

On the Nature of the Impact of the COVID-19 Pandemic on Youth Labour Markets: A Cross-Country Analysis

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Abstract

This paper seeks to contribute to an understanding of why young people were so very hard hit by the economic consequences of the COVID-19 pandemic. Presented here in preliminary form, after providing a brief overview of the economic context, we describe the fluctuations in youth employment witnessed across a range of high and middle income countries and how these varied between youths and adults. We then examine youth labour markets in a little more detail, looking at how falls in youth employment translated – in contrast to previous economic crises - into substantial increases in youth inactivity and (inactive) NEET rates. We then start to look at the factors underlying these variations, and especially the contribution of labour market institutions in determining variations in the reactions of youth (and adult) employment to the pandemic induced economic crisis. We find that protective labour market institutions did indeed play a positive role in limiting employment losses – but not for young people – going some way to explaining the poor performance of youth labour markets in response to the crisis.

Keywords: covid-19, labour market institutions, NEET, youth labour markets.

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Preliminary draft – please do not quote without asking

From early on it was already clear that young people were bearing the brunt of the effects of the massive economic consequences of the COVID-19 pandemic.¹ The crisis has been particularly severe for youth across three dimensions: (1) disruptions to education, training and work-based learning; (2) increased difficulties for young jobseekers and new labour market entrants; and (3) job and income losses, along with deteriorating quality of employment. Whilst youth employment is always more sensitive than adult employment to economic downturns, this time the youth/adult divergence in outcomes appears even more pronounced than usual. Between 2019Q2 and 2020Q2, employment fell by, on average, 11.2 per cent for young men and by 13.8 per cent for young women in high-income countries, but by around double that – 23.7 per cent and 29.0 per cent, respectively – in middle-income countries.² Job losses were more contained in high-income countries, though the youth/adult divergence was more pronounced.

This paper seeks to contribute to our understanding of why. Presented here in preliminary form, after providing a brief overview of the economic context, we describe the fluctuations in youth employment witnessed across a range of high and middle income countries and how these varied between youths and adults. We then examine youth labour markets in a little more detail, looking at how falls in youth employment translated – in contrast to previous economic crises - into substantial increases in youth inactivity and (inactive) NEET rates. We then start to look at the factors underlying these variations, and especially the contribution of labour market institutions in determining variations in the reactions of youth (and adult) employment to the pandemic induced economic crisis. We find that protective labour market institutions did indeed play a positive role in limiting employment losses – but not for young people – going some way to explaining the poor performance of youth labour markets in response to the crisis. The results are preliminary and we end by suggesting the ways forward to further enrich our understanding.

1. *Economic Context*

The latest IMF World Economic Outlook Estimates (April 2021) confirm a severe contraction in global GDP in 2020 of -3.3 per cent, which is an improvement on the October 2020 (-4.4 per cent) and January 2021 estimates (-3.5 per cent).³ Despite the revisions, the COVID-19 crisis remains a far deeper and more global downturn than witnessed in 2009 (figure 1). In the global financial and economic crisis, the world economy declined by 0.1 per cent, but this was mainly driven by a sharp fall in output in

¹ ILO. 2020a. *Preventing exclusion from the labour market: Tackling the COVID-19 youth employment crisis*. ILO Policy Brief. ILO. 2020b. *COVID-19 and the world of work. ILO Monitor: Fourth edition*.

² ILO. 2021. *An update on the youth labour market impact of the COVID-19 crisis*, ILO Statistical Brief.

