

# IV. ECONOMIC TRANSITION



European  
Commission

# IV. ECONOMIC TRANSITION

## IV.1. OVERVIEW

Economic transition is hardly captured by a single indicator such as the output growth. This is the reason why the TPI relies on four different sub-pillars to measure Economic transition. A successful Economic transition balances high performances in terms of Wealth, Education and ICT use and skills, Labour productivity and R&D intensity, and Industrial base. Innovation is central in the COVID-19 recovery phase and R&I policies play an important role to support the Economic transition, as well as the other transitions. In this year's report, two indicators for ICT have been added (internet users and the proportion of people with ICT skills) to reflect the importance of the digital transition. The impact of these additional indicators is discussed in part IV.4.

The ranking and scores for Economic transition (**TABLE 10**) measure progress towards a sustainable and resilient prosperity model. On average, the world is in moderate transition and the EU-27 is in good transition. Switzerland ranks first followed by Ireland and South Korea. Only three countries are transition leaders while more than a third (30 countries) are in weak transition. Seven EU countries rank in the top 10. The large heterogeneity in performance across countries highlights opportunity for progress especially in Labour productivity and R&D intensity. Additionally, none of the countries are leaders in more than two sub-pillars, which suggests room for improvement even among leaders and strong performers.

### *Economic transition, leaders and strong performers*

Three countries are leaders in Economic transition (Switzerland, Ireland and South Korea) and 12 countries are strong performers. Switzerland and Germany have balanced performances with leader or strong positions in all sub-pillars. The two other leaders, Ireland and South Korea, show larger variations across sub-pillars.

The scores of the leaders and strong performers do not reveal a clear pattern to identify a successful policy mix for an Economic transition model. Nevertheless, most of them combine strong or leader performances in Education and Wealth.

Among the leaders and strong performers, Industrial base shows the highest disparity between scores. Five countries are leaders or strong performers in Industrial base: South Korea, Ireland, Switzerland, Germany and Singapore. Five countries are weak or moderate performers: Belgium, Iceland, Luxembourg, Norway and the United States. The high scores in Ireland are explained by the country's attractiveness for multinational firms, especially in the pharmaceutical and electronics industries. Overall, the gross value-added score of manufacturing is decreasing in the EU-27 (-2%) from 2011 to 2020, with large differences across countries. The average score in the EU-27 (48.3) is lower than at the global level (55.1). In this respect, the communication 'A new ERA for Research and Innovation'<sup>28</sup> calls for a refocusing of the European Research Area (ERA) on developing a strong European industrial base and technological sovereignty.

### *Economic transition, good performers*

Thirteen countries are good performers in Economic transition. These countries have their strengths in Education (including ICT skills) with leader or strong performances, with the exceptions of Japan (moderate) and Italy (good). Japan's moderate score is explained by the very weak performance in ICT skills despite having a large proportion of internet users<sup>29</sup>.

In Education and ICT skills, Canada, Estonia and the United Kingdom take the lead.

28 European Commission, *A new ERA for Research and Innovation COM/2020/628 final*, 2020.

29 Data for ICT skills is collected by the ITU (ITU: *Committed to connecting the world*) as part of the SDG Indicator Framework. Skills are measured through self-reporting surveys and are not a direct assessment of skills. Therefore, as noted by ITU, the results have limitations including cultural differences in survey responses.



The situation is slightly less satisfactory in the other three sub-pillars. All countries achieve relatively homogeneous scores in Wealth with moderate to good performances, except for Australia (strong position). Most countries show moderate to weak performances in Labour productivity and R&D intensity, with the exceptions of Israel (leader), Japan and France (in good transition). In the case of Israel, this result is fuelled by the highest level of gross expenditure on R&D as a percentage of GDP, 4.9%. In Industrial base, Japan stands out as a transition leader with strong manufacturing industries and a leader position in the number of patents filed, followed by Slovenia and Czechia with strong performances; Saudi Arabia and Australia, in turn, show weak performances.

