European Commission

IX. TPI LINKAGES

IX. TPI LINKAGES

The TPI is a new metric published for the first time in 2020 in the context of the COVID-19 pandemic. Last year, the linkages of the TPI with other relevant measurable phenomena were succinctly assessed to identify and open potential avenues for future research:

- TPI and GDP per capita (PPP$).
- TPI and Summary Innovation Index scores.
- TPI and Digital Economy and Society Index (DESI) scores.
- TPI indicators and resilience.
- TPI and trade (% of GDP).[109]

This year's TPI refines some of these analyses and explores new linkages with global multidimensional approaches as well as thematic indicators through a series of scatterplots:

- The scatterplot of GDP per capita (PPP$) and TPI scores leaving out GDP per capita (PPP$) allows us to explore the possibility to exclude GDP per capita in future editions of the TPI.
- The scatterplot of the TPI and the Sustainable Development Report SDG index confirms a strong correlation between the two indices.
- TPI and planetary pressures-adjusted Human Development Index (PHDI) scores explore the linkages of the TPI with a global index of HDI capturing ecological and environmental factors.
- TPI and OECD's Better Life Index compare qualitatively the two different frameworks with a macro-level view for the TPI and a micro-level approach for the Better Life Index.
- TPI and the concept of resilience and resilience dashboards.
- TPI and the Global Innovation Index analyse the possible links between innovation and transition performance.
- TPI and International Digital Economy and Society Index (I-DESI) scores explore the effect of digitalisation on transitions.
- TPI and the Gender Equality Index capture to which extent performance in transition goes hand in hand with bridging gaps in gender equality.
- TPI and Multidimensional Poverty Index (MPI) scores focus on the relationship between level of poverty and transition performance for low and middle-income countries.

TABLE 19 shows possible overlaps of the TPI's dimensions with selected composite indicators and dashboards that are not discussed in the report. The correlation between the TPI and the Environmental Performance Index EPI is strong (0.85); it is weaker with the Happy Planet Index HPI (0.46), probably explained by the specificity of the HPI, which includes a measure of subjective life satisfaction, life expectancy at birth and ecological footprint per capita. The Eurostat SDG Dashboard, the recovery dashboard[110], the Recovery and Resilience Scoreboard[111], the Resilience Dashboards[112], the EU Justice Scoreboard, the Environmental Action Programme and the European Green Deal Monitoring dashboard are not composite indicators and therefore not directly comparable with the TPI.

109 See Step 9, Link to other measures and the Handbook on Constructing Composite Indicators of the Competence Centre on Composite Indicators and Scoreboards of the Joint Research Centre of the European Union.
110 Eurostat, Recovery Dashboard
111 European Commission, *Recovery and Resilience Scoreboard*
112 European Commission, *Resilience Dashboards*

TABLE 19: Selection of composite indicators and scoreboards

<table>
<tr><th>Economic</th><th>Social</th><th>Environmental</th><th>Governance</th></tr>
<tr><td colspan="4">Sustainable Development Goals (SDGs) Index and Indicators, United Nations, 193 countries</td></tr>
<tr><td colspan="4">EU SDGs, European Commission, EU-27 countries</td></tr>
<tr><td colspan="4">Better Life Index, OECD, 35 countries</td></tr>
<tr><td colspan="4">Resilience Dashboards, European Commission, EU-27 countries</td></tr>
<tr><td colspan="2" rowspan="2">Summary Innovation Index and European Innovation Scoreboard[1], European Commission, EU-27 countries + 11 countries</td><td colspan="2">Happy Planet Index (HPI), The New Economic Foundation, 152 countries</td><td rowspan="11">EU Justice Scoreboard, European Commission, EU-27 countries</td></tr>
<tr><td colspan="2">Environmental Performance Index (EPI), Yale and Columbia Universities, 180 countries</td></tr>
<tr><td colspan="3">Planetary pressures-adjusted Human Development Index (PHDI), UNDP, 189 countries</td></tr>
<tr><td colspan="3">Recovery and Resilience Scoreboard, European Commission, EU-27 countries</td></tr>
<tr><td colspan="2">Recovery Dashboard, European Commission, EU-27 countries</td><td rowspan="2">8th Environmental Action Programme (planned)</td></tr>
<tr><td colspan="2">Multidimensional Poverty Index, UNDP, 79 countries</td></tr>
<tr><td>Global Innovation Index[1], WIPO, 132 countries</td><td rowspan="2">European Skills Index, CEDEFOP, 31 countries</td><td rowspan="3">European Green Deal Monitoring Dashboard (planned)</td></tr>
<tr><td rowspan="2">Digital Economy and Society Index (DESI / IDESI)[1], European Commission, EU-27 countries / 45 countries</td></tr>
<tr><td>Social Scoreboard, European Commission, EU-27 countries + 3 countries</td></tr>
<tr><td colspan="3">Gender Equality Index, European Commission, EU-27 countries</td></tr>
</table>

■ Scoreboards and dashboards for which a composite indicator is calculated
■ Scoreboards and dashboards without composite indicator
1) These scoreboards are thematic and focus on innovation or digital but they also cover partly other aspects than strictly economic indicators
Source: European Commission, Transitions Performance Index 2021.

TABLE 20 presents the Pearson correlation coefficients of the TPI with each of these indicators. Correlations tend to be positive and strong with the TPI and its pillars except for the Environmental pillar, which tends to show weaker associations. This suggests that the environmental dimension measured by the TPI is not captured by the other indicators considered. Overall, the positive correlations between the TPI and other composite indicators are not surprising as international composite indicators and scoreboards often have the same countries as good performers. This results from their multidimensional nature, as good performances in one dimension tend to reinforce performances in other, related dimensions. In addition, some factors can be common to two different multidimensional phenomena without reducing the specific nature of each composite indicator. In statistical aggregation, the existence of confounding variables not accounted for may not be precluded a priori. This also results, in part, from construction, since correlation analysis is a crucial element of the robustness analysis of rankings (refer to Appendices IV and V). It is noticeable that the Spearman's rank coefficients of correlation allowing for non-linear dependences (not displayed in the report) are close to the Pearson correlation coefficients. It suggests that the relationships between the TPI and other indicators are mostly linear, which is an underlying assumption in the use of Pearson correlation coefficients.