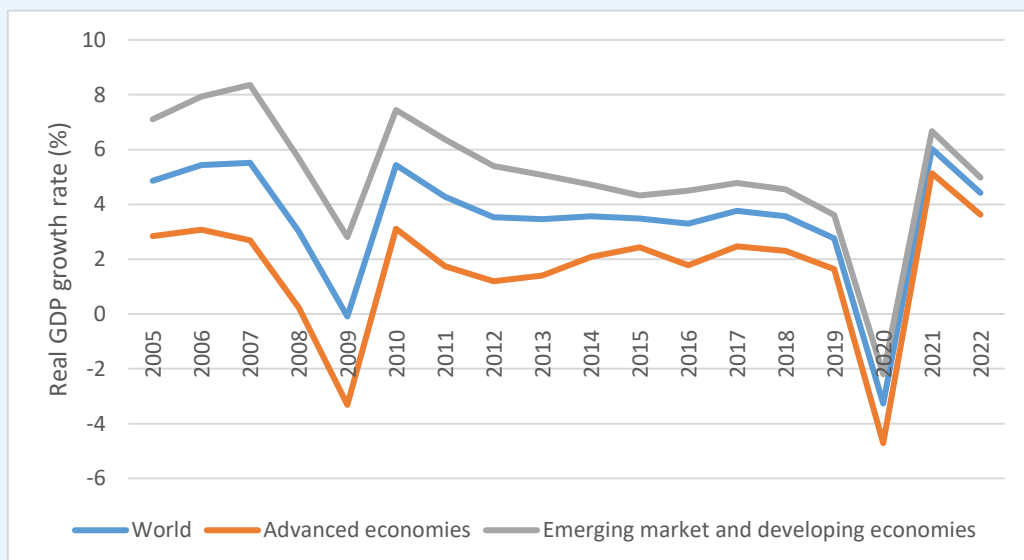
³ <https://www.imf.org/en/Publications/WEO/Issues/2021/01/26/2021-world-economic-outlook-update>

advanced economies, which shrunk by 3.3 per cent in 2009. In contrast, emerging markets and developing countries experienced a slowdown in that year but still managed to grow by 2.8 per cent.

In 2020, the pandemic devastated nearly all countries due to the economic and jobs crisis precipitated by the lockdown and other containment measures, most notably in the second quarter of 2020. Consequently, output in emerging and developing economies is estimated to have declined by 2.2 per cent in 2020 compared with a fall of 4.7 per cent in advanced economies, representing a difference of just 2.5 percentage points compared with a difference of 6.1 points in 2009. While recovery is expected in 2021 in many advanced economies, a recovery in low- and middle-income countries is much more uncertain and likely to be delayed due to the resumption of lockdown measures in some regions and a slow rollout of the vaccine, along with the lack of fiscal space, which constrains countries from maintaining policy support this year and beyond.

The economic shock has had a major impact on labour markets throughout the world, particularly in middle-income countries. Although GDP losses were greater in high-income countries, the lower capacity of middle-income countries to respond with fiscal stimulus packages and other policy measures, including subsidies to keep workers in jobs, is reflected in the much greater employment losses in these economies.

► **Figure 1. A truly global crisis in 2020, real GDP growth rates from 2005 to 2022 (%)**



Source: International Monetary Fund, World Economic Outlook Database, April 2021 update, accessed 12 April 2021.

Global working hours declined by 8.8 per cent in 2020, equivalent to 255 million full-time jobs (assuming a 48-hour working week).⁴ The disruption to the labour market in 2020, as measured in terms of average hours worked, was four times greater than that witnessed during the global financial crisis in 2009. In line with the period of the strictest lockdowns, working-hour losses peaked in the second quarter of 2020, especially in lower-middle income countries where the decline was 29 per cent. Losses abated in the third and fourth quarters but this still meant that the vast majority of countries finished 2020 with a working-hour deficit compared to 2019. These working-hour losses were generated through two channels: job losses and a reduction in working hours for those who remained in employment.

