

## Analysis supporting the decision making of labor market reforms

The case of Slovenia

Gonzalo Capriolo

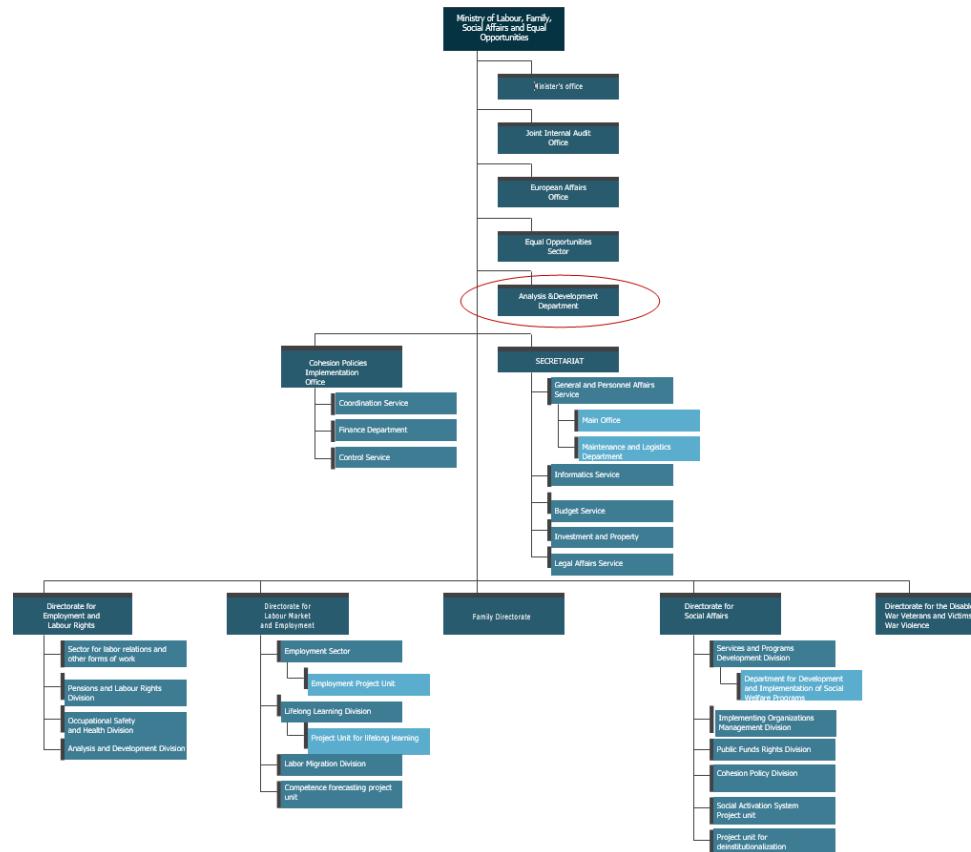
# Outline

1. Relevance of evidence-based policy making
2. The analytical unit: purpose, data and tools
3. Monitoring and policy assessment in the labor market
4. The role of the Analytical Unit on ongoing structural reforms and key policy measures

# Evidence-based Policy-Making

1. Policy-making against the backdrop of the factual evidence and statistical data
2. Evidence has a critical role to play in improving transparency, the quality, suitability, sustainability, effectiveness of policy making
3. Reliable and systematically collection of data and its analysis is a key building block to make political decisions understandable, assessable and sustainable
4. Deliver good and targeted outcomes based on transparent evidence that is systematically and effectively used
5. Evidence based policy making often requires organizational change, solid institutional arrangements and commitment from higher management

# The Analytical Unit within the Organigram of the MoLFSAEO



# Tasks and tools of the Analytical Unit

## 1. Tasks

- Monitoring trends in the fields of labor and social conditions
- Conducting policy-oriented analysis to support evidence-based policy making and identifying policy reform options;
- Conducting policy impact assessment

## 2. Monitoring tools

- Dash-board indicators (social transfers, social-pillar, wellbeing, labor market, unemployed)
- Reports public and internal