#### ***Economic transition, moderate and weak performers***

More than half of the countries (44) are in moderate or weak Economic transition. Education and ICT skills seem to be the main factor explaining the performances of the moderate group compared to the weak performers. Indeed, in the moderate transition group, 10 countries out of 14 achieve strong performances in Education. On the contrary, in the weak transition group, 19 countries out of 30 are weak or moderate performers in Education, with the noteworthy exceptions of Moldova and Ukraine, which have leader positions with a relatively high government expenditure per student in education. Nonetheless, this result for Ukraine may hide inefficiencies and quality deterioration in secondary and higher education<sup>30</sup>.

For moderate and weak performers, performances in Wealth, Labour productivity and R&D intensity and Industrial base are worrisome. China is leader in Industrial base with the world's largest manufacturing sector. The United Arab Emirates, in turn, is a leader in Wealth although its dependence on oil and gas (30% of the country's GDP) raises significant challenges for the future. All 30 countries in weak Economic transition are also weak performers in these three sub-pillars with two exceptions in Industrial base: Thailand (good transition) and Algeria (moderate transition).

## **IV.2. ECONOMIC TRANSITION, PROGRESS OVER 2011-2020**

Over a decade, the overall score in the Economic transition has increased by 10.1% on average for the 72 countries taken together (world) and by 6.2% in the EU-27, a higher pace than the overall TPI (4.3%). Almost all countries (69) out of the 72 countries have improved their Economic transition scores, with the exceptions of Finland, Kenya and Luxembourg. Moreover, the three leader countries register robust progress rates, 8.2% in Switzerland, 20.0% in Ireland and 10.7% in South Korea, showing that leaders can still increase their performance on this pillar. The high progress rate in Ireland should be put in perspective with the remarkable increase in Wealth (67.3% in 2011-2020 and 35.3% only in 2015) due to the relocation of multinational corporations' headquarters (including their intellectual property), attracted by low corporate tax rates, which suggests that the measure of GDP in Ireland might not adequately reflect the economic activity in the country<sup>31</sup>.

Middle-income countries are progressing the most and some countries succeed in catching up with improvement in Wealth and Education / ICT skills. As a measure of efficiency in the use of resources, progress in the Economic transition must go hand in hand with progress in the three other transitions.

The largest progress rates in the Economic transition are seen for Egypt (44.0%), Nigeria (43.9%) and Iran (43.8%). These rates are mainly driven by the improvement in digitisation and access to the internet, a clear catch-up effect observed in other countries as well. For the analysis of the four dimensions, 'catch-up effect' refers to the fact that a) the same absolute progression when applied to a low starting point corresponds to a higher percentage rate of increase and b) the initial progress can be easier by picking 'low hanging fruits'. Therefore, a high rate of progress that is partly due to a catch-up effect should be seen in somewhat relative terms.

<sup>30</sup> Repko, M. and Ruda, Y., 'Ukrainian-style Education: 129 Billion Hryvnya – a Waste or an Investment in the Next Generation?', VoxUkraine, 7 March 2017