TABLE 20: Correlations between the TPI and other relevant indicators

	TPI	Economic transition	Social transition	Environmental transition	Governance transition	EDUCATION	WEALTH	PRODUCTIVITY & R&D INTENSITY	INDUSTRIAL BASE	HEALTH	WORK & INCLUSION	FREE TIME	EQUALITY	EMISSIONS REDUCTION	BIODIVERSITY	MATERIAL USE	ENERGY	PRODUCTIVITY	FUNDAMENTAL RIGHTS	SECURITY	TRANSPARENCY	SOUND PUBLIC FINANCES
Gross domestic product per capita (PPP$) score (0-100)	0.73	0.93	0.66	(0.11)	0.79	0.70	1.00	0.90	0.57	0.70	0.60	0.64	0.28	(0.65)	0.23	(0.26)	0.35	0.77	0.51	0.76	(0.12)
Summary Innovation iferror(iferror(index score (0-1)	0.68	0.87	0.72	0.03	0.76	0.67	0.81	0.86	0.54	0.80	0.69	0.76	0.34	(0.33)	0.14	(0.08)	0.27	0.80	0.37	0.77	(0.14)
International Digital Economy and Society score (0-100)	0.51	0.82	0.61	(0.15)	0.64	0.67	0.83	0.80	0.37	0.51	0.63	0.72	0.36	(0.44)	0.01	(0.11)	0.08	0.65	0.33	0.68	0.07
Trade (% of GDP)	0.39	0.36	0.33	0.11	0.37	0.30	0.46	0.24	0.21	0.31	0.28	0.21	0.22	(0.21)	0.24	(0.11)	0.30	0.29	0.33	0.23	0.10
Planetary pressures-adjusted HDI (PHDI) score (0-100)	0.62	0.46	0.54	0.31	0.50	0.46	0.33	0.40	0.38	0.62	0.42	0.47	0.29	0.06	0.30	0.08	0.34	0.52	0.31	0.50	(0.20)
2021 Sustainable Development Goals Index score (0-100)	0.79	0.74	0.82	0.10	0.78	0.76	0.63	0.64	0.53	0.80	0.66	0.64	0.50	(0.28)	0.43	(0.23)	0.22	0.74	0.54	0.72	(0.12)
Gender Equality Index score (0-100)	0.77	0.80	0.58	(0.02)	0.76	0.66	0.73	0.82	0.44	0.62	0.58	0.66	0.18	(0.16)	(0.31)	0.19	0.17	0.74	0.24	0.72	0.14
Multidimensional Poverty Index score (0-100, log scale)	(0.48)	(0.62)	(0.35)	0.20	(0.53)	(0.60)	(0.67)	(0.21)	(0.21)	(0.76)	(0.10)	(0.02)	(0.06)	0.49	0.24	0.37	(0.21)	(0.27)	(0.39)	(0.52)	0.11
Global Innovation Index score 0-100	0.72	0.90	0.71	(0.11)	0.76	0.69	0.83	0.87	0.69	0.72	0.71	0.70	0.26	(0.46)	0.14	(0.26)	0.24	0.77	0.48	0.73	(0.19)

Note: Negative values in red, between 0 and 0.5 in light green, values above 0.5 in dark green.
Source: European Commission, Transitions Performance Index 2021.

To sum up, the specific nature of each separate composite indicator is enhanced if some countries rank high in multiple multidimensional indicators, whereas variations between composite indicators tend to be substantial for other countries.

IX.1. BEYOND GDP APPROACHES

As described in Appendix I - Conceptual framework, the construction of the TPI as a composite indicator aims to possibly address some key limitations of GDP as a measure of prosperity and contributes to the 'beyond-GDP' paradigm[113]. Other composite indexes with such an approach already exist at the international level.

TPI vs GDP

Currently the TPI includes GDP per capita in the Economic transition pillar. Therefore, comparing both has some caveats.

This year, the comparison has been done with a recalculated TPI without GDP per capita (so-called 'leave-out scores') and the sub-pillar 1.2 score, which corresponds to GDP per capita; the score, and not the value, is used to properly account for the goalpost bounds affecting Ireland, Singapore and Luxembourg, with normalised scores of 100 (**FIGURE 15**). This allows first a check on how this TPI really relates to GDP per capita, and second a way to explore the possibility of excluding GDP per capita in future editions.

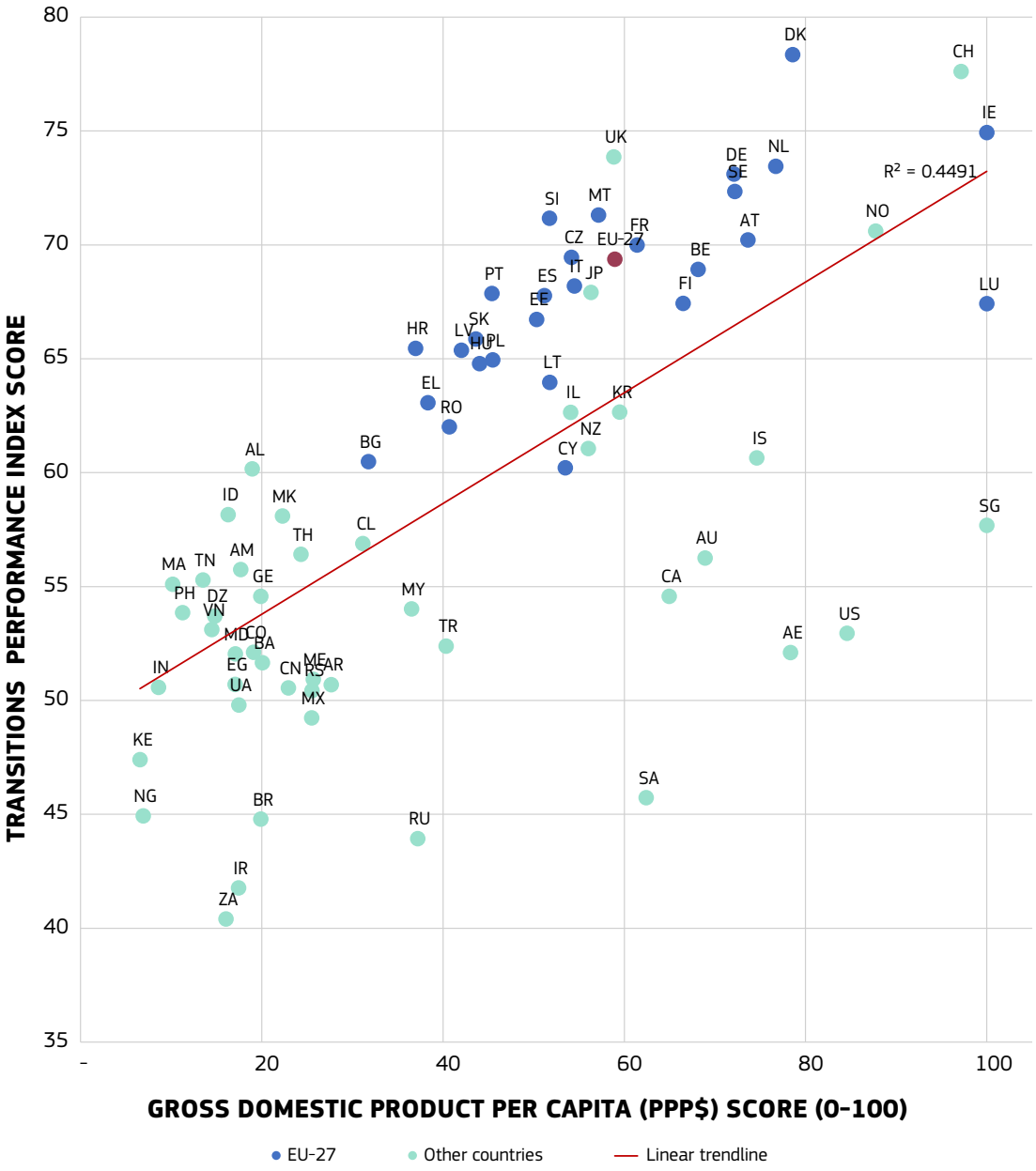
A first important result is that the ranking is altered; for instance, Denmark now tops the ranking in the place of Switzerland.