2. Youth Labour Markets and COVID-19

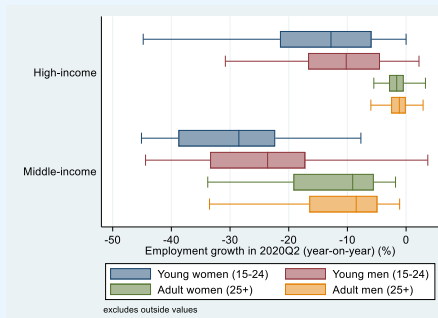
2.1 Youth employment

Disaggregating employment by age and gender reveals the extent to which young people have been affected in the labour market in comparison with other age groups. In the countries included in our sample (see note 5 below), between 2019Q2 and 2020Q2, employment fell, on average, 11.2 per cent for young men and by 13.8 per cent for young women in high-income countries, but by around double that – 23.7 per cent and 29.0 per cent, respectively – in middle-income economies. While there is considerable variation across countries, the decline in employment among youth, especially young women, was far greater than among adults in the majority of countries (figure 2).⁵

⁴ ILO, 2021. *World Employment and Social Outlook – Trends 2021*; ILO, 2020. *ILO Monitor: COVID-19 and the world of work*. Seventh Edition.

⁵ These are based on the simple unweighted country averages for which data is available. As of 6 December 2020, the list included the following countries: Argentina (urban and metropolitan areas only), Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Costa Rica, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Georgia, Greece, Hong Kong, China, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Rep., Latvia, Lithuania, Luxembourg, Macau, China, Malta, Moldova, Rep., Montenegro, Netherlands, New Zealand, North Macedonia, Norway, Occupied Palestinian Territory, Peru, Philippines, Poland, Portugal, Romania, Saint Lucia, Serbia, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan, China, Thailand, Turkey, Ukraine, United Kingdom, United States and Viet Nam.,

► **Figure 2. Change in employment in middle- and high-income countries for youth and adults in the second quarter of 2020 (year-on-year) (%)**