## 3. Analytical tools (TaxBen model, General equilibrium model)

## 1. Labor incentives (interaction between tax and benefit systems)

Extensive margin

Intensive margin

## 2. Assessing policy interaction of incentives and wages

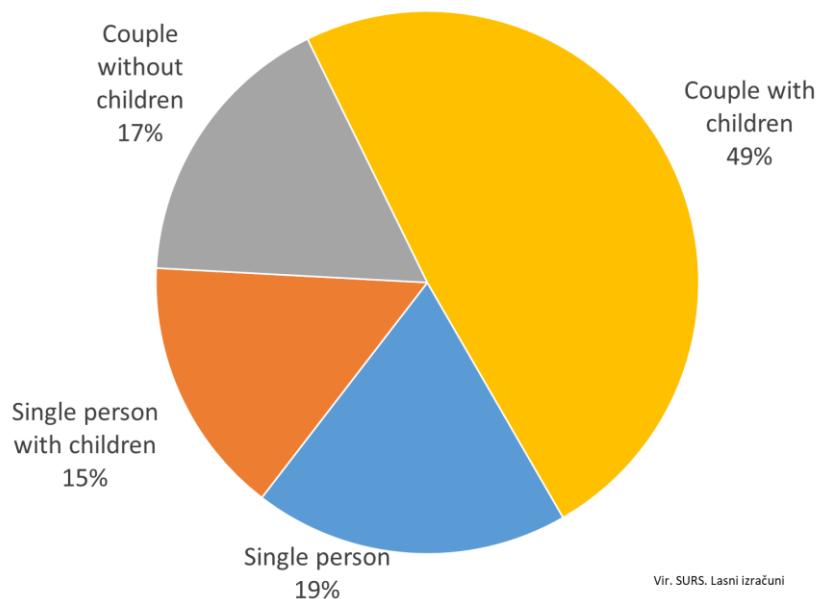
## 3. Labor monitoring

- Labor market framework indicators
- Internal reports

## 4. Assessment of structural reforms also beyond standard metrics

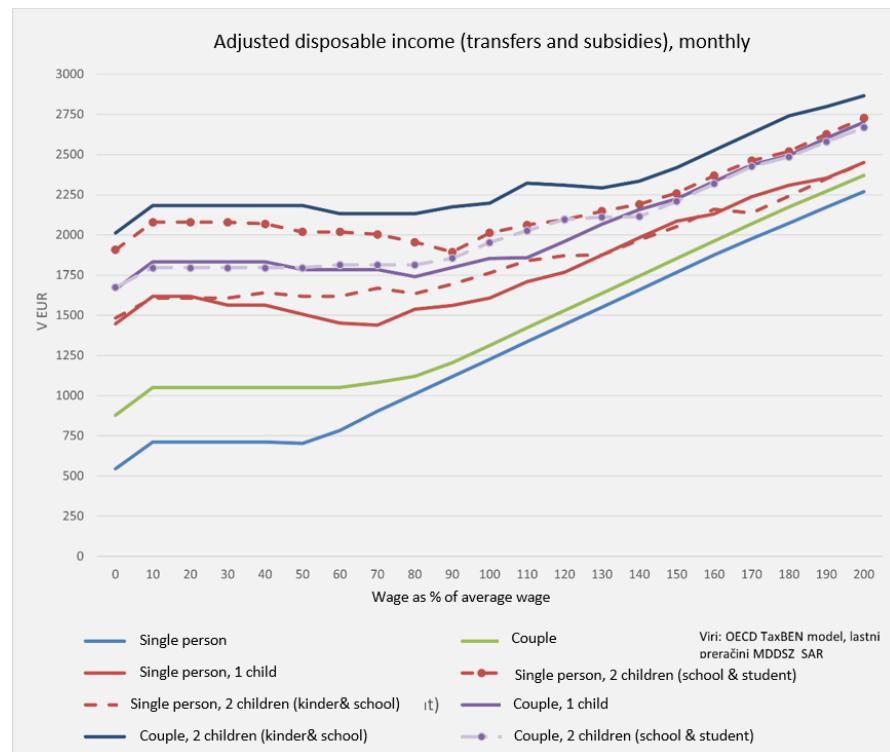
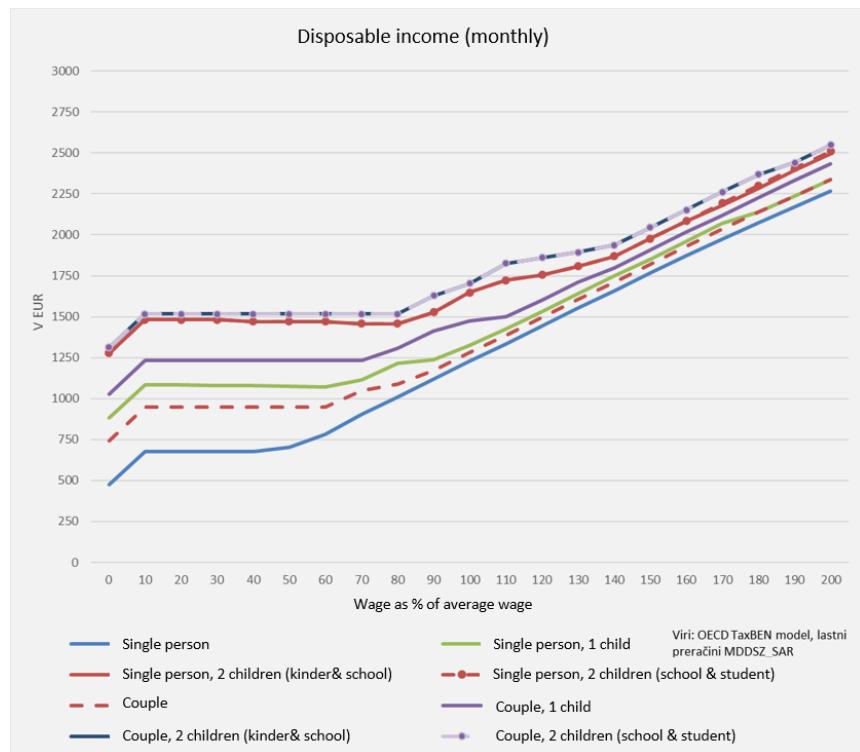
# Interaction of tax and benefit systems on income and labor incentives

Household composition 2021

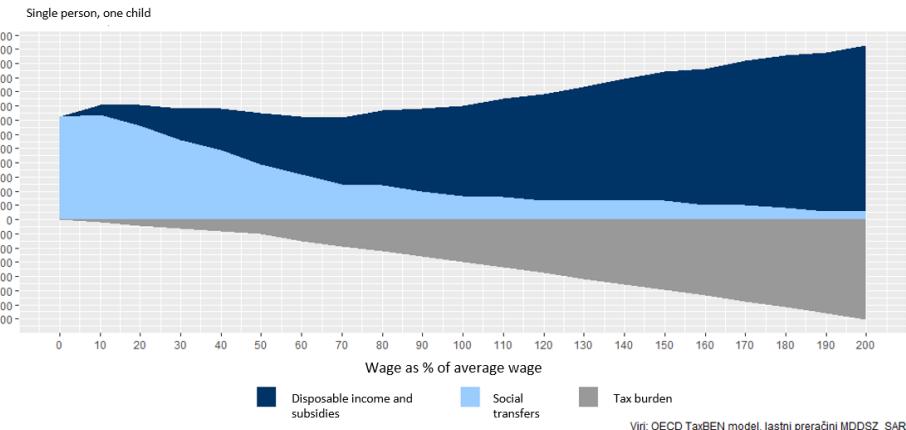


Vir. SURS. Lasni izračuni

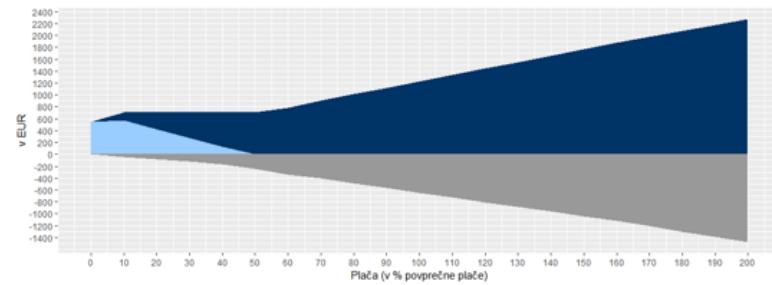
# Interaction between tax and benefit (cash and in-kind) on disposable and adjusted disposable income for various family types



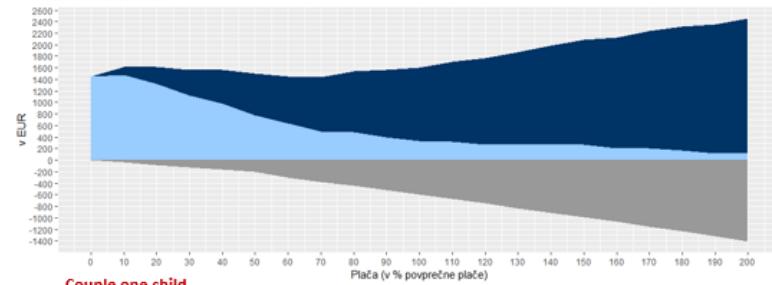
# Interaction between tax, benefit (cash and in-kind) and wages for various family types



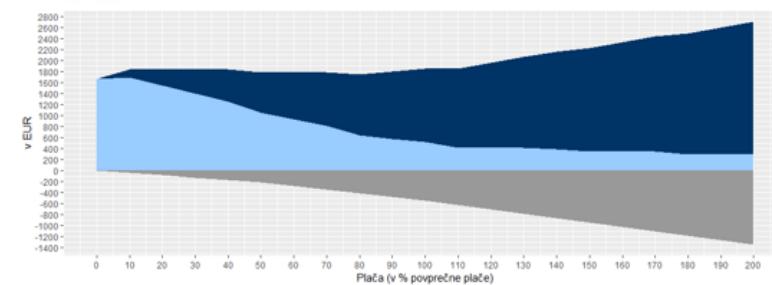
Single person



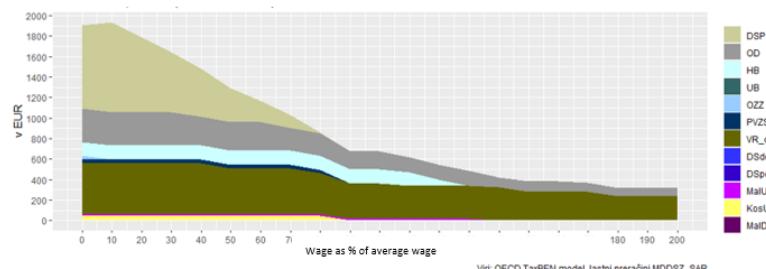
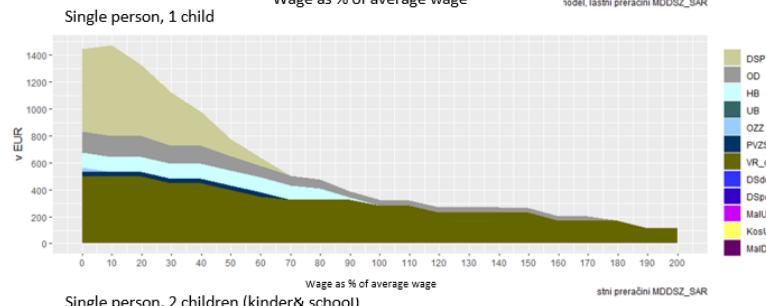
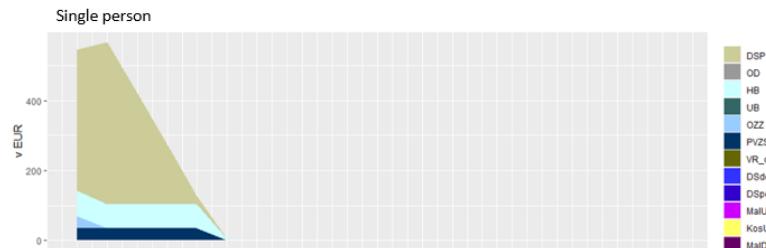
Lone parent one child