The positive association between the recalculated TPI and the GDP per capita score suggests that a measure of economy's output is already captured by other indicators in the TPI. Except for Luxemburg, and to a minor extent Cyprus, all EU-27 countries outperform the trendline (in red) in their TPI compared to their GDP per capita. Among countries with GDP per capita scores above 50, this is also the case of Japan, Switzerland and the United Kingdom.

Israel, Korea, New Zealand, and Norway are right on the trendline, whereas the remaining wealthy countries perform below expectations (trendline): Australia, Canada, Iceland, Singapore, South Africa, the United States and the United Arab Emirates. This latter result – which is partly driven by their weak performance under the Environmental pillar – indicates that the TPI is not a proxy for GDP per capita, but rather a synthetic measure of multiple important dimensions not captured by a simple GDP per capita indicator.

113 In particular, limitations such as the non-valorisation of the impact on stocks (environment, debt, etc.) or non-monetary elements (equality, security and governance, free and non-remunerated time); the absence of measures of resilience; the absence of direct measures of impact on well-being (see Appendix I - Conceptual framework).

FIGURE 15: GDP per capita (PPP$) score (sub-pillar 1.2) and TPI score with 1.2 left out



Source: European Commission, Transitions Performance Index 2021.

Sustainable Development report

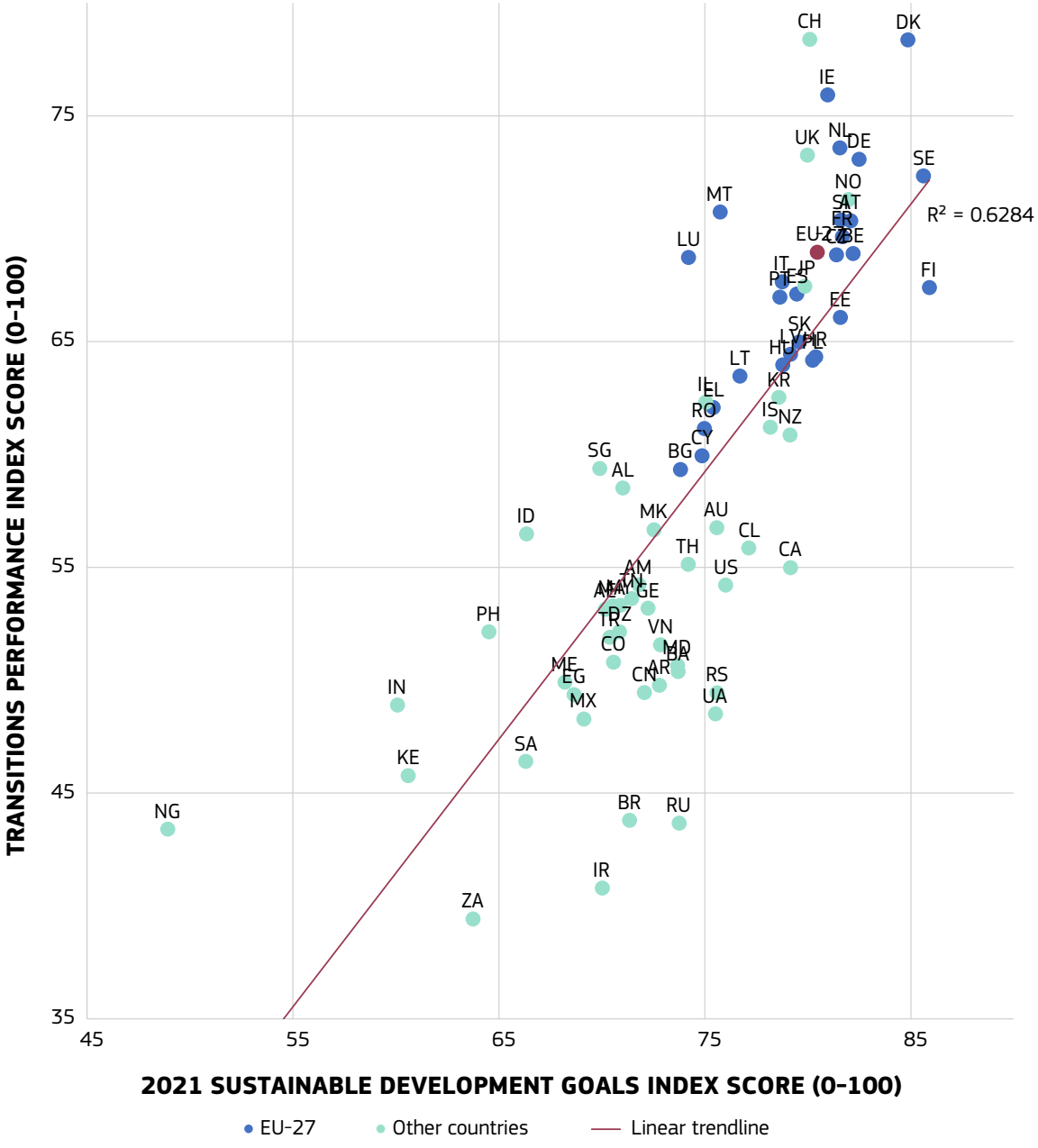
The Sustainable Development Report[114] (formerly the SDG Index & Dashboards) is a global assessment of countries' progress towards achieving the Sustainable Development Goals. It is a complement to the official SDG indicators and the voluntary national reviews. The SDG index is a measure of a country's performance using the 17 SDGs with an equal weight given to each goal.

FIGURE 16 shows a positive association between the SDG Index and the TPI and a high R2 of 0.63 and correlation coefficient (0.79) that is reassuring in light of the fact that both indicators are conceptually close, the TPI being based on a reduced number of SDGs indicators, in contrast, for example, to the PHDI of the previous section. The EU-27 countries take the lead in the two composite indicators with Denmark at the top. Most of the EU-27 countries are above the linear trendline and in the upper right quadrant suggesting that they achieve higher scores in both the TPI and the SDG, with performances above the level expected from their SDG index scores.

114 Sachs, J., Kroll, C., Lafortune, G., Fuller, G., & Woelm, F, *Sustainable development report 2021*, Cambridge University Press, 2021.