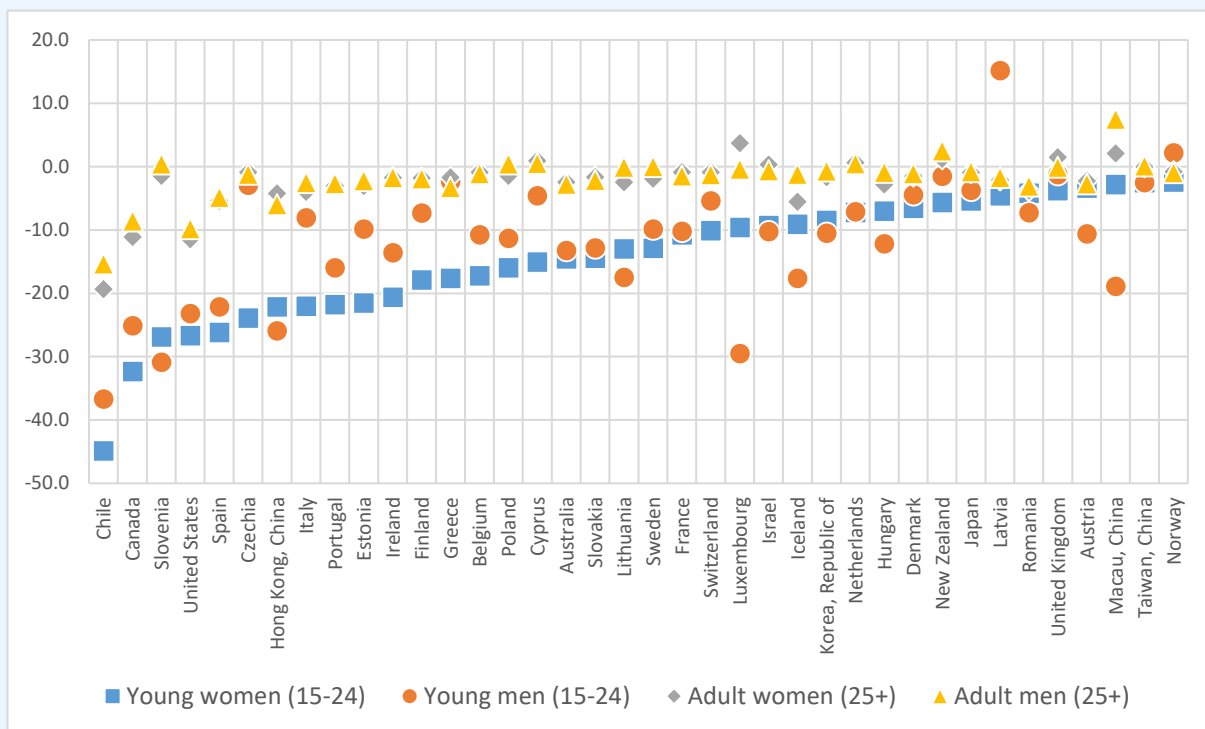


Source: authors' calculations, ILOSTAT, accessed 15 March 2021. The box chart are based on the sample of countries with available data and are unweighted. The graph should be read as follows: (a) the vertical line in the middle of the box represents the median value (50th percentile); (b) the left-hand side of the box (whisker) represents the 25th percentile; (c) the right-hand side of the box (whisker) represents the 75th percentile; (d) the adjacent lines to the left and right of the box represent the lowest and highest values, respectively

Although job losses were more contained in high-income countries, the divergence between youths and adults was more pronounced. In high-income economies, employment levels amongst young women and men fell by more than five times as much as they did amongst their adult counterparts. In middle-income countries, the employment losses amongst the young were around double those of adults. It