Couple one child



# Detailed account of transfers for different family types



**DSP:** cash social assistance

**HB:** Housing subsidy

**UB:** unemployment benefit

**OD:** Child allowance

**VR:** Kindergarten subsidy

**MalU:** lunch subsidy for pupils

**KosU:** lunch subsidy for pupils

**MalD:** lunch subsidy for students

**DSdo18:** state scholarship for a beneficiary under the age of 18

**DSpo18:** state scholarship for a beneficiary over 18 years of age

**PVZS:** coverage of the difference up to the full value of medical services

**OZZ:** payment of contribution for compulsory health insurance

Lone parent with two children (kindergarten and student primary), euros

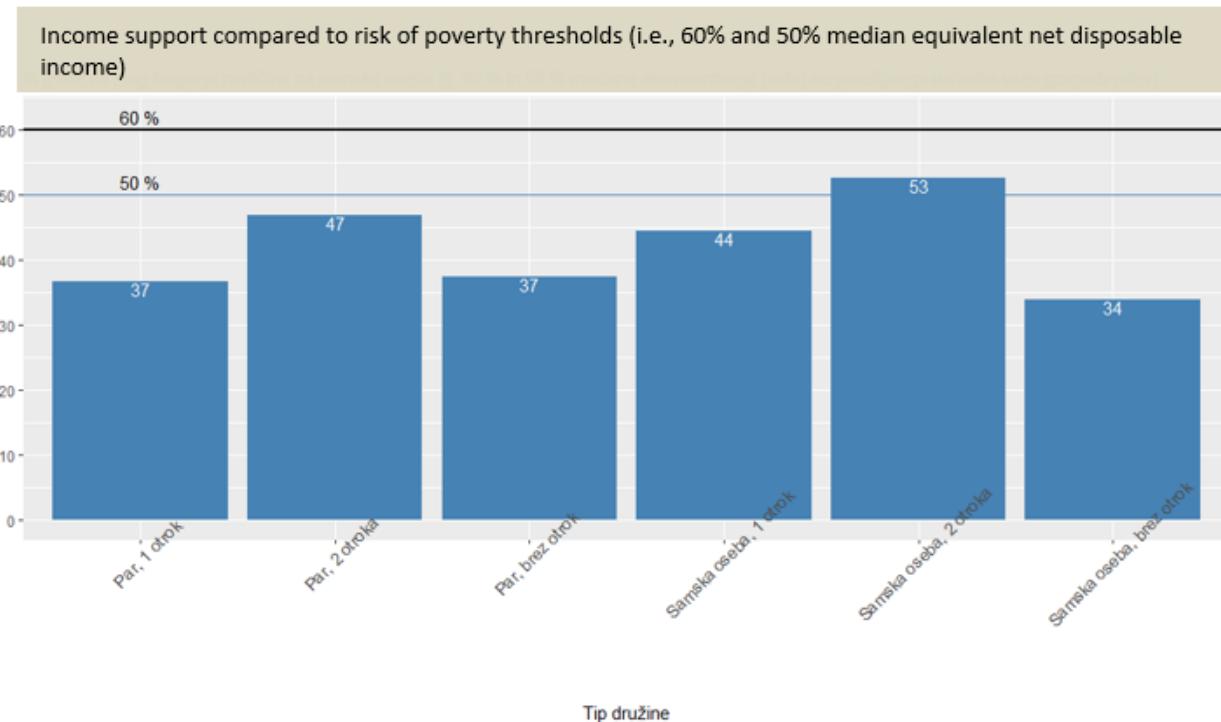
Wage (% average wage)	SocTr	DSP	OD	HB	NB	VR	Dsdo18	DSpo18	PVZS	OZZ	MaU	KosU	MaD
0	1.907	814	328	135	0	498	0	0	35	34	16	48	0
10	1.933	873	328	135	0	498	0	0	35	0	16	48	0
20	1.787	727	328	135	0	498	0	0	35	0	16	48	0
30	1.641	581	328	135	0	498	0	0	35	0	16	48	0
40	1.484	471	282	135	0	498	0	0	35	0	16	48	0
50	1.289	325	282	135	0	448	0	0	35	0	16	48	0
60	1.168	204	282	135	0	448	0	0	35	0	16	48	0
70	1.031	131	218	135	0	448	0	0	35	0	16	48	0
80	859	8	218	135	0	398	0	0	35	0	16	48	0
90	675	0	176	135	0	348	0	0	0	0	16	0	0
100	675	0	176	135	0	348	0	0	0	0	16	0	0
110	617	0	147	131	0	323	0	0	0	0	16	0	0
120	542	0	147	56	0	323	0	0	0	0	16	0	0
130	486	0	147	0	0	323	0	0	0	0	16	0	0
140	423	0	100	0	0	323	0	0	0	0	0	0	0
150	383	0	100	0	0	284	0	0	0	0	0	0	0
160	383	0	100	0	0	284	0	0	0	0	0	0	0
170	368	0	84	0	0	284	0	0	0	0	0	0	0
180	318	0	84	0	0	234	0	0	0	0	0	0	0
190	318	0	84	0	0	234	0	0	0	0	0	0	0
200	318	0	84	0	0	234	0	0	0	0	0	0	0

## Disposable income and labor costs

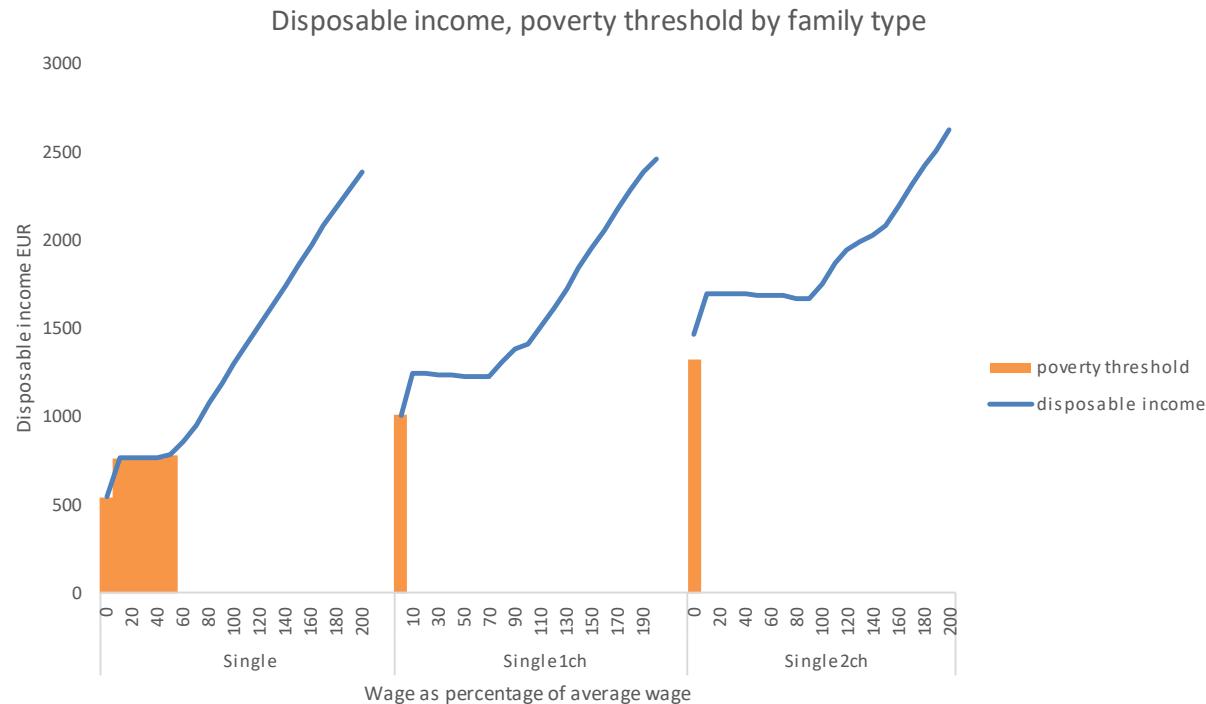
Couple with two children, student secondary and tertiary education (in EUR)

