, and the difference between the values of the two rounds.

- 1. Within a unified labor policy concept, the framework for coordination of employment policies should be established,** with clear competences and regular content coordination.

There is no entity responsible for labor market policies and institutions within the government system. As a result, the existing labor market tools and related services lack consistency because they are provided by several distinct actors.

	First round consultation	Second consultation	round	Difference
mean	5.93	6.04		0.11
deviation	1.47	1.08		-0.39
median	7	6		-1.00
modus	7	7		0.00

2. The development of **labor market** services and programs should be **done according to** demand, bearing in mind that the jobseeker should indeed have a **greater chance to** be employed in the primary labor market after he or she has benefitted from these services and programs.

Most labor market services are ineffective in Hungary because, in the current setting, programs are tied to resources, for example, the performance of services and programs is driven by supply rather than demand; and the characteristics of the open labor market are only partly considered.

	First round consultation	Second consultation	round	Difference
mean	5.68	5.95		0.27
deviation	1.26	1.18		-0.08
median	6	6		0.00
modus	6	7		1.00

- 3. Additional funds should be allocated to compensate the employee's additional labor costs, while public funding for municipal employment should be redesigned to facilitate exit from public works to the primary labor market.**

The efficiency of labor market programs is hampered by barriers and counter-incentives due to the public works program, local government financing, earlier engagement in public works (e.g. the operation of investments), and by the difficulties of operating the settlement. From the employee's point of view, the significant additional costs of employment (transport, meals, clothing) and the difficulty of accommodating children during working hours limit their position on the primary labor market.

	First round consultation	Second consultation	round	Difference
mean	5.46	5.88		0.42
deviation	1.72	1.26		-0.46
median	6	6		0.00
modus	7	7		0.00

**4. NES services should be extended beyond registered jobseekers to the whole potential labor reserve which requires expanding its capacity and rationalizing its tasks.**

NES services and employment projects are geared primarily towards registered jobseekers. Although the institution aims to help jobseekers to find suitable work, a significant part of people who are working on the black market remain out of their reach. In order to expand its scope, the NES must reduce its administrative burden, segment the clients in order to guide them to the most appropriate channel, and improve the efficiency of the mediation process, for example, by improving the NES job offerings.

	First round consultation	Second consultation	round	Difference
mean	5.68	5.95		0.27
deviation	1.65	1.14		-0.51
median	7	6		-1.00
modus	7	7		0.00

**5. Jobseekers with multiple labor market barriers need complex, flexible, family-oriented, long-term support that combines multiple resources, while the systematic involvement of additional partners and sectors alongside the NES is also a must.**

Due to the specific combination of demand and supply side factors in the labor market, a significant part of the vulnerable groups in the Hungarian population remain excluded from the labor market. Another significant part of the inactive and unemployed face complex individual and household problems, such as care responsibilities, health problems, lack of skills demanded by the labor market, lack of knowledge combined with transport disadvantages.

	First round consultation	Second consultation	round	Difference
mean	6.04	6.21		0.17
deviation	1.49	0.98		-0.51
median	7	6		-1.00

<b>modus</b>	7	7	0.00
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- 6. Relying on a revamped IR, that minimizes administrative tasks, the NES must identify and systematize labor market barriers, such as care or nursing responsibilities, obstacles to mobility, physical or mental health problems that require solutions that go beyond the current scope of labor market services.**

Employment barriers faced at the individual and family level as identified by the 2016 EU-SILC data are difficult to interpret with the current IR system. Therefore the IR system should be reviewed, while the current portfolio of labor market services needs to be improved with innovative interventions. Without these steps, the modification of the IR system would be superfluous.

	<b>First round consultation</b>	<b>Second consultation</b>	<b>round</b>	<b>Difference</b>
<b>mean</b>	6.02	5.93		-0.09
<b>deviation</b>	1.38	1.37		-0.01
<b>median</b>	7	6		-1.00
<b>modus</b>	7	7		0.00

- 7. Moving from an activity focused on official tasks to a service-oriented NES implies a restructuring of its resources and institutional capacity.**

In order for the NES to establish co-operation and cross-sectoral co-ordination with appropriate service providers at the district or county level, it is necessary to rethink the structure and distribution of its current resources. The services and administrative tasks of the NES must be separated (the latter tasks may even be retained in the structure). In order to strengthen the service profile a single, professionally managed and integrated employment organization should be established.

	<b>First round consultation</b>	<b>Second consultation</b>	<b>round</b>	<b>Difference</b>
<b>mean</b>	6.06	5.53		-0.53
<b>deviation</b>	1.17	1.50		0.33
<b>median</b>	6	6		0.00
<b>modus</b>	7	6		-1.00

- 8. For persons employed on the fringes of the labor market, approximately 500.000 people, only a significantly expanded NES can provide access to such job search services that would improve their position on the labor market, therefore an overhaul of the service portfolio and resources of NEF is needed.**

The existing labor market tools cover only a part of the jobseekers that face labor market barriers and can only address some of their barriers. People currently employed should be encouraged through an expanded NES services portfolio to increase their productivity in order to improve their position. Also, they should be encouraged to use the services of the NES to find a better or more stable job, as many have fallen on the fringes of the labor market, although many of them based on their qualification and work experience may be able to change their job. For this, it is essential to expand the current resources of the NES.