is evident that the substantial income support and job retention measures put in place in most high-income countries tended to favour prime-age workers. All too often, young people did not qualify for such support being concentrated in less secure temporary and informal employment. As observed at the outset, gender gaps in youth labour markets have also become more pronounced.

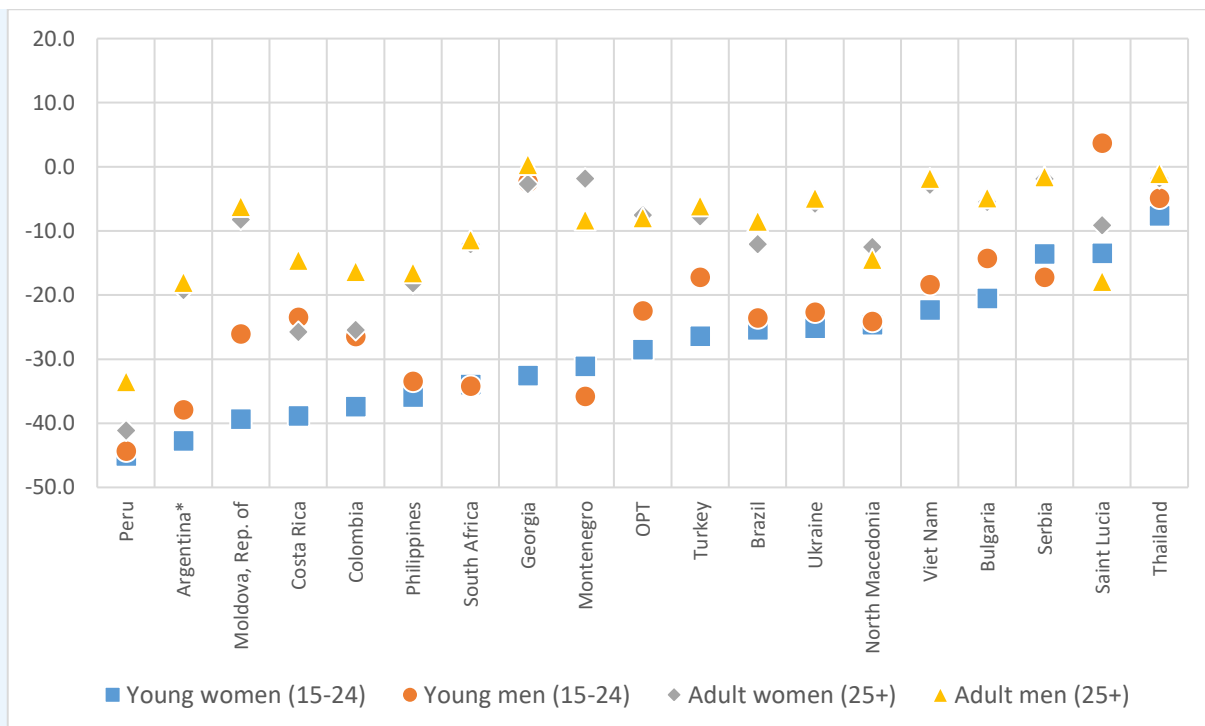
Indeed, young women experienced greater employment losses in the vast majority of countries for which data is available. This was particularly true in Latin America where employment of young women fell by between 25 and 45 per cent in the second quarter of 2020 (Chile in figure 3 and Argentina, Brazil, Colombia, Costa Rica and Peru in figure 4). Young women's employment declined by a greater percentage in that quarter than young men in 26 (or 65.0 per cent of) high-income countries and 16 (or 84.2 per cent of) middle-income countries in the sample.