Wage (% average wage)	Disposable income and in-kind benefit	Social transfers	Net wage	Gross wage	Social security contributions employer	Labor cost
0	1.673	1.673	0	0	0	0
10	1.796	1.650	146	187	384	571
20	1.796	1.504	292	375	343	717
30	1.796	1.358	438	562	301	863
40	1.796	1.212	584	750	260	1.009
50	1.796	1.066	730	937	218	1.155
60	1.813	937	876	1.124	181	1.305
70	1.813	808	1.005	1.312	211	1.523
80	1.813	685	1.128	1.499	241	1.740
90	1.855	604	1.250	1.686	272	1.958
100	1.952	579	1.373	1.874	302	2.175
110	2.027	531	1.496	2.061	332	2.393
120	2.095	490	1.606	2.249	362	2.611
130	2.111	397	1.714	2.436	392	2.828
140	2.114	292	1.822	2.623	422	3.046
150	2.210	280	1.930	2.811	453	3.263
160	2.318	280	2.038	2.998	483	3.481
170	2.426	280	2.146	3.185	513	3.698
180	2.486	232	2.254	3.373	543	3.916
190	2.579	217	2.362	3.560	573	4.133
200	2.668	198	2.470	3.748	603	4.351

## Adequacy of minimum income levels for different family types



Viri: OECD TaxBEN model, lastni preračuni MDDSZ\_SAR



# Participation Tax Rate (PTR)

The Effective Tax Rate by family type: foregone income when entering the labor market

Wage as % average wage	Single person	Lone parent 1 child	Lone parent 2 children	Couple	Couple 1 child	Couple 2 children
20	49	44	45	45	45	45
30	66	64	64	64	64	64
40	75	73	74	73	73	73
50	79	79	79	78	78	78
60	84	83	83	82	82	82
70	83	82	85	77	84	84
80	79	80	87	81	81	86
90	75	81	84	78	77	81
100	72	78	80	75	76	79
110	69	75	78	72	77	75
120	67	72	78	69	74	76
130	65	70	78	67	72	76
140	63	68	77	65	71	76
150	62	66	75	64	69	74
160	61	65	73	63	67	72
170	60	64	71	61	66	70
180	59	63	70	60	64	69
190	59	63	68	60	63	68
200	58	62	67	59	62	67

The Effective Tax Rate measures the fraction of additional gross earnings lost to either higher taxes or lower benefits

# Marginal Effective Tax Rate (METR)

## METR according to different salary increases and family type

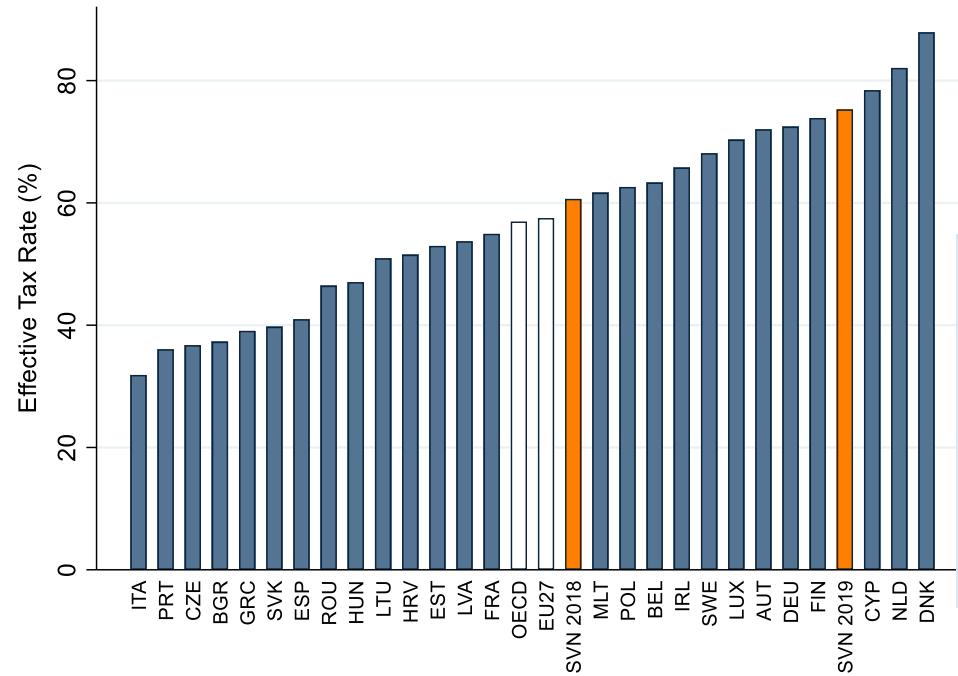
	From minimum wage to 75 % average wage	From 75 % of average wage to the average wage	From average wage to 150 % average wage
Single person	42	42	42
Single person, 1 child	72	69	44
Single person, 2 children	104	59	65
Couple	68	55	42
Couple, one employed person, 1 child	96	52	54
Couple, one employed person, 2 children	100	61	63

<https://www.gov.si/drzavni-organji/ministrstva/ministrstvo-za-delo-druzino-socialne-zadeve-in-eneake-moznosti/o-ministrstvu/sluzba-za-analize-in-razvoj/>

The share of lost income when wage increases (METR) is measured by the share of additional earnings lost as a result of higher taxes or lower social transfers when a person's salary rises.

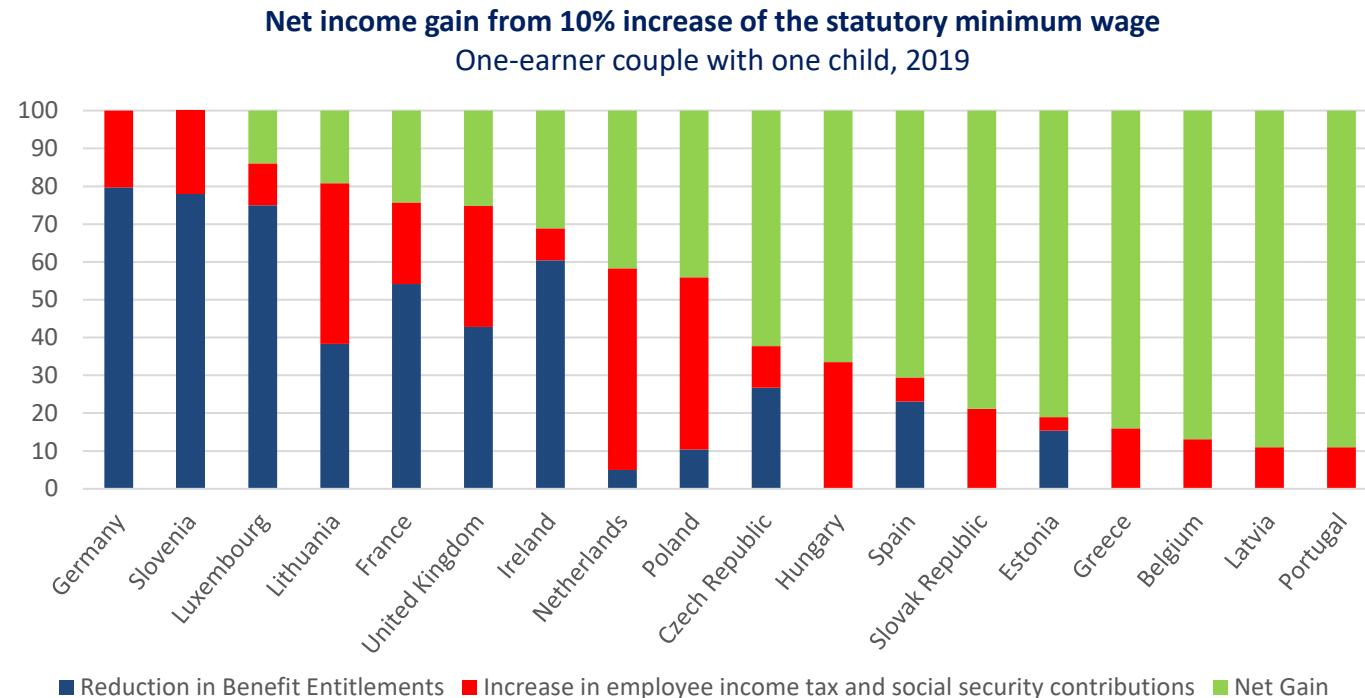
# Impact of higher social assistance on incentives to join the labor market