<sup>31</sup> OECD, 'Irish GDP up by 26.3% in 2015?'. Paris, October 2016



TABLE 10: Economic transition pillar ranking

RANK	COUNTRY	PROGRESS	2020 SCORES				
			ECONOMIC TRANSITION	Education	Wealth	Labour productivity & R&D intensity	Industrial base
1	Switzerland	8.2%	79.8	79.9	97.2	73.0	72.8
2	Ireland	20.0%	76.1	60.3	100.0	57.8	88.2
3	South Korea	10.7%	75.4	75.2	59.5	72.2	88.5
4	Denmark	9.4%	73.4	85.2	78.6	68.0	61.8
5	Sweden	2.9%	73.0	88.1	72.2	70.8	59.8
6	Singapore	5.1%	72.3	57.7	100.0	69.2	70.4
7	Germany	3.7%	70.7	72.5	72.1	66.7	70.7
8	Austria	5.7%	70.2	74.1	73.6	69.4	64.5
9	Luxembourg	-1.4%	69.3	80.3	100.0	61.9	42.9
10	Finland	-5.1%	68.2	77.6	66.5	62.7	63.8
11	United States	10.1%	68.2	70.3	84.6	70.5	53.5
12	Belgium	7.9%	67.9	79.5	68.1	69.4	55.0
13	Norway	4.1%	67.3	81.2	87.7	62.9	42.6
14	Iceland	2.8%	67.2	88.1	74.6	57.9	47.4
15	Netherlands	6.5%	66.7	76.4	76.7	58.6	55.6
16	Israel	10.7%	64.0	67.1	54.1	81.6	55.8
17	Slovenia	6.0%	62.5	73.6	51.7	47.9	68.1
18	Japan	5.9%	62.2	50.0	56.3	58.6	80.6
	EU-27	6.2%	61.1	68.4	58.9	53.8	60.1
19	Canada	4.7%	60.9	80.1	65.0	47.0	48.2
20	Czechia	11.5%	60.4	68.0	54.2	46.2	66.4
21	France	0.2%	58.9	65.7	61.4	59.2	50.3
22	United Kingdom	2.3%	58.2	76.2	58.8	48.5	46.4
23	Saudi Arabia	11.1%	57.0	73.6	62.4	47.9	42.8
24	Italy	5.2%	56.7	60.9	54.5	50.7	57.9
25	Estonia	4.6%	56.4	78.0	50.3	40.3	49.7
26	New Zealand	6.4%	55.8	73.5	56.0	40.8	48.0
27	Malta	12.0%	55.7	73.4	57.1	40.3	47.4
28	Australia	3.0%	55.6	68.2	68.9	51.8	36.6
29	Spain	4.6%	54.2	71.7	51.2	44.9	44.8
30	United Arab Emirates	4.7%	53.7	67.1	78.3	45.5	29.5
31	Hungary	5.8%	53.0	66.4	44.0	38.2	55.5
32	Poland	17.4%	52.5	67.4	45.5	36.9	52.8
33	Lithuania	8.8%	52.3	66.7	51.8	35.2	49.8
34	China	14.4%	52.1	58.9	22.9	31.2	78.7
35	Portugal	5.5%	50.3	66.1	45.4	38.2	45.9
36	Slovakia	5.1%	50.1	65.7	43.6	31.3	51.3
37	Malaysia	9.9%	49.7	60.9	36.5	30.2	60.2
38	Latvia	8.5%	47.9	73.9	42.0	27.8	39.0
39	Cyprus	11.3%	47.6	66.8	53.5	25.9	38.8
40	Turkey	26.3%	47.1	48.5	40.3	37.8	56.4
41	Croatia	7.0%	45.6	65.0	37.0	33.9	39.6
	World	10.1%	45.4	48.1	27.2	33.3	62.9
42	Greece	9.4%	45.2	63.3	38.3	40.5	34.7
43	Thailand	15.4%	42.3	47.7	24.3	21.2	63.1
44	Romania	6.3%	42.2	55.1	40.7	27.1	40.5
45	Moldova	20.8%	41.4	82.5	17.1	11.1	36.6
46	Russia	18.3%	41.0	50.6	37.2	29.2	41.9
47	Bulgaria	17.8%	40.8	53.1	31.8	24.9	45.0
48	Ukraine	10.5%	40.3	76.9	17.5	14.5	36.1
49	Chile	12.9%	39.9	61.2	31.2	20.9	37.2
50	Argentina	3.9%	39.8	61.0	27.7	22.5	38.1
51	Serbia	12.0%	37.5	55.1	25.5	20.4	39.4
52	South Africa	14.0%	36.5	54.9	16.0	22.9	40.9
53	Mexico	12.6%	36.2	46.8	25.5	18.2	44.7
54	Tunisia	3.9%	34.2	57.5	13.5	18.0	35.5
55	Egypt	44.0%	34.0	51.9	17.1	21.9	35.5
56	Morocco	18.3%	34.0	57.7	10.2	16.9	37.5
57	North Macedonia	4.9%	33.7	54.3	22.3	18.0	31.1
58	Algeria	0.9%	33.6	39.8	14.8	20.0	49.0
59	Vietnam	38.9%	33.4	57.1	14.5	9.9	38.0
60	Iran	43.8%	33.3	47.0	17.4	22.1	37.5
61	Armenia	31.0%	33.1	49.4	17.7	15.3	39.1
62	Brazil	3.4%	33.0	48.3	19.9	22.5	33.5
63	Bosnia and Herzegovina	18.5%	31.4	48.9	20.1	16.4	31.3
64	Montenegro	24.4%	31.1	63.7	25.7	23.3	7.4
65	Colombia	8.1%	30.1	45.5	19.1	12.7	33.5
66	Georgia	32.0%	29.8	45.2	19.9	13.2	32.0
67	Indonesia	21.8%	29.5	39.7	16.3	10.4	41.0
68	Albania	29.9%	28.9	57.1	19.0	12.5	18.2
69	India	12.2%	27.4	34.3	8.6	13.1	42.4
70	Philippines	2.8%	26.8	33.7	11.3	8.8	42.3
71	Nigeria	43.9%	20.8	28.3	6.9	15.4	26.2
72	Kenya	-2.6%	18.7	28.9	6.6	11.2	21.7