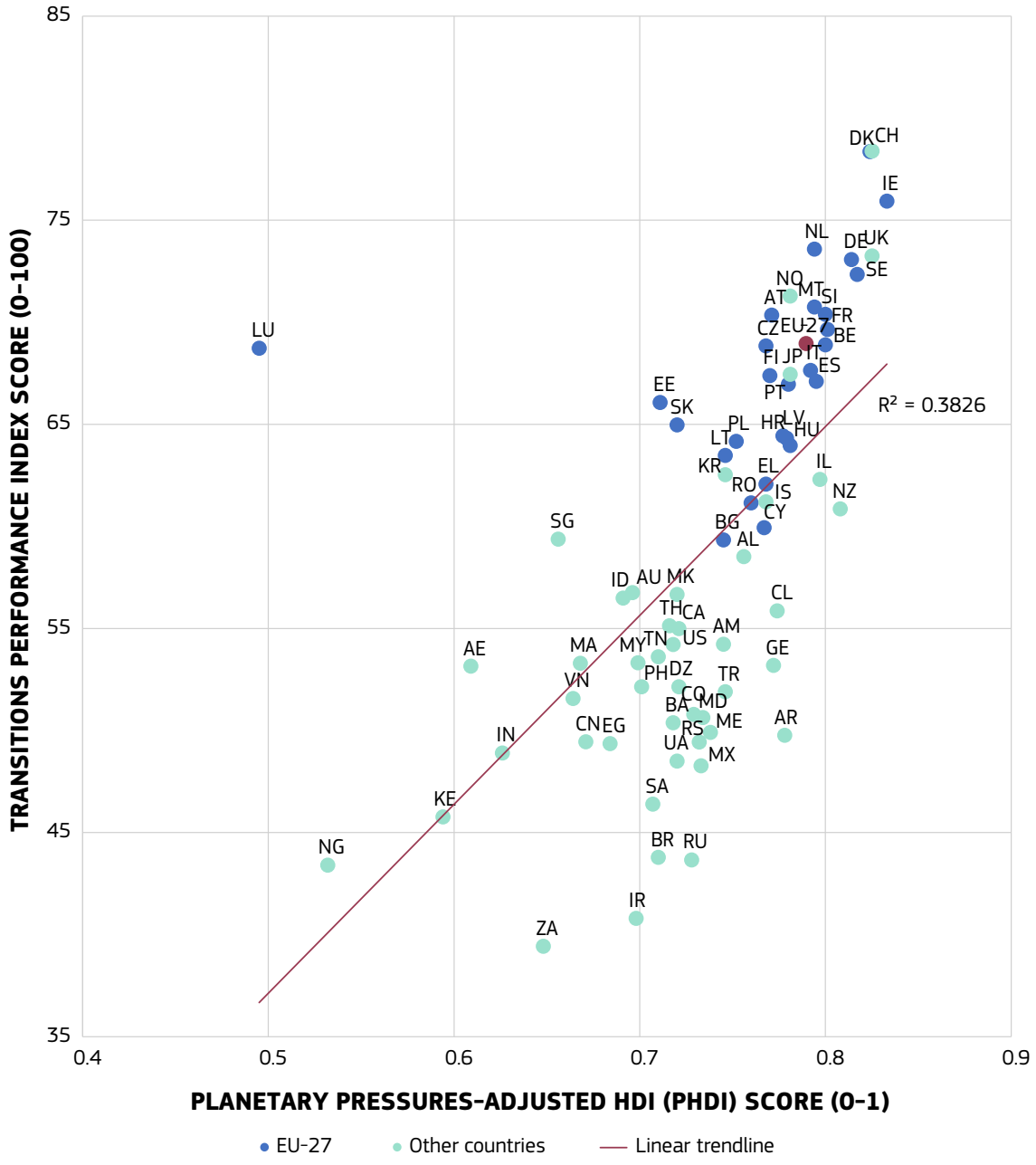
Where Denmark, Finland and Sweden stand out with relatively high SDG scores, Denmark, Ireland and the Netherlands stand out in the TPI. Most countries, however, stay close to the trendline, which is expected since the TPI is mostly a reduction of SDG indicators to a smaller and tractable number of indicators, even as wealthier countries are generally penalised in the TPI by the relatively high weight assigned to the Environmental transition. Middle income countries tend to lag behind in one index or the other, a reflexion of their policy mixes, and partly due to the lack of infrastructure and policy to make progress in their transitions and achieve the SDGs.

FIGURE 16: TPI and Sustainable Development Goals Index scores



Source: European Commission, Transitions Performance Index 2021.

FIGURE 17: TPI and Planetary-Pressures Adjusted Human Development Index scores



Source: European Commission, Transitions Performance Index 2021.

Planetary pressures-adjusted Human Development Index

The Human Development Index (HDI)[115] is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living. The HDI is the geometric mean of normalised indices for each of the three dimensions.

The Planetary pressures-adjusted Human Development Index (PHDI) is an experimental index that adjusts the Human Development Index (HDI) for planetary pressures. The PHDI is the level of human development adjusted by carbon dioxide emissions per person (production-based) and material footprint per capita to account for the excessive human pressure on the planet.

Most EU-27 countries show a strong link between the PHDI and TPI indices (**FIGURE 17**). Denmark, together with Switzerland, are tied at the top. Among other non-EU-27 countries, Japan, Norway and the United Kingdom also perform well in both indices. While Bulgaria, Greece and Romania are right on the trendline, Cyprus is the only EU-27 country below the trendline. Luxembourg is a clear outlier, strongly penalised in the PHDI (score of 0.495 compared to 0.916 in the HDI), as well as in the TPI with a score of merely 52.9/100 in the Environmental pillar (moderate transition).

The graph also highlights some upper middle-income countries, such as Chile, Georgia or Argentina performing better in the PHDI than in the TPI (at the same level than several EU-27 countries). The R2 (0.38) and relatively strong correlation coefficient (0.62) reflect the fact that the TPI is consistent with the PHDI in the inclusion of pressures on planetary resources.