► **Figure 3. Change in employment in the second quarter of 2020 (year-on-year) (%), high-income countries**



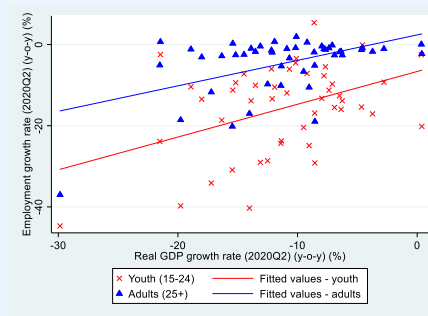
Source: authors' calculations, ILOSTAT, accessed 15 March 2021.

► **Figure 4. Change in employment in the second quarter of 2020 (year-on-year) (%), middle-income countries**



Source: authors' calculations, ILOSTAT, accessed 15 March 2021. Geographical coverage for Argentina: Main cities or metropolitan areas. OPT = Occupied Palestinian Territory.

► **Figure 5. Year-on-year change in employment of youth (15-24) and adults (25+) (%) versus change in real GDP (%), 2020Q2**



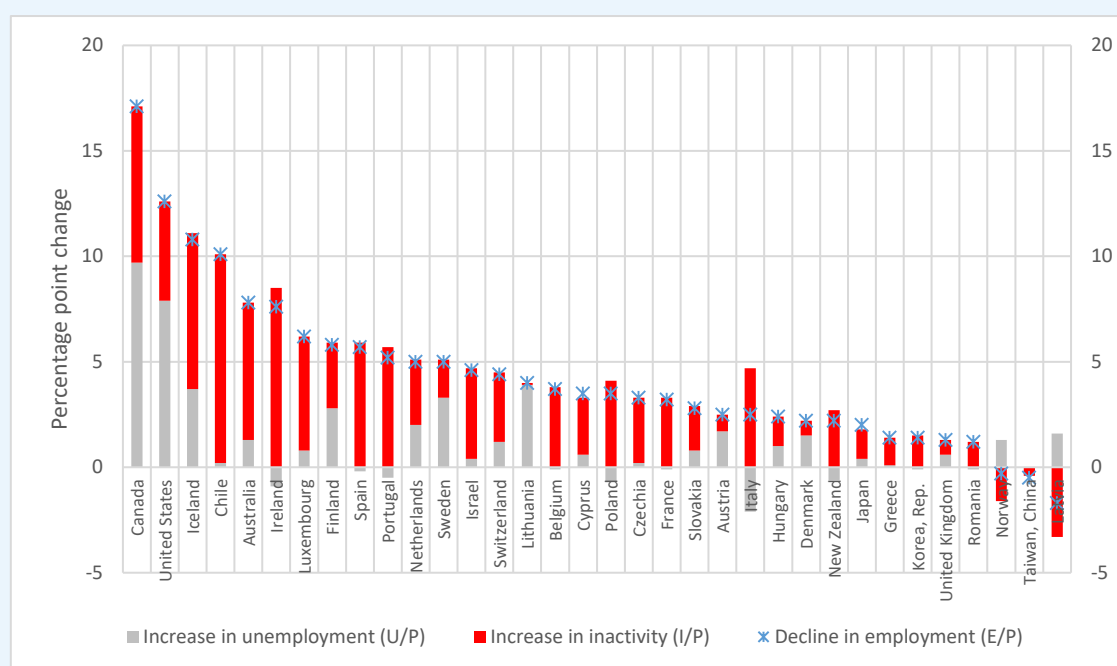
Source: Real GDP growth rate (%): The Economist Intelligence Unit, accessed 13 December 2020; authors' calculations of employment growth rate for youth (15-24) and adults (25+), ILOSTAT, accessed 6 December 2020.