	First round consultation	Second consultation	round	Difference
mean	5.73	5.58		-0.15
deviation	1.31	1.40		0.09
median	6	6		0.00
modus	7	6		-1.00

- 9. There is no need to further subdivide the current three categories used in the labor market segmentation system, but further data and individual action plans are needed to support mediation and development activities.**

Further segmentation based on the probability of successfully finding a job (high / medium / low) does not improve the quality of the information but it is important to collect further data to be able to more accurately calibrate a statistical client categorization system using multiple variables (e.g. child care responsibilities or need for healthcare) that may also support case management and mediation **based on an individual action plan developed by making use of the above.**

	First round consultation	Second consultation	round	Difference
mean	5.61	5.65		-0.04
deviation	1.67	1.53		-0.14
median	6	6		0.00
modus	7	6		-1.00

- 10. Increased efforts and additional resources are needed to increase the effectiveness of working with third category clients, and supplementary services are needed that support the activity of the NES.**

Many of the most vulnerable job seekers. i.e. category three (employed in public works) clients, need additional services to facilitate their access to the primary labor market. Case managers should be responsible for contacting and coordinating with other stakeholders, including social service providers to ensure that the most disadvantaged groups have access to multiple programs, social benefits, housing support, disability benefits, etc. At same time case management and guidance should be **conducted by** human services professionals, such as advisors and mentors. Customized services are also needed to

improve the resilience and adaptability of the clients to future structural changes that go beyond the services currently provided, therefore more resources are needed to operate them. In parallel with the elimination of the obstacles to employment the mediation activities aimed at those employed by public works program need to be strengthened.

	First round consultation	Second consultation	round	Difference
mean	6	5.87		-0.13
deviation	1.28	1.19		-0.09
median	6	6		0.00
modus	7	7		0.00

**11. The NES' institutional model needs to be decentralized so that it can adapt effectively to local and regional labor market processes. Improving the use of resources can be attained with proper rules, rights, and central coordination.**

A decentralized organizational model, which gives more space to local initiatives, can contribute to a more efficient and balanced role for the NES under a comprehensive umbrella: in areas with high labor demand, employers should focus on head hunting and advising. In developing areas, jobseekers need policies that increase their mobility by providing trainings, integrated labor market and social services (including health and education) and long-term mentoring.

	First round consultation	Second consultation	round	Difference
mean	5.8	5.75		-0.05
deviation	1.13	1.34		0.21
median	6	6		0.00
modus	6	7		1.00

**12. The NES can be enabled to coordinate a wide range of parallel employment programs and projects – and thus to increase the efficiency of services and programs for the labor market - if a given territorial organization receives the mandate to make autonomous local decisions and plan its own resources.**

Programs for the target population run by other actors – municipalities, labor sections of government agencies, employers, NGOs - often overlap. On the other hand, the project-based temporary nature of each service creates supply breaks that compromise the efficiency and effectiveness of services. Coordination processes play an important role in maximizing the impact of these programs. Due to its accountability as an institution, the NES can be the coordinator of these projects and programs.

	First round consultation	Second consultation	round	Difference
mean	5.95	5.74		-0.21
deviation	1.39	1.47		0.08
median	6	6		0.00
modus	7	7		0.00

**13. In order to prevent the long-term harmful effects of unemployment on an individual level, the focus of services should be to prevent fractures in labor market participation.**

Services that help with the transition from unemployment to employment are more effective if priority is given to prevent or mitigate personal issues that can lead to reduced motivation or increased stress. Job-search motivation can be improved by additional counseling and mentoring, while job retention can be helped by additional support given to the employer or to the job seeker. For example, young people or groups affected by discrimination, e.g. Roma or people with disabilities, would need this kind of additional support. In order to complete these tasks, additional funding is required.

	First round consultation	Second consultation	round	Difference
mean	6	5.87		-0.13
deviation	1.1	1.26		0.16
median	6	6		0.00
modus	7	7		0.00

**14. A complete overhaul of the mobility support system is needed to address regional and the occasional local labor shortages, including the effective support of the costs of housing and travel, and development of the transportation network.**

People living in areas with a low labor demand are likely to have fewer resources, so they will need additional or longer-term support to stabilize their position in the labor market. At the same time, in regions characterized by high labor demand, the NES must be prepared to meet the needs of the workforce coming from other regions and to provide ongoing support and follow-up during the resettlement process. At the sub-regional and local level, it is necessary to mitigate the difficulties of reaching the workplace by developing the transport infrastructure and by supporting commuting.

	First round consultation	Second consultation	round	Difference
mean	5.86	5.95		0.09
deviation	1.26	1.23		-0.03
median	6	6		0.00
modus	7	7		0.00

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**15. It is necessary to strengthen basic competences and to transform the adult and vocational training system, in order to prepare for the expected changes in the labor market that are driven by technological development.**

With the introduction of new technologies, labor markets are expected to increasingly reward cognitive and interpersonal skills rather than manual and routine tasks. As rapid technological development changes the skills needed by employers, a review of the adult and vocational training systems is needed. Also, the public education system needs to be reviewed, because young people often graduate with no competences. Within this framework, there is the possibility of developing a result measurement system for trainings and the possibility of remuneration that take into account the job obtained by the jobseeker as a result of courses he took.

	First round consultation	Second consultation	round	Difference
mean	5.93	6.28		0.35
deviation	1.33	1.08		-0.25
median	6	7		1.00
modus	7	7		0.00

With the data collection we have been able to make sure that the package of proposals put together on the basis of the analyses is relevant. The average of the consultation in the first round was already a total value of 5.85, which is in the "consensus" range of the seven point grading scale, resulting in high modus values. This means that we can expect the conclusions to be widely accepted in the profession. The small improvement of the average of the second round (5.88) only corroborated that we can expect the policy problems identified and the related proposals for change to be widely accepted in the profession, both on the side of the system of institutions, the researchers and other experts.

**The final proposals have been developed in accordance with the above. In the case of questions no. 1., 2., 3., 4., 5., 14. and 15. the proposals developed in the second round have been taken over, whereas in the case of questions no. 6., 7., 8. and 9., 10., 11., 12., 13. we have adhered to the proposals developed in the first round.**