■ Transition leader [75-100] ■ Strong transition [65-75] ■ Good transition [55-65] ■ Moderate transition [45-55] ■ Weak transition [0-45]

Notes: 'Progress 2011-20' refers to the percentage growth of economic transition scores from 2011 to 2020.

Source: European Commission, Transitions Performance Index 2021.



The only downward trends are registered in Finland (-5.1%), and Luxembourg (-1.4%), both strong performers, and Kenya (-2.6%) at the bottom of the ranking. Finland shows declines in education expenditure (-7.4%), ICT skills (-32.2%)<sup>32</sup>; gross expenditure on R&D (-22.9%), and Industrial base (-7.4%). Luxembourg shows important declines in gross expenditure on R&D (-18.5%) and in the gross value of manufacturing (-22.4%). Finland's decline in the Economic pillar reflects the economic crisis faced by the country in the past decade following the collapse of the electronics sector (Nokia-led ICT cluster) and the contraction of the paper industry. Kenya achieves a poor performance in the pillar despite important progress in Education (36.2%) and Wealth (84.8%), a result driven by the low starting points, in part due to the goalpost's lower bounds.

### ***Education, progress over 2011-2020***

In the Education sub-pillar, progress over the decade is limited for the EU-27 (3.3%) but larger at the world level (26.3%), which was fuelled by the significant increase in internet users' score. A majority of countries (66) improved their scores in this sub-pillar, pushed by a digital boom in many middle-income countries. The six countries declining are all high-income countries: Finland, France, Ireland, Iceland, Portugal and the United Kingdom. Conversely, the largest progress is made mostly by middle-income countries such as Egypt, Iran and India.

### ***Wealth, progress over 2011-2020***

In Wealth, progress rates are significant at the world (+28.7%) and EU-27 levels (+27.7%). Again, the majority of countries (66) progress or stagnate. The largest improvements are made by middle-income countries catching up: Vietnam, Moldova and Kenya. The downward movements in Wealth are seen in Iran, which was strongly affected by the reinstatement of US sanctions in 2018, and in Algeria and the United Arab Emirates, which are highly dependent on the oil and gas prices.