As always, youth employment has been more sensitive than adult employment to the economic downturn. This is to be expected. A scatterplot of percentage changes in youth and adult employment on the one hand to variations in real GDP on the other clearly illustrates the greater vulnerability of young people to the current crisis (figure 5). A given negative impact of the pandemic on real GDP in a country translates into a much larger reduction in employment for young people than adults. For young people, on average, a 10-percentage point decline in GDP translates into an 8.1 percentage point decline in youth employment compared to 6.3 percentage points for adults.

2.2 Youth Inactivity

Global estimates show that the employment loss for young people (-8.7 per cent) has translated into a similar increase in inactivity and very little change in global youth unemployment. The youth unemployment rate thus provides only a very partial insight on the impact of the COVID-19 crisis on young people.

► **Figure 6. Decomposition of the decline in youth employment-to-population ratio (2019Q2 to 2020Q2) (percentage points), high-income countries**

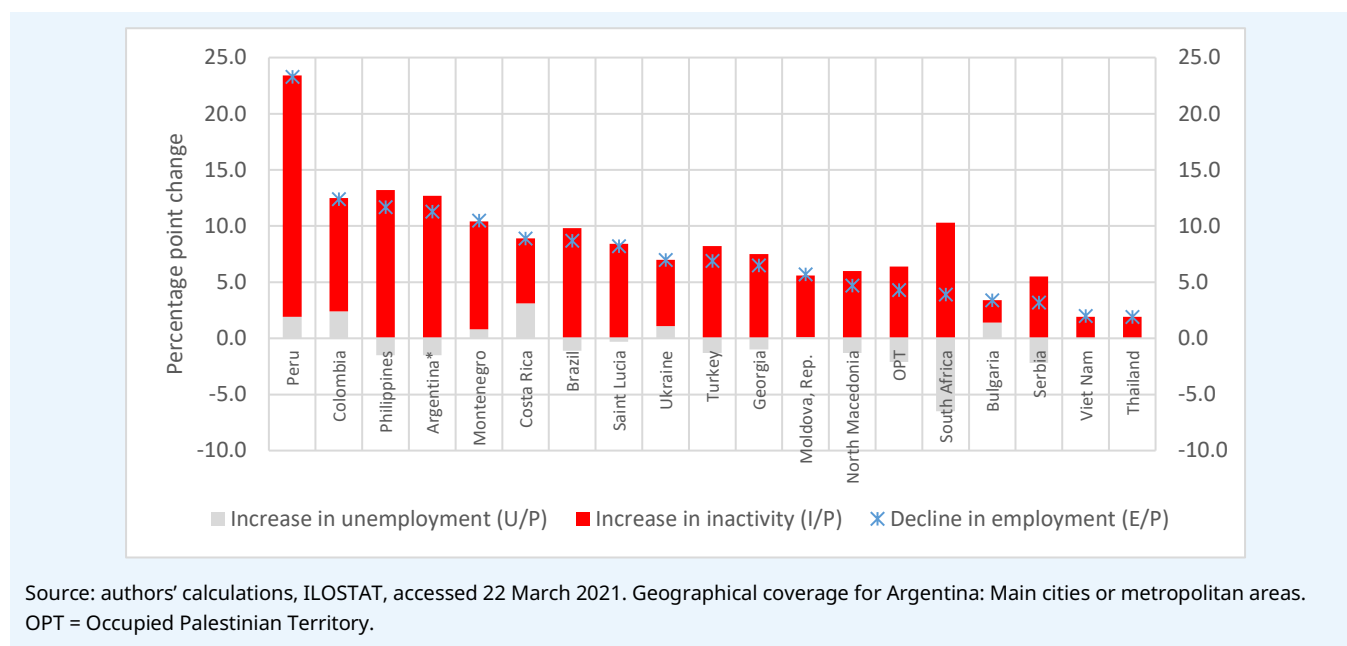


Source: authors' calculations, ILOSTAT, accessed 22 March 2021.

In general, young people can either be employed, unemployed or outside the labour force (i.e. economically inactive). Thus, if the share of young people who are employed falls in a country, then either the share of young people who are unemployed or the share of young people who are inactive, or both, must necessarily increase. For example, in the USA, the employment-to-population ratio for young people fell by 12.6 percentage points between the second quarter of 2019 and the same period in the following year. A little under two-thirds of this fall in employment (7.9 points) was accounted for by an increase in unemployment, the remaining one-third or a little over (4.7 points), was accounted for by young people withdrawing from the labour force. In Peru, on the other hand, more than 92 per cent of the reduction in youth employment (23.3 percentage points) in 2020Q2 was accounted for by a withdrawal from the labour force, whilst less than 8 per cent of the employment loss manifested itself in terms of increased unemployment.

In some countries, the employment losses for young people during the crisis resulted in diverging trends in unemployment and inactivity. For example, in Italy, the employment-to-population ratio for young people fell by 2.5 percentage points in 2020Q2, which was, in turn, associated with an actual decline in youth unemployment and a steep rise in inactivity (figure 6). In the case of South Africa, the divergence in unemployment, which declined sharply in the second quarter of 2020, and inactivity was even stronger during this phase last year (figure 7).

► **Figure 7. Decomposition of the decline in youth employment-population ratio (2019Q2 to 2020Q2) (percentage points), middle-income countries**