115 United Nations Development Programme, *Human Development Index (HDI)*

TABLE 21: Better Life Index linkages to TPI

BETTER LIFE INDEX AND LINKAGES TO TPI		
DIMENSIONS	**INDICATORS**	**LINKAGES**
Housing	Housing expenditure, Dwellings with basic facilities, Room per person	TPI does not include a direct measure of housing conditions. It has a global view on wealth with the GDP per capita in PPP$ to reflect the differences in cost of living across countries.
Income	Household net wealth, Household net adjusted dispo-sable income	TPI includes a measure of living standards with the GDP per capita and a more global view of income distribution with the Gini index and the income share held by the poorest quintile
Jobs	Job security, Personal earnings, Long-term unemployment rate, Employment rate	TPI does not measure directly job security but includes a similar aggregate measure of employment rate, as well as the employment-to-population ratio gender. The TPI also includes a measure of net enrolment rate in school, which is related to jobs as childcare facilities have an influence on the return to work.
Community	Quality of support network	BLI uses survey measures on the proportion of people who believe they can rely on their friends in case of need. The TPI has a more global approach on quality of network, partly captured by composite indicators in Transparency and Fundamental rights.
Education	Years in education, Student skills, Educational attainment	Unlike BLI which relies on output measures (PISA scores), the TPI has an input indicator for education with government expenditure in education per student. The TPI also includes measures of digital skills and internet users which is a dimension (digital) not included in the BLI.
Environment	Water quality, Air pollution	TPI has a more comprehensive and global view in the Environmental pillar which includes GHG emissions, measures of biodiversity, material use and energy productivity.
Civic engagement	Stakeholder engagement for developing regulations, voter turnout	TPI does not measure directly civic engagement but some aspects such as confidence in public institutions, democracy and rule of law which are captured in the composite indicators of Transparency and Fundamental rights in Governance transition.
Health	Self-report health, Life expectancy	TPI includes a measure of healthy life expectancy and does not rely on subjective measures for health.
Life satisfaction	Life satisfaction	TPI uses mostly hard data and therefore does not rely on subjective data for personal evaluation of life satisfaction.
Safety	Homicide rate, Feeling safe walking alone at night	TPI also includes the homicide rate as it is a reliable measure of country safety with a large coverage.
Work-Life Balance	Time devoted to leisure and personal care, Employees working very long hours	TPI has a free or non-remunerated time calculated to measure the work-life balance.

Better Life Index

The OECD Better Life Index[116] allows the comparison of well-being across countries, based on 15 topics the OECD has identified as essential, in the areas of material living conditions and quality of life, based on a set of over 80 indicators.

Topics go beyond the TPI scope and are divided into two categories: 11 are related to current well-being (housing, income, jobs, community, education, environment, civil engagement, health, life satisfaction, safety and work-life balance), and four refer to future well-being (natural, economic, human and social capital).

The interactive website makes it possible to create its own index, according to personal preferences, which determine the weights. This also shows the subjectivity involved when designing such an index and also the difference in point of views. On the one hand, the BLI has a more micro approach by focusing on the living conditions of individuals, including qualitative measures from surveys and personal preferences. On the other hand, the TPI has a more macro approach with hard data preferred over soft data and a global view of sustainability and transitions. **TABLE 21** describes in more detail the differences.

Resilience dashboards

The resilience is the capacity not only to prevent, anticipate and cope with challenges but also to adapt and recover. Resilience is defined in this context as the capacity of individuals, firms and society to resist shocks and their ability to work towards a healthy recovery.

The COVID-19 crisis has highlighted the need to improve resilience in many areas such as health care systems. The EU's dependencies on third countries to supply necessary goods to cope with the pandemic has been blatant. The globalised and interconnected world has shown the vulnerabilities to a pandemic and more generally to future crises. The 2021 Strategic Foresight Report[117] mentions global megatrends in the coming decades that could be global threat: environmental challenges, technological transformations and digitalisation, and pressure on democracy and value.

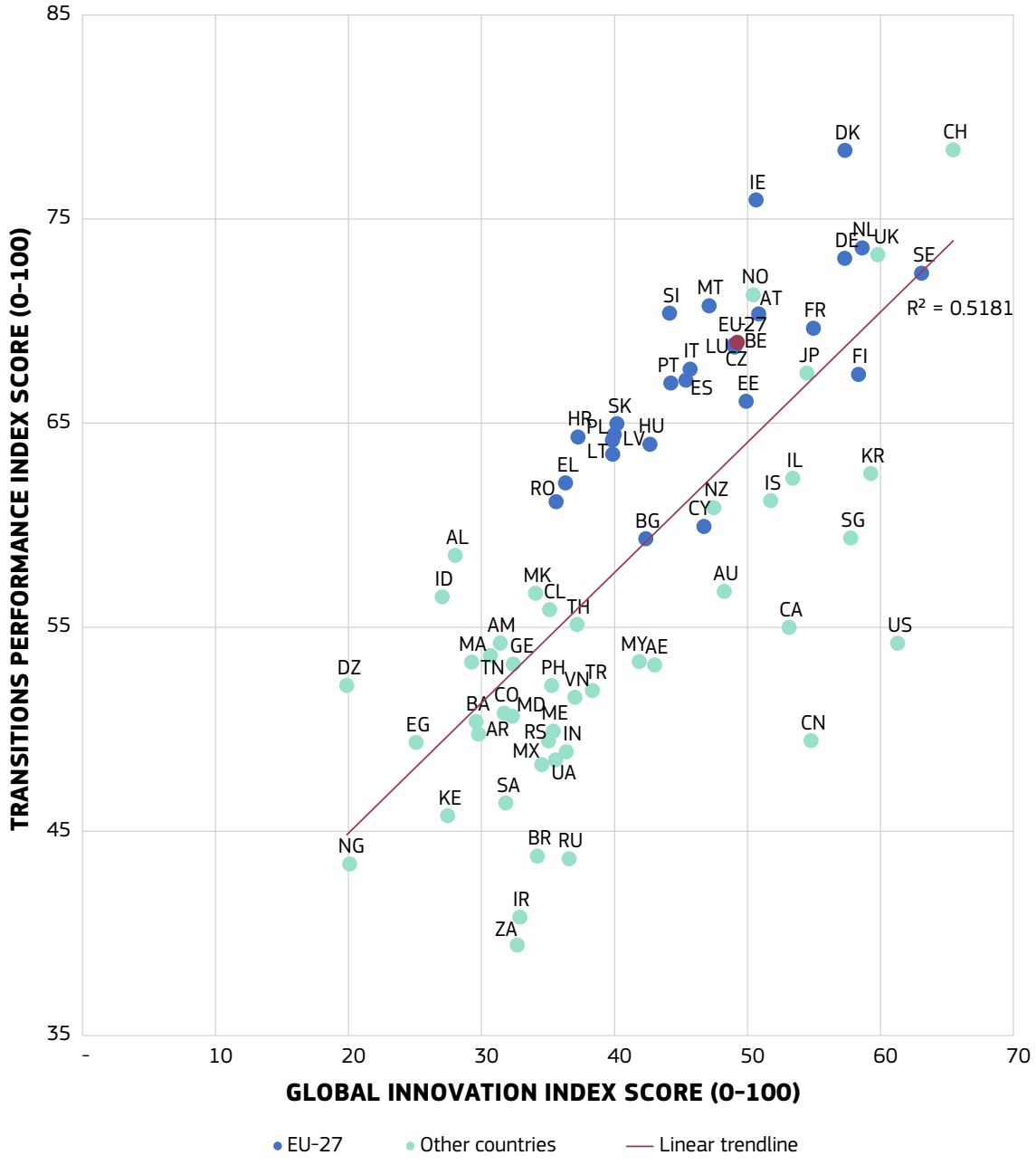
Following the 2020 Strategic Foresight Report, the on-going work at the European Commission has been to develop resilience dashboards[118] to measure vulnerabilities and capacities across four interrelated dimensions: social and economic, geopolitical, green and digital. This approach focuses specifically on Europe's resilience in comparison to other non-EU-27 countries. The first editions of the dashboards are available and complement the TPI's approach in monitoring the progress of the EU policy agenda. Note that the aim of the Resilience Dashboards is different from that of the Recovery and Resilience Scoreboard[119], which provides an overview of how the implementation of the Recovery and Resilience Facility and the national recovery and resilience plans is progressing.