### ***Labour productivity & R&D intensity, progress over 2011-2020***

Fifty-seven countries improved their scores in Labour productivity and R&D intensity with an average progress rate of 11.6% at the world level and 8.1% in the EU-27. For this sub-pillar, the pattern is similar to Wealth; middle-income countries are catching-up with largest progress rate: Vietnam, Thailand and Georgia. The declines are seen in countries experiencing economic difficulties over the past decade: Nigeria, Ukraine and Argentina.

If Labour productivity scores have increased in the EU-27 over the decade (+6.8% on average), the progress remains lower in comparison to the world level (+17.1%). As noted by the 2022 Annual sustainable growth survey<sup>33</sup>, this trend in the EU-27 is explained by the difficulties European companies have in scaling-up and adapting their activities to a fast-changing world where digital technologies have a key role. Therefore, measures to develop innovation ecosystems and support the adoption of technologies, notably by SMEs, are important as outlined in the renewed European Research Area.

### ***Industrial base, progress over 2011-2020***

Industrial base is the only sub-pillar showing a decrease in world score (-3.8%) as well as in the EU-27 (-2.4%), a trend partly explained by the transformation of developed economies which are shift from manufacturing to services. Twenty-one countries improved their scores in Industrial base including high-income countries such as Ireland or Denmark.

<sup>32</sup> Note that Finland ranks first in the Digital Economy and Society Index (DESI, 2020), which includes digital skills.

<sup>33</sup> European Commission, *2022 European Semester: Annual sustainable growth survey*, 24 November 2021.



### IV.3. SPECIFIC IMPACT OF COVID-19

The outbreak of COVID-19 has caused global health and economic shocks that will have long-lasting effects on all countries. It poses policy challenges for developed and developing countries. The effect of the pandemic on the Economic pillar is not fully visible in this edition as data is reported with a delay.

#### Education

Many countries decided to close schools in 2020 in order to curb the spread of the virus. In the emergency situation, new remote learning systems were implemented that accelerated the digitisation of education. These disruptions in education systems exacerbated education inequalities and learning losses as home-schooling environments differ significantly in terms of access to technologies, skills, and support by family and schools. Early research on high-income countries (Belgium, the Netherlands, Switzerland and the United Kingdom) finds higher losses for disadvantaged families, with possible long-term effects<sup>34</sup>. Impacts for middle-income countries with lower access to technology are expected to be more dramatic.

Recognising the challenges posed by the COVID-19 and the digital inequality, the EU's Digital Education Action Plan (2021-2027)<sup>35</sup> is a policy initiative created to support the development of high-performing digital education ecosystems and enhance digital skills and competences. This long-term strategic action plan aims at a high quality, inclusive and accessible digital education in Europe. Additionally, an important part of the National Recovery and Resilience Plans of Member States is dedicated to education and specifically to digital education. Most countries plan to invest in infrastructure to improve connectivity in schools and reduce the digital gap between learners. A majority of Member States will also invest in Vocational Education and Training (VET) and support digital skills via upskilling and reskilling programmes in the context of digital and green transitions, supported by the Recovery and Resilience Facility<sup>36</sup>.

#### Wealth

The pandemic has further accelerated the use of digital technologies, not only in education but also in remote working, e-commerce and changes in consumption and production behaviours. Global GDP declined by 3.1% in 2020<sup>37</sup> due to the strong impact of lockdowns and other measures to contain the pandemic. According to the IMF, the gap in expected recovery across countries has widened between high-income and low-income countries partly due to differences in policy support. Most high and upper-middle income countries adopted economic recovery packages in order to build more sustainable and resilient economic and social systems, whereas low and lower-middle income countries are often constrained in implementing such packages. In this regard, the EU's NextGenerationEU<sup>38</sup> plan aims to boost the economic recovery and social cohesion, including through specific support for digital and green transitions.