**Effective tax rate on entering employment, 2019**  
Single person without children, starts working at P10 wage



Slovenia 2018 >> 2019:

- Social assistance and housing benefit are more generous
- Higher withdrawal of benefits once a person starts working



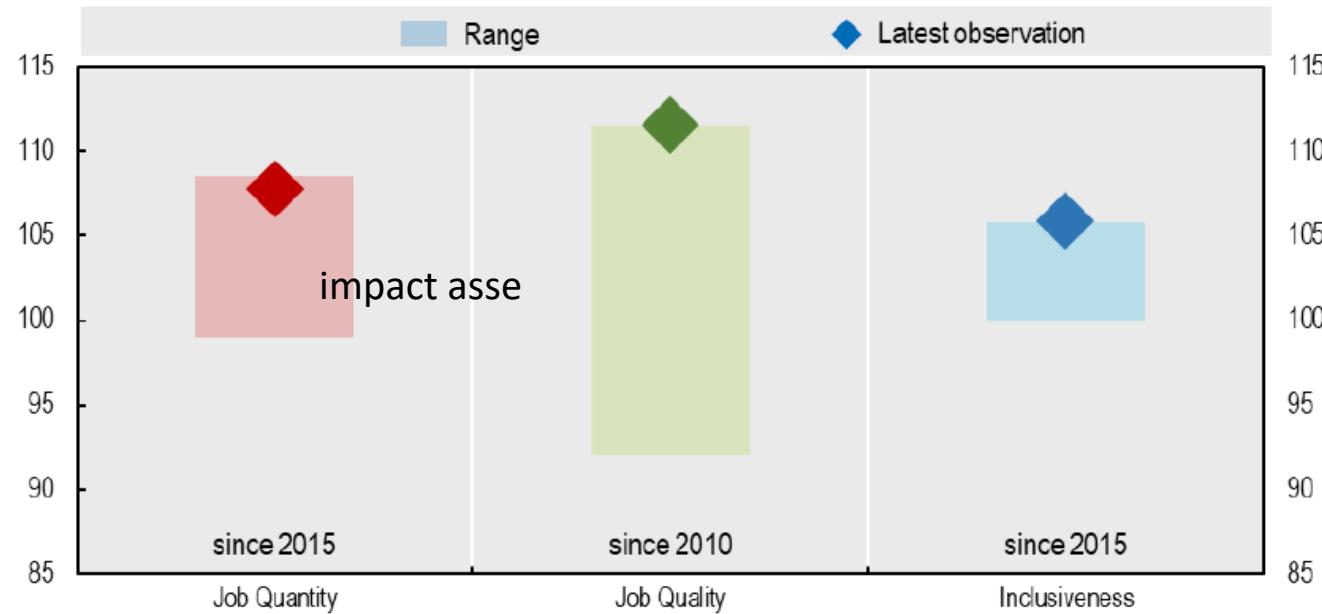
## Set of indicators organized according to the three broad conceptual pillars of the OECD Jobs Strategy

1. The *Job Quantity* pillar includes indicators on jobless individuals and the workforce more broadly
2. The *Job Quality* pillar examines the components of a good job: earnings, work environment, and job security
3. The *Inclusiveness* pillar examines income disparities as well as factors that may affect access to jobs and the inequality of opportunity

Level	Reporting structure		
	Labour market snapshot		
1	<b>Job Quantity</b>	<b>Job Quality</b>	<b>Inclusiveness</b>
	Synthesis Indicator	Synthesis Indicator	Synthesis Indicator
	Core indicators		
2	<b>Job Quantity</b>	<b>Job Quality</b>	<b>Inclusiveness</b>
	JS indicators	JS indicators	JS indicators
	Extended indicators		
3	<b>Job Quantity</b>	<b>Job Quality</b>	<b>Inclusiveness</b>
	11 additional indicators	8 additional indicators	10 additional indicators
	Context		
	23 related indicators		
	Disaggregation by sub-group		
4	<b>Job Quantity</b>	<b>Job Quality</b>	<b>Inclusiveness</b>
	Context		
	Sex	Age	Education
	Work type	Sector	Region
	Occupation	Foreign-born status	[Other groups]

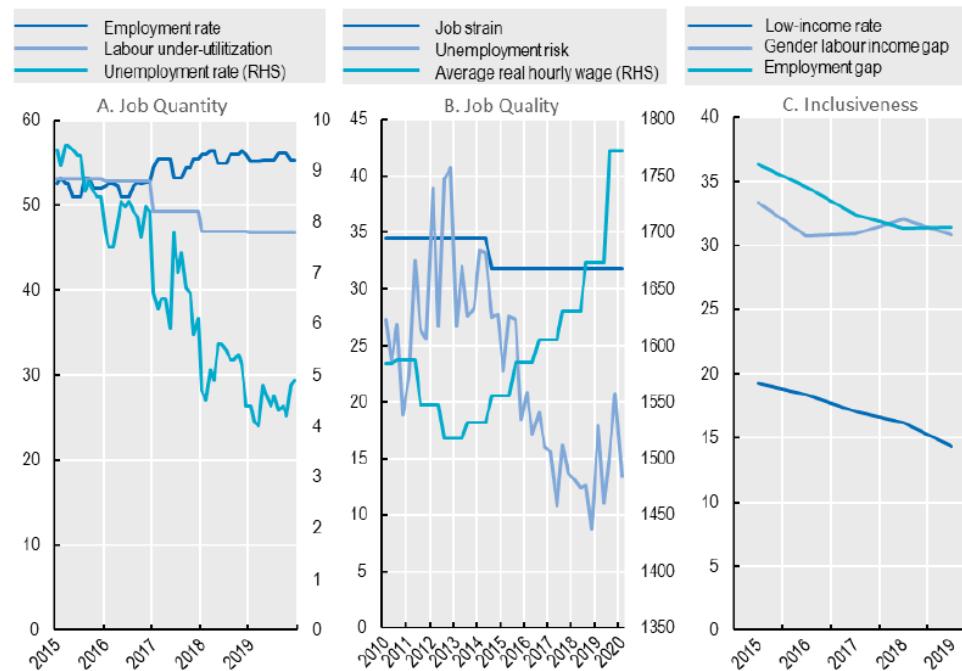
## Overview of labor market performance

Synthesis indicators of job quantity, job quality, and inclusiveness. Latest year and historical range.