The TPI's ambition is to measure the progress toward a sustainable path in the four dimensions – economic, social, and environmental and governance – but it also gives insights on the capacity of a system to adapt over time to a more harmonious society. As such, it contributes to social cohesion and progress, which are essential factors for the resilience capacity of countries.

Integrating the resilience objective in the TPI's conceptual framework does not make it an index of resilience per se, which would be designed specifically to this end. Nevertheless, some linkages can be made between TPI and resilience and last year, a thorough analysis was undertaken to analyse these linkages.

116 OECD, Better Life Index, 2020
117 European Commission, '*2021 Strategic Foresight Report*', 2021
118 European Commission, *Resilience Dashboards*
119 European Commission, *Recovery and Resilience Scoreboard*

FIGURE 18: TPI and Global Innovation Index scores



Source: European Commission, Transitions Performance Index 2021.

IX.2. RESEARCH AND INNOVATION AND TPI

Innovation increases the efficiency and adaptability of economic and social systems and is expected to have a positive impact on transitions. To address the global challenges and the SDGs, the new mode of R&I should contribute to socio-economic transitions in complement with other policies[120]. Transitions and innovation are multidimensional phenomena measured by composite indicators. The Global Innovation Index (GII), developed by WIPO, measures the innovation performance of 132 economies based on around 80 indicators including measures on inputs (institutions, human capital and research, infrastructure, market and business sophistication) and outputs (knowledge and technology outputs and creative outputs).

FIGURE 18 shows a positive association between the GII and TPI scores indicating a complementarity between innovation and transition performances. Almost all EU-27 countries outperform in the TPI (above the trendline) compared to their GII scores. Switzerland is top-ranked in both the GII and the TPI. Few high-income countries such as Canada, Singapore, South Korea and the United States underperform in the TPI considering their good performances in innovation as measured by the GII. This is partly explained by their relatively low scores in the Environmental pillar. A large group of mostly lower-middle and upper-middle countries are lagging behind with lower scores in the TPI than expected based on their GII (below the trendline). It indicates room for improvement to use innovation as a driver of transitions progress. The Summary Innovation Index shows a similar trend with a smaller coverage of countries (refer to the 2020 edition of the TPI).

In conclusion, it seems that in line with the theory, innovation contributes to progress in the TPI, but not all countries seem to make the best of their innovation capacity in this respect.

IX.3. TPI AND DIGITALISATION

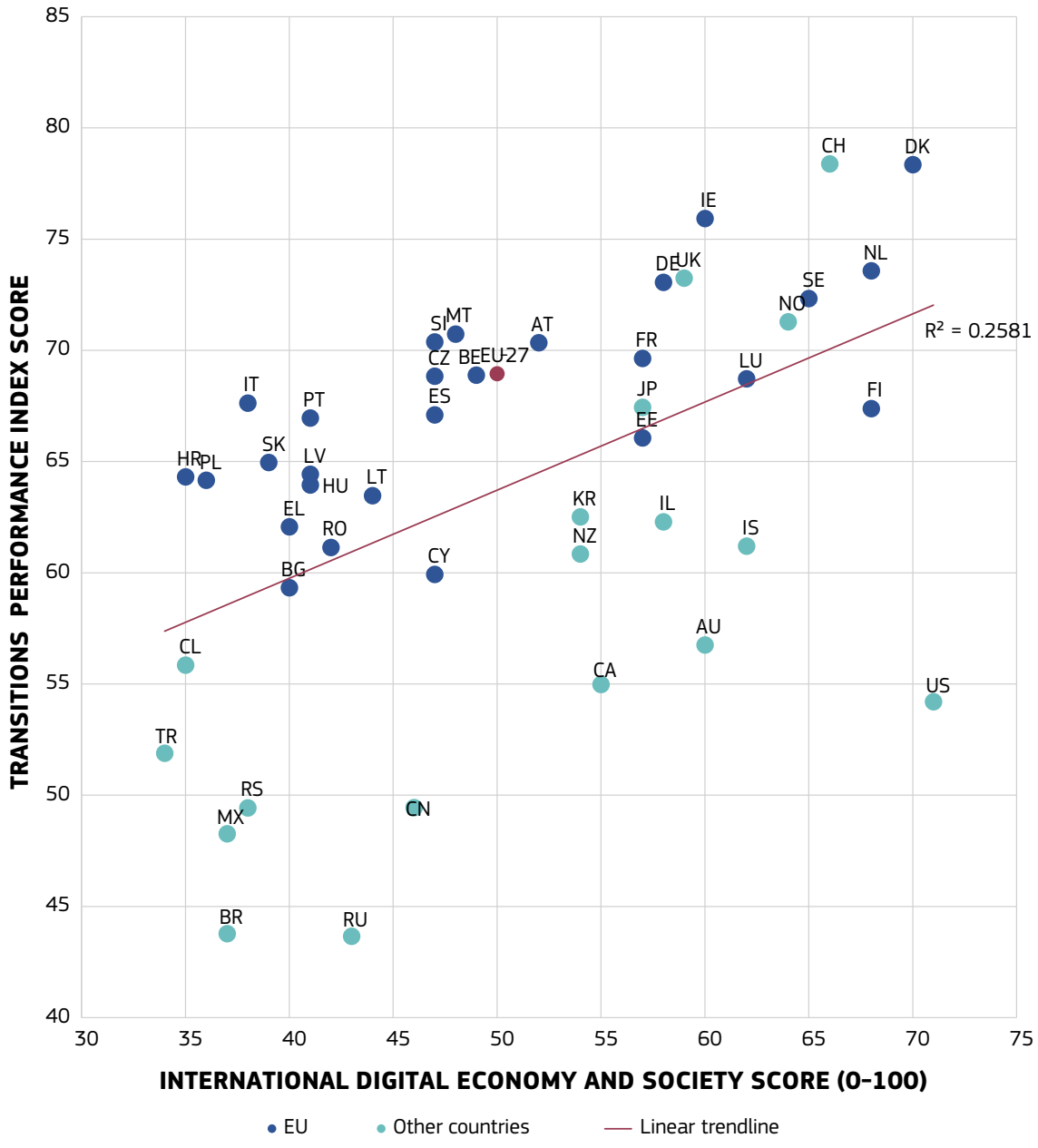
The trend of digital transformation has been accelerated by the COVID-19 crisis. In this context, this year's edition of the report includes two new indicators in the Economic pillar: internet users (%) and proportion of people with ICT skills (composite). These capture the digital transformation of society. It is unclear to what extent digitalisation translates automatically into progress towards economic, social, environmental and governance sustainability. For instance, the debate around the implementation of 5G technology stresses the positive impact of facilitating autonomous transport or distance learning and teleworking. However, at the same time, others point to the risk that an exponential use of data storage poses to privacy and energy consumption.