There is a clear pattern of decline in TPI Wealth scores in 2020 in comparison with 2019. This is one of the few indicators for which data is up to date. Sixty-four countries have stagnating or declining GDP per capita growth rates and scores, whereas only eight countries were in that situation between 2018 and 2019. In 2020, the drop is stronger at the EU-27 level (-5.1%) than at the world level (-2.9%). The five largest downward movements take place in Montenegro, Spain and Argentina. Most countries in the western Balkan region experienced a decline as well: Montenegro, Bosnia and Herzegovina, North Macedonia, Albania, Serbia. China has the largest increase in Wealth, which was aided by strict lockdown measures to contain the pandemic.

#### Labour productivity & R&D intensity

Some early data suggests that the pandemic has negatively affected labour productivity, as measured by output per worker, notably due to companies retaining workforce in spite of a slowdown in production<sup>39</sup>. The adoption of new technologies induced by the pandemic can provide opportunities to raise productivity in some sectors, such as in telemedicine in healthcare.

34 Engzell, Per, Frey, Arun, Verhagen, Mark D. *Learning loss due to school closures during the COVID-19 pandemic. Proceedings of the National Academy of Sciences, 2021, vol. 118, no 17.*

35 European Commission, '*Digital Education action Plan*', COM/2020/624 final, September 2020

36 European Commission, *Recovery and Resilience Facility*

37 International Monetary Fund (IMF), *World Economic Outlook*, October 2021

38 European Union, *NextGenerationEU*

39 World Intellectual Property Organization (WIPO), *Global Innovation Index: Tracking Innovation through the COVID-19 Crisis, 2021*



As innovation is a key driver of recovery, the World Intellectual Property Organization (WIPO) is optimistic and notes that despite the economic crisis, R&D expenditure seems to be more resilient based on preliminary data. Confirming these views, international patent filings reached a higher point in 2020 (+3.5% compared to 2019), with a particularly strong increase in the medical technology, pharmaceutical and biotechnology categories. In the TPI, the impact of COVID-19 on Labour productivity and R&D intensity is not yet visible because of data lags.

### **Industrial base**

The COVID-19 pandemic has revealed the vulnerabilities of globalised and interconnected economies based on an international division of labour around technological competences. The pandemic has disrupted global value chains and many countries have faced difficulties in providing essential supplies. The resilience of economies depends then on robust supplies chains. In the post-pandemic era, innovation is key to shaping the response strategy in the transformation towards more sustainable and prosperous economies, with a central role for R&I policies.

In the 'My agenda for Europe'<sup>40</sup>, European Commission President Ursula von der Leyen called for 'technological sovereignty' to achieve ownership of key technologies in Europe and for enhanced resilience to prepare for future shocks and invest in the capacity to develop or source technologies and avoid 'one-sided dependencies' to countries<sup>41</sup>. The implementation of the Industrial Strategy and the updated version in 2021<sup>42</sup> will contribute to addressing the EU's strategic dependencies with measures which include the launch of new industrial alliances so as to diversify international supply chains.

The Industrial base indicator in the TPI is an important measure of a country's capacity to produce and to innovate. It is worth noting that the measure should be analysed by considering the specificities of each country, including their size and the structure of their economy. Between 2019 and 2020, more than half of the countries (43) improved their scores in the Industrial base sub-pillar. At the global level the score stagnated in 2020 (-0.1%) and slightly decreased at the EU-27 level (-0.9%). There is no clear pattern of changes in the Industrial base. Some high-income countries have downward trends, such as Germany (-3.5%) and France (-2.3%), whereas others improved, such as Norway (+1.9%). Similarly, some middle-income countries are declining, such as the Philippines (-3.8%) while others are increasing, such as Nigeria (+9.6%).

## **IV.4. IMPACT OF THE ADDITION OF THE DIGITAL DATA**

The trend of digital transformation has been accelerated by the outbreak of COVID-19. The crisis has revealed the central role of digital skills to ensure the continuity of activities in companies and public administration. The fourth industrial revolution raises challenges for the future of work, with a need for upskilling and reskilling to foster employability in the labour market.