# Core framework indicators

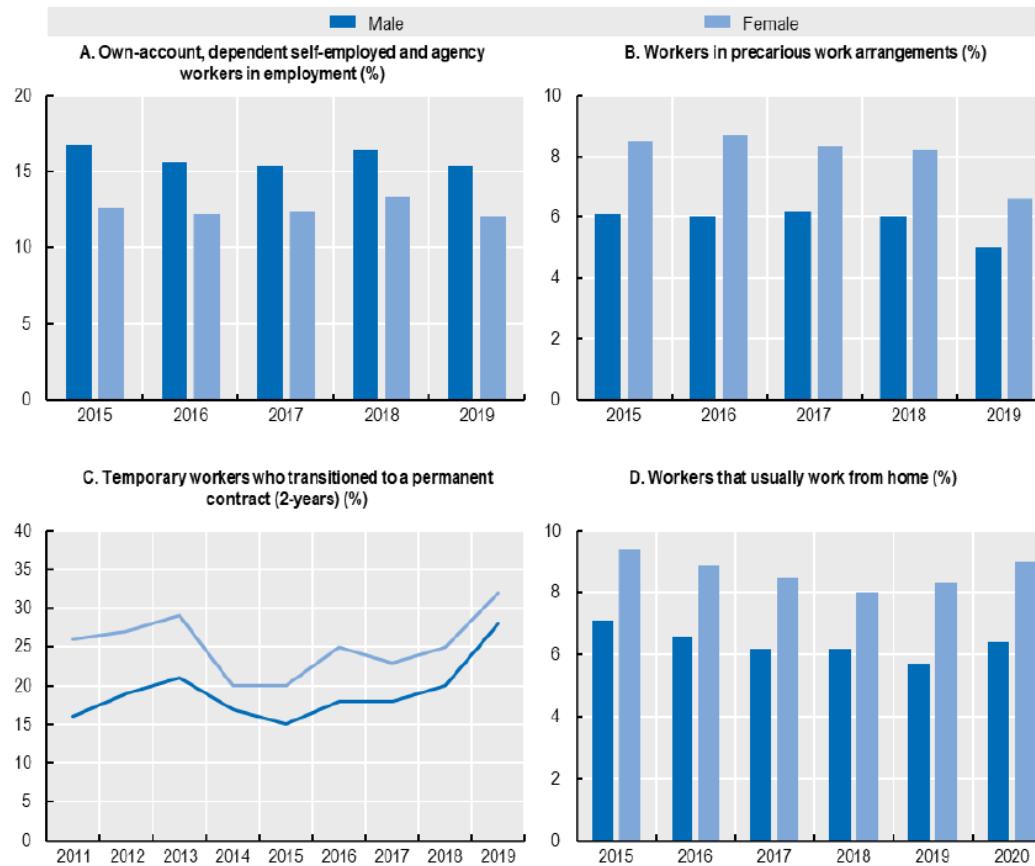
Input indicators for the synthesis indicators, 2010 or 2015 to latest available period. Various units (refer to the notes)



Note: The employment rate, labour under-utilization rate, and low-income rate is presented as a share of the working age population. The unemployment rate is presented as a share of the labour force. Job strain is reported as a share of workers, the average real hourly wage is reported in Euros, the unemployment rise is the monthly unemployment inflow probability times the expected average duration of unemployment spells. The gender labour income gap and the employment gaps are presented as a share of the reference group.  
 Source: OECD calculations based on data from EUROSTAT, OECD.stat, and the Slovenian Statistician Agency.

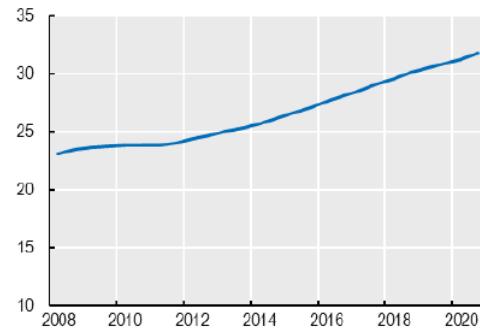
1. Job quality
2. Population ageing
3. Skills and technological change
4. Inward and outward migration
5. Jobless individuals

# Job quality across gender

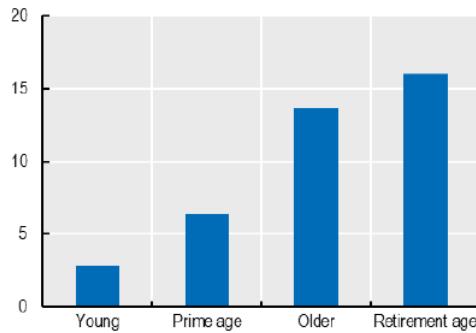


# Older workers' labor force participation

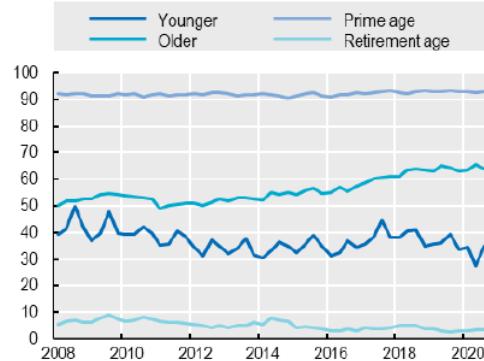
A. Old-age support ratio



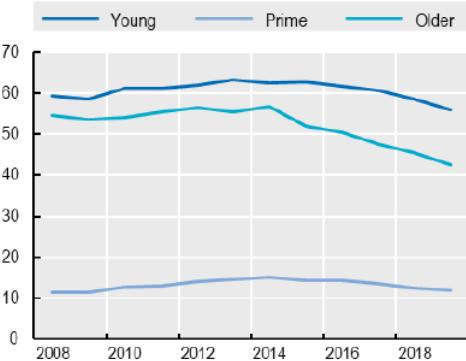
B. Adults with low numeracy skills (%)



C. Labour force participation rate (%)

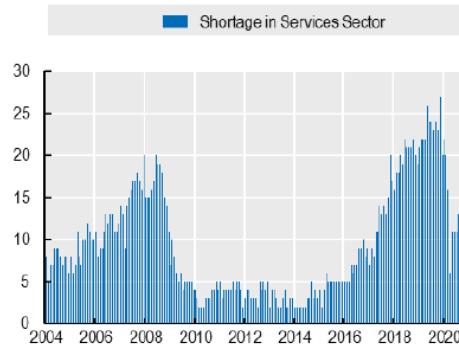


D. Weak labour market attachment (%)

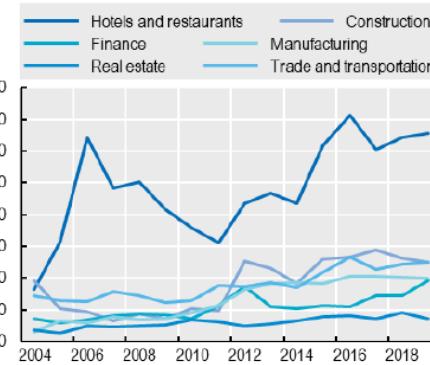


# Skills mismatches

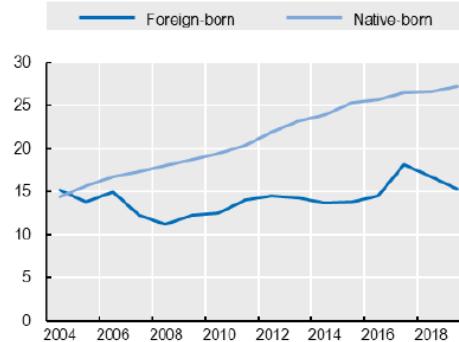
A. Share of enterprises indicating a shortage of labour - services sectors (%)



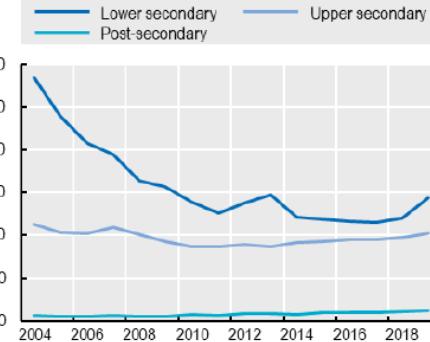
B. Vertical skills mismatch: over-qualification rate (%)