More generally, in theory, digitalisation, by improving the efficiency of the economy, should increase productivity and may reduce the impact of economic activities on the environment. However, accompanying measures are required to avoid a digital gap and a possible negative impact on employment[121], especially for specific categories of the population. In addition, adverse effects on the environment can be addressed through research, mandatory regulations, and voluntary standards.

The digitalisation of countries can be measured by the I-DESI. The International Digital Economy and Society Index (I-DESI)[122] is a composite index that measures the digital performance of 45 countries, including the EU-27 Member States. I-DESI includes 24 indicators to provide insights in five main dimensions: connectivity, human capital, citizen use of internet, integration of digital technology, and digital public services. The R2 of the TPI with the I-DESI (0.26) suggests a weak but positive association between digitalisation measured by I-DESI and transition performance. This positive association may indicate that increasing the digitalisation of the economy and society is likely to be a positive structural element to succeed in the four transitions (**FIGURE 19**). Nonetheless, the figure shows large disparities between countries.

120 Geels, F., '*Transformative innovation and socio-technical transitions to address grand challenges*', European Commission R&I Paper Series, Working Paper, vol. 2, 2020.
121 European Commission, '*Science, research and innovation performance of the EU 2020 (SRIP)*', Chapter 11 The consequences of AI-based technologies for jobs, 2021
122 European Commission, '*The International Digital Economy and Society Index (I-DESI)*', 2021

FIGURE 19: TPI and International Digital Economy and Society Index scores



Source: European Commission, Transitions Performance Index 2021.

Most of the EU-27 Member States are above the linear trendline, indicating that the on-going digitalisation process might have a positive effect on the four transitions measured by the TPI. Conversely, countries below the linear trendline, including four EU-27 countries (Bulgaria, Cyprus, Estonia and Finland), are not leveraging their digital performance into transitions performance as measured by the TPI. The United States is an interesting example as a leading country in the I-DESI index (top-ranking) but with a relatively weak score in the TPI, particularly on the Environmental pillar.

IX.4. TPI AND GENDER EQUALITY

Gender equality is an important dimension of transitions. As noted by 2021 Report on Gender equality in the EU: 'Gender balance in management and leadership functions can boost innovation, competitiveness and productivity, and contribute to the prosperity of the EU'[123]. Additionally, bridging gaps in gender equality is an 'important condition for effective democracy and good governance and it contributes to citizens' trust in democratic institutions'[124]. The linkage between TPI and a measure of gender equality aims to assess to what extent gender equality is positively correlated with transitions.

Gender equality is partly captured in the TPI by indicators employment-to-population ratio gender gap and gross enrolment ratio, both in the Social pillar. The Gender Equality Index[125] is a tool to measure progress in gender equality in the EU-27, developed by the European Institute for Gender Equality (EIGE). It gives visibility to areas that need improvement in the domain of work, money, knowledge, time, power, health and violence. Ultimately, the gender equality index supports policy makers to design more effective gender equality measures.

Despite the positive correlation between both indices (0.77 in **TABLE 20**, and R2 of 0.59 in **FIGURE 20**), achievements in gender equality and transitions vary considerably by member state. Denmark outperforms in both dimensions. With similar and relatively low scores in gender equality, Czechia considerably outperforms Cyprus in the TPI. In turn, with similar TPI scores, Belgium and Luxembourg present better performances in gender equality compared to Czechia. The same can be said of Sweden compared to Germany or of Spain compared to Estonia, Greece, Poland, Portugal and the EU-27 average on the trendline. What is clear is that to be complete, performance and progress in transition should go hand in hand with bridging gaps in gender equality.