It is estimated that within ten years, nine out of ten jobs will require digital skills<sup>43</sup> although almost half of the world's population is still offline. In this context, this edition of the TPI includes digital data on internet users and the proportion of people with ICT skills (a composite) to capture the role of digital competences in the Economic transition.<sup>44</sup> Appendix I, Conceptual framework, shows how this change impacts the rankings compared to those obtained with the 2020 framework by leaving out each of the added indicators in turn.

40 Von der Leyen, Ursula, *Political guidelines for the next European Commission 2019-2024*, October 2019

41 Edler, J., Blind, K., Frietsch, R., Kimpeler, S., Kroll, H., Lerch, C., ... & Walz, R, *Technology sovereignty: From demand to concept*, Fraunhofer Institute for Systems and Innovation Research (ISI), 2020.

42 European Commission, *Updating the 2020 industrial strategy: towards a stronger single market for Europe's recovery*, May 2021

43 World Economic Forum, *'Jobs will be very different in 10 years. Here's how to prepare'*, 2020.

44 The ICT skills indicator has a relatively high percentage of missing values (22.97%); nevertheless, as pointed by the JRC audit (Appendix V), there is no impact on the rankings when missing values are imputed, suggesting a good robustness of the TPI to missing values.



These new indicators mirror the Commission's priorities in the Europe Fit for the digital age agenda<sup>45</sup> and the central role of the Digital transition in the recovery strategy. The recovery and resilience plans include measures to contribute to the digital and green transitions with, for example, the energy-efficient use of digital technologies. The TPI is therefore a tool to help monitor digital strategies in the EU and other countries.

#### IV.5. LINK WITH OTHER MEASURES OF EDUCATION

The Education sub-pillar includes ICT skills and internet users along with a measure of government expenditure in education. The latter is a proxy input indicator to measure the collective effort in education. Therefore, the education system's efficiency and outcomes are not taken into account by the TPI. It is then interesting to reflect on the relationship between expenditure in education and the results achieved, measured by other output measures such as NEET rates (neither in employment nor in education and training) or PISA (Programme for International Student Assessment) scores. A comparison between resource spent in education per student and PISA scores is available in the OECD's report 'Government at a Glance 2021'<sup>46</sup> for OECD countries. The PISA scores measure the performance of 15-year-old students in reading, mathematics and science. The expenditure levels are positively correlated with PISA scores and the relationship is stronger at lower levels of spending and weakens as spending increases.

#### TPI comparison NEET rates

NEET rates refer to the percentage of people neither in employment nor in education and training by sex, age and labour status. **FIGURE 10** shows the link between the government expenditure in education per student (% of GDP per capita) and the proportion of young adults (15-24 years) neither in employment nor in education or training. Expenditure in education and NEET measures are correlated as education expenditure increases the ability to maintain and improve skills to succeed in the transition from studies to work.

Additionally, the sub-pillar Work and inclusion is correlated with Education (0.57) suggesting that a stronger performance in education tends to be associated with better employment rates and inclusion. The NEET rates show large differences across countries as well as across genders (not visible on this figure). In the EU, NEET rates tend to be high in Italy, Romania and Czechia with large differences between women and men in Czechia, Poland and Slovakia. Conversely, NEET rates are lower in the Netherlands, Sweden and Luxembourg with a shorter gender gap. Some countries achieve a relatively high score in NEET rates considering the level of government expenditure per student, such as Moldova, whereas other countries, such as Japan and Singapore, have relatively low NEET rates for the amount spent. The association between NEET rates and education expenditure is not straightforward as NEET rates are also influenced by other factors, such as social and family environments.