C. Share of the working-age population having completed a tertiary education (%)



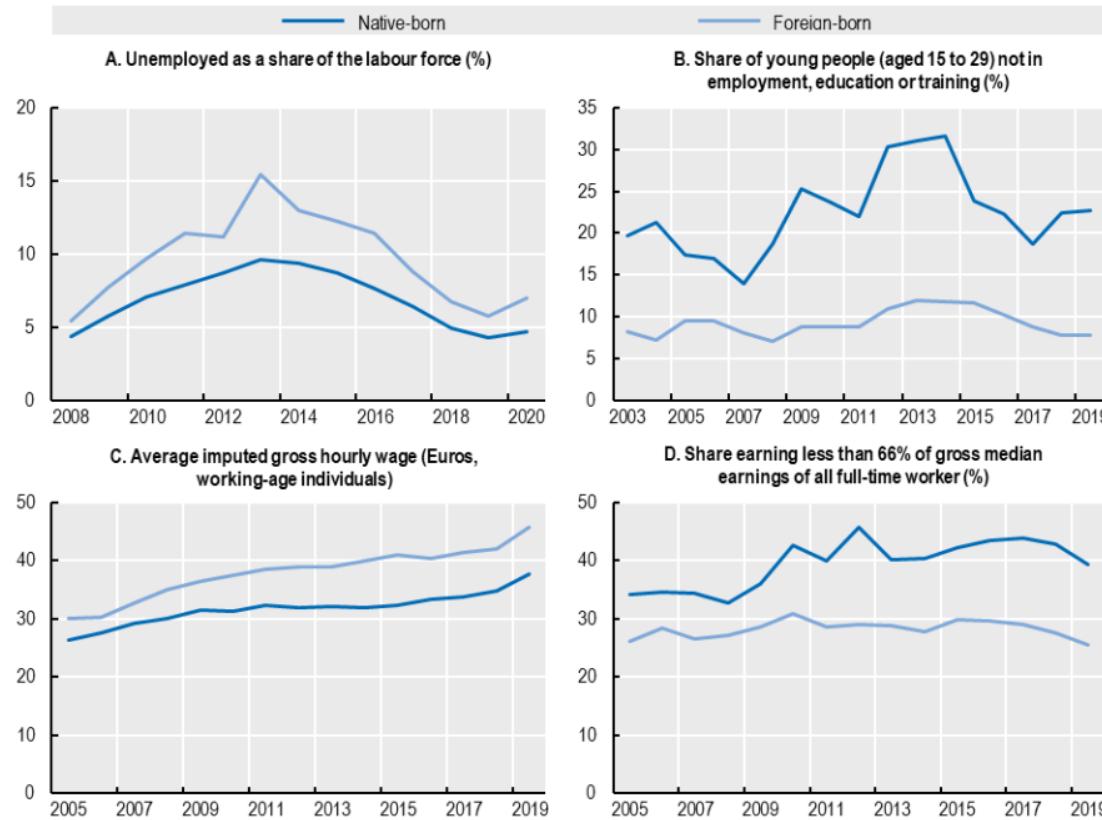
D. Middle-skill occupations as a share of high- and low-skill occupations (%)



# Skills and technological change



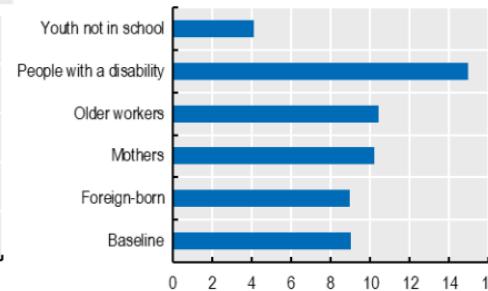
# Inward and outward migration



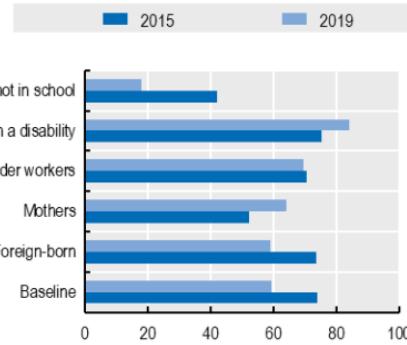
# Jobless individuals



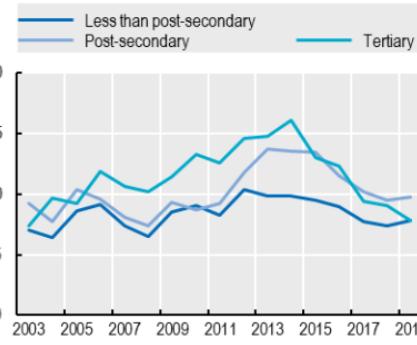
**B. Average number of months spent unemployed, 2019**



**C. Share of unemployed who have been unemployed for 12 months or longer (%)**



**D. Share of youth (aged 15 to 29) not in employment, education or training (%)**



Internal reports (e.g.,)

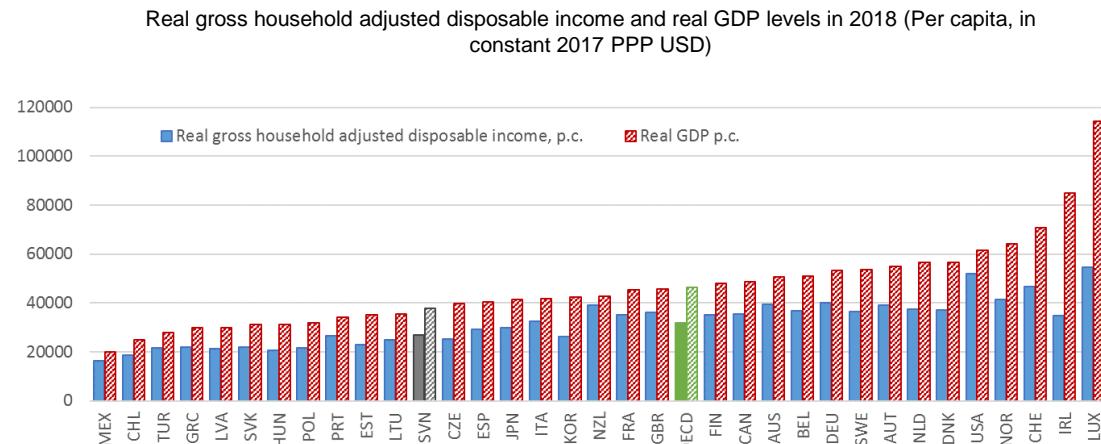
Labor market: [Follow the link](#)

Unemployed: [Follow the link](#)

# Assessing labor market and structural reforms also beyond standard metrics

# Impact of structural reforms on disposable income rather than GDP per capita

Slovenia's gap to OECD's top 3 performers in GDP per capita is 58%, and 47% in terms of household gross adjusted disposable income per capita



Source: OECD 2021

# Impact of policies on GDP and household adjusted income (ADI) per capita

1. Policies, that operate mainly through the multi-factor productivity or capital intensity channels, have larger effects on GDP than ADI
2. Policies, that operate through the employment channel, boost ADI more than GDP

## Long-term effects of policies

Policy	Size of typical reform:	Total long-term effect on:		
		GDP	ADI from eq(1)	ADI from eq(2)
<b>Policies primarily acting through MFP and capital channels</b>				
Energy, Communication and Transport Regulation (ECTR) indicator (0-6, 6 is strictest)	-0.307	2.33%	2.33%	1.57%
Business R&D by private sector, % of GDP	0.097	0.40%	<b>0.25%</b>	<b>0.14%</b>
Trade openness, adjusted for country size, % of GDP	4.007	2.80%	2.80%	1.89%
Corporate income tax revenues, % of GDP	-0.980	1.06%	<b>-0.21%</b>	<b>-0.66%</b>
<b>Policies primarily acting through the employment channel</b>				
Employment Protection Legislation (EPL) indicator, permanent contracts (0-6, 6 is strictest)	-0.295	0.72%	0.72%	0.48%
ALMP spending (per unemployed, % of GDP per capita)	3.180	1.59%	1.59%	1.07%
Average tax wedge (single earner couple with 2 children; percentage points)	-2.282	0.46%	<b>0.69%</b>	<b>0.54%</b>
Minimum to median wage (%)	-2.479	0.59%	0.59%	0.40%
Unemployment benefit replacement rate (% of previous gross earnings)	-1.417	0.41%	<b>0.56%</b>	<b>0.42%</b>
Excess coverage (%)	-1.890	0.14%	0.14%	0.09%
Total in-kind benefits, % of GDP	0.109	0.22%	<b>0.44%</b>	<b>0.38%</b>
Maternity leave (weeks)	4.829	0.54%	0.54%	0.36%