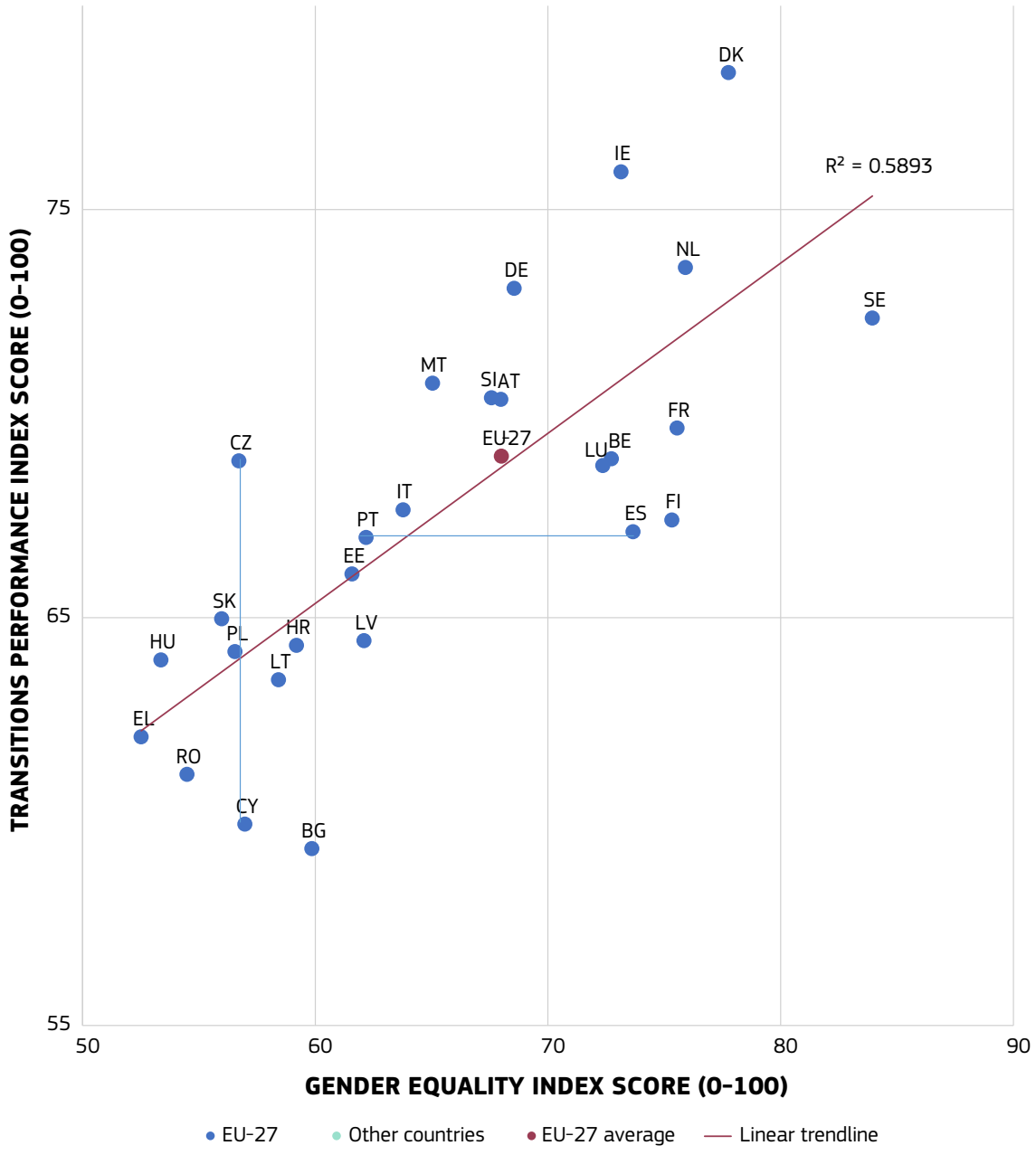
IX.5. TPI AND POVERTY

The global multidimensional poverty index (MPI)[126] is produced by the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative. The composite index measures poverty in 109 developing countries and contributes to the monitoring of SDG 1 which aims to end poverty. The index measures deprivations at the household and individual level in health, education and standard of living based on data from household survey.

A person is considered multidimensionally poor or non-poor based on the weighted number of deprivations in the household. The index captures both the incidence of deprivation and its intensity.

123 European Commission, '*2021 report on gender equality in the EU*', 2021
124 ibid.
125 European Insitute for Gender Equality, 'Gender Equality Index', 2021
126 United Nations Development Programme, '*The 2021 Global Multidimensional Poverty Index (MPI)*', 2021

FIGURE 20: TPI and Gender Equality Index scores

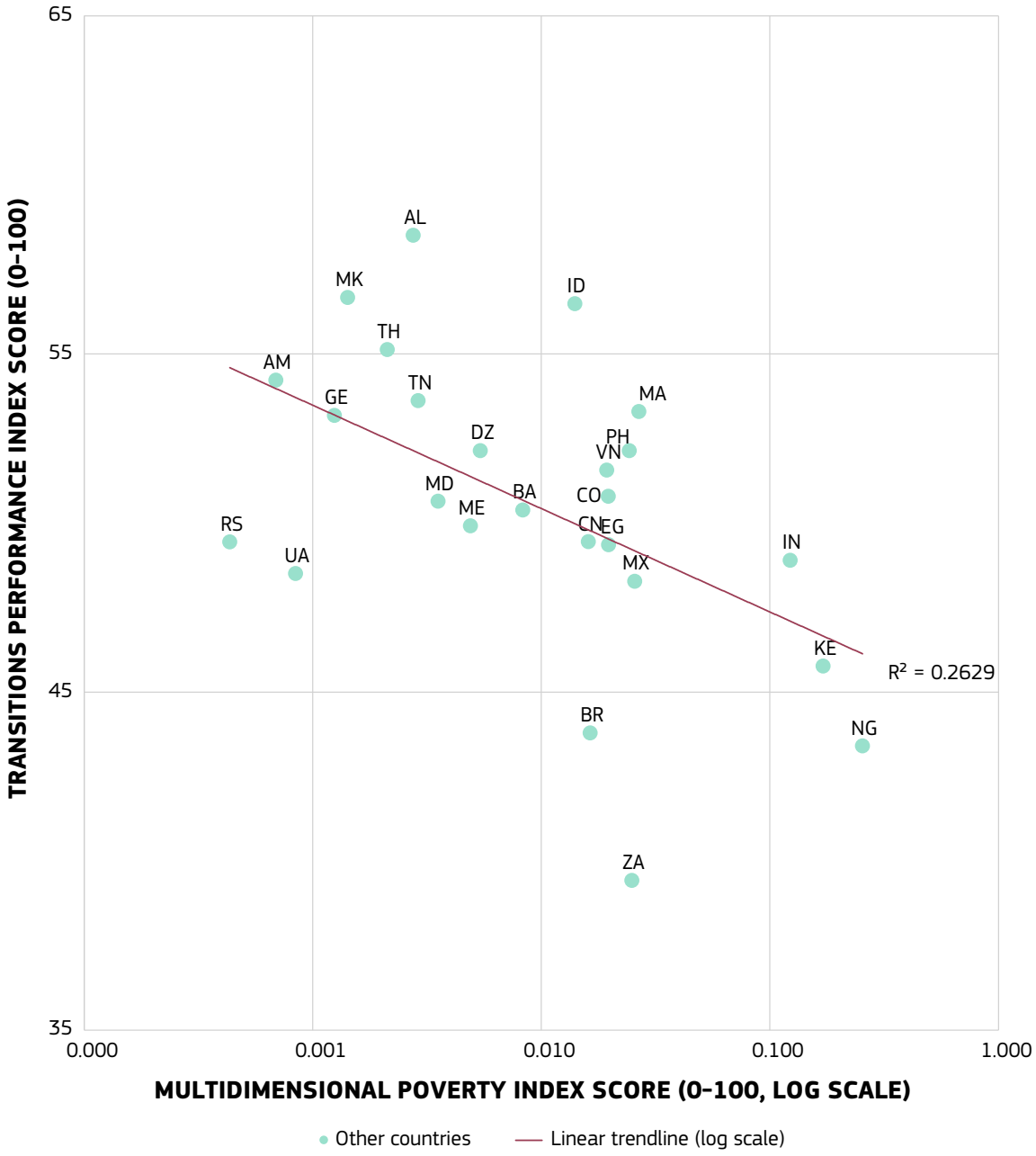


Source: European Commission, Transitions Performance Index 2021.

The MPI focuses essentially on middle-income countries (80) and low-income countries (26). Therefore, the linkages between TPI and MPI does not apply to high-income countries, which are the best performers in the TPI. This linkage analysis is valuable as lower income countries tend to face different challenges than high income countries, such as ending extreme poverty and providing access for all to basic services and infrastructure (SDGs 1-9).

FIGURE 21 shows an association between transition performance measured by the TPI and the level of poverty captured by the MPI. Countries with relatively high levels of poverty (high MPI index scores), such as Kenya or Nigeria, tend to have lower TPI scores. Russia, Ukraine, Brazil and South Africa are outliers with particularly low TPI scores, well below the expectations based on their poverty level. Most of these countries suffer from high levels of inequality based on the Gini index.

FIGURE 21: TPI and Multidimensional Poverty Index scores



Source: European Commission, Transitions Performance Index 2021.

Conversely, Albania, Indonesia, Morocco and, less so, North Macedonia, Thailand, the Philippines, Vietnam and India achieve relatively high TPI scores considering their MPI scores, a result that is mostly driven by good relative performances in the Environmental pillar, and to a minor extent, in the Social pillar.

The contrast is particularly worrisome between Indonesia and Brazil, or South Africa and Morocco.