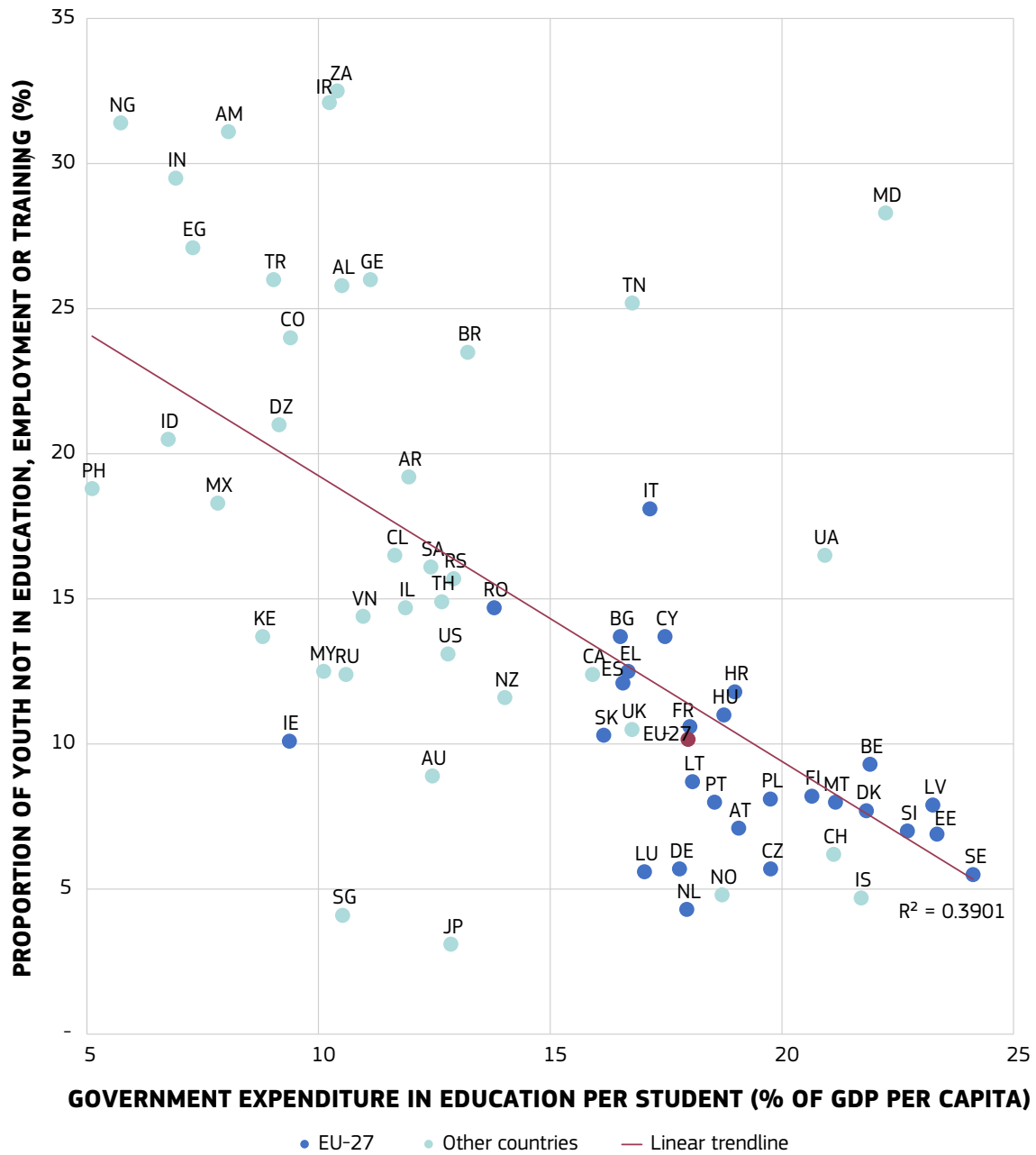
45 European Commission, '*A Europe fit for the digital age*'.

46 OECD, '*Government at a Glance 2021*', OECD Publishing, Paris, 2021, p.214.





FIGURE 10: Government expenditure in education per student (% of GDP per capita) and NEET rates



Source: European Commission, Transitions Performance Index 2021.