# Using the shadow price of employment can be used routinely for policy evaluation with the help of this

The shadow price of 1 percentage point (ppt) of employment is on average equal to 3% of household income across OECD countries

The shadow price of employment can be used routinely for policy evaluation with the help of this table

country	Total 15-64	Total 15-24	Females 25-54	Males 25-54	Total 55-64
AUS	3.3	0.5	2.3	2.2	0.9
AUT	3.2	0.4	2.5	2.1	0.7
BEL	2.6	0.3	2.3	2.0	0.7
CAN	3.3	0.5	2.4	2.0	0.9
CHE	4.1	0.5	2.6	2.5	1.0
CHL	2.6	0.2	1.8	1.9	0.7
CZE	3.0	0.3	2.4	2.5	0.8
DEU	3.4	0.4	2.5	2.3	0.9
DNK	3.3	0.5	2.5	2.1	0.9
ESP	2.4	0.2	1.9	1.6	0.7
EST	3.2	0.4	2.5	2.2	0.9
FIN	3.1	0.5	2.6	2.2	1.0
FRA	2.7	0.3	2.4	2.1	0.7
GBR	3.1	0.4	2.3	2.1	0.8
GRC	2.1	0.3	1.8	1.8	0.7
HUN	2.6	0.4	2.3	2.2	0.8
IRL	2.7	0.3	2.0	1.8	0.7
ISL	4.7	0.5	2.7	2.2	1.0
ISR	2.6	0.1	2.0	1.6	0.7
ITA	2.3	0.3	1.8	1.9	0.7
JPN	3.6	0.4	2.1	2.6	1.0
KOR	2.7	0.3	1.9	2.2	0.9
LUX	2.8	0.3	2.4	2.3	0.7
MEX	2.3	0.0	1.5	1.9	0.5
NLD	3.5	0.5	2.5	2.2	0.9
NOR	3.5	0.5	2.7	2.2	1.1
NZL	2.8	0.5	2.4	2.3	1.1
POL	2.6	0.3	2.3	2.0	0.7
PRT	2.7	0.2	2.3	1.8	0.7
SVK	2.6	0.3	2.2	2.0	0.8
SVN	2.8	0.4	2.7	2.1	0.7
SWE	3.6	0.4	2.7	2.2	1.0
TUR	1.9	0.1	1.3	1.7	0.5
USA	3.0	0.5	2.2	2.0	0.9
Average	3.0	0.4	2.3	2.1	0.8

# Wellbeing impact of policy changes on the employment rate and household average income

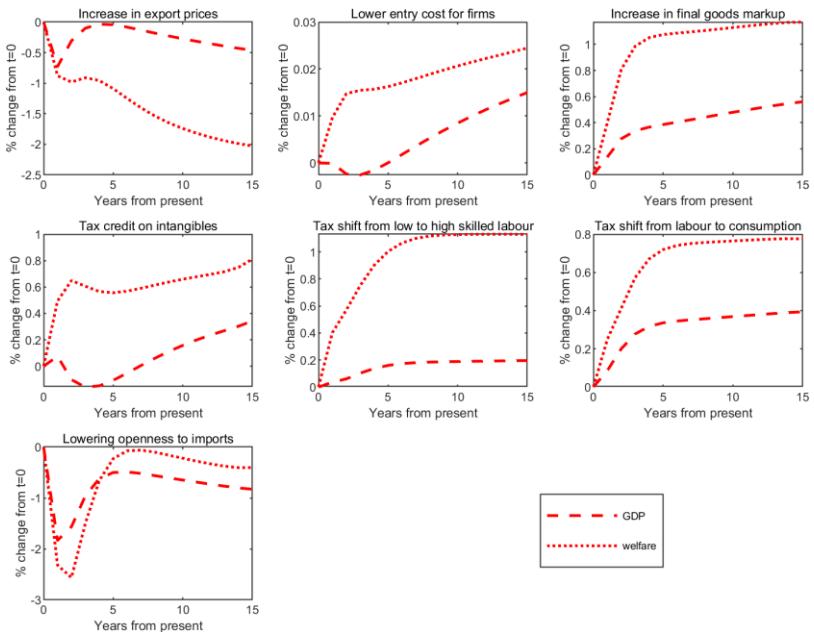
1. **Largest welfare impacts arise from employment**, then from income through GDP
2. **No policy trade-off** across the two dimensions
3. **Large gains from reforms of ETCR, ALMPs, hh tax wedge**

Policies	Scenario	Typical policy change	Impact on employment rate			Impact on average household income			Impact on welfare (SWB)	
			Change in percentage points	Change in percentage points	Monetised impact (in %, comparable to income growth)	Direct effect	Indirect effect via GDP	Total effect	Change in percent	% due to employment
						Change in percent	Change in percent	Change in percent		
Business R&D by private sector %GDP	increase	0.097	0.00	<b>0.00</b>	-0.13	0.27	<b>0.14</b>	<b>0.14</b>	0	
Corporate income tax revenues %GDP	cut	-0.980	0.00	<b>0.00</b>	-1.37	0.62	<b>-0.76</b>	<b>-0.76</b>	0	
<b>Average tax wedge, single earner couple with 2 children</b>	cut	-2.282	0.39	<b>1.09</b>	0.23	0.31	<b>0.54</b>	<b>1.63</b>	67	
Unemployment benefit replacement rate	cut	-1.417	0.31	<b>0.88</b>	0.14	0.32	<b>0.46</b>	<b>1.33</b>	66	
<b>Total in-kind benefits % GDP</b>	increase	0.109	0.16	<b>0.45</b>	0.24	0.16	<b>0.40</b>	<b>0.85</b>	53	
ETCR indicator - overall	cut	-0.307	0.142	<b>0.40</b>	0	1.50	<b>1.50</b>	<b>1.90</b>	21	
EPL - permanent contracts	cut	-0.295	0.253	<b>0.71</b>	0	0.48	<b>0.48</b>	<b>1.18</b>	60	
ALMP spending	increase	3.180	0.225	<b>0.63</b>	0	1.08	<b>1.08</b>	<b>1.71</b>	37	
Minimum wage	cut	-2.479	0.407	<b>1.14</b>	0	0.41	<b>0.41</b>	<b>1.55</b>	73	
Excess coverage	cut	-1.890	0.103	<b>0.29</b>	0	0.10	<b>0.10</b>	<b>0.39</b>	73	
<b>Tax wedge - single earners</b>	cut	-1.385	0.120	<b>0.34</b>	0	0.12	<b>0.12</b>	<b>0.46</b>	73	
Maternity leave weeks	increase	4.829	0.403	<b>1.13</b>	0	0.41	<b>0.41</b>	<b>1.54</b>	73	
Legal retirement age	increase	0.566	0.129	<b>0.36</b>	0	0.13	<b>0.13</b>	<b>0.49</b>	73	
<b>Total</b>				<b>7.4</b>	<b>-0.9</b>	<b>5.9</b>	<b>5.0</b>	<b>12.4</b>		

# Impact of structural reforms or shocks on welfare in Slovenia using QUEST DSGE model

Reform scenarios against a welfare measure that goes beyond GDP taking into account  
inequality in income and in unemployment by skill level

All scenarios, welfare trends



Source: Bonnet-Glazar-Martin, 2023

## Reforms policies under Slovenia's recovery and resilience plan

1. Preparation of the analytical and legislative basis for the establishment of a permanent short-time working scheme
  - The unit prepared the underlying analysis  
<https://www.gov.si/assets/ministrstva/MDDSZ/Analiticna-podlaga-za-vzpostavitev-stalne-sheme-SDC.docx>
2. Review and update of the implementation documents of the Guidelines for the implementation of active labor market policy 2021-2025
  - The unit is participating in a project to assess the impact of active labor market policies