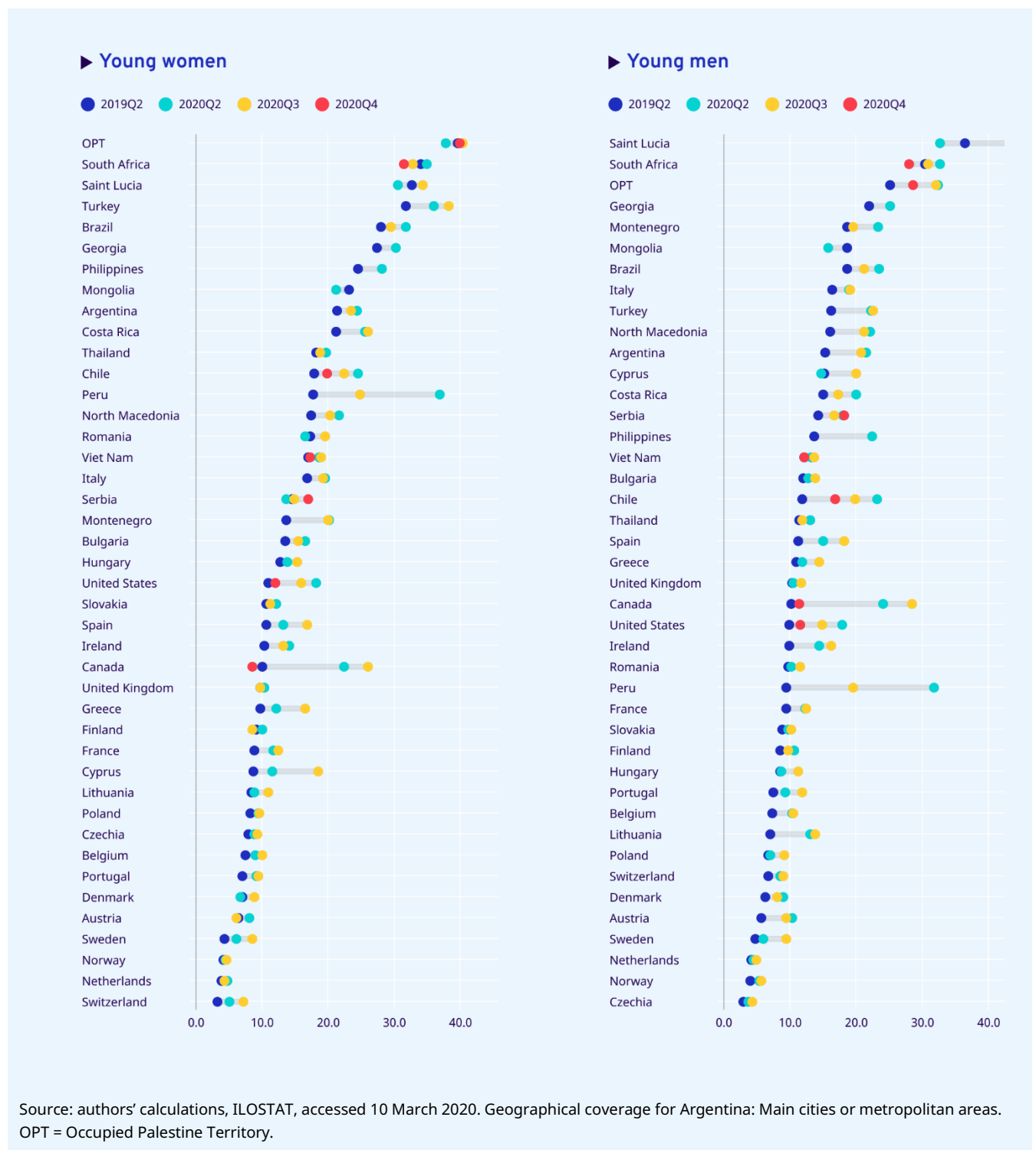
2.3 But what about NEETs?

Another way of subdividing the youth population is to classify them according to whether they are in employment, education/training or neither of the two. Again, this is a comprehensive and mutually exclusive classification, so that if employment rate goes down, either the NEET rate or the educational participation rate (or both) must increase.⁶

Observing the changes over 2020 relative to 2019Q2, one can see that the NEET rate increased in 2020Q2 in the vast majority of countries for which data is available (figure 8).

⁶ Of course, some young people may be in both education and employment simultaneously. Following standard international procedures, young people who are in both employment and education are defined as being in employment.

► **Figure 8. Share of youth not in employment, education or training (NEET) (%) in 2019 and 2020, young women and men (15-24)**



For example, in Canada, the share of young women in employment fell by 32.3 per cent (figure 2 above) whilst the share of young women neither in employment education or training increased by 12.3 percentage points in 2020Q2 (year-on-year). Looking at changes in overall labour market status,⁷ around 63 per cent of the fall in young female employment in Canada can be attributed to an increase in the number of young women classified as NEET. The residual is made up of young women who entered in education and training in the second quarter of last year, which is classified as out of the labour force.

Overall, NEET rates remained above the pre-crisis level in the third and fourth quarters of 2020 (in the sample of countries with available data), though they have declined in some cases from their peak in 2020Q2. For example, in Peru, the NEET rate for young women increased from 17.9 per cent in 2020Q2 to 36.9 per cent in the following quarter, before falling back to (a still elevated level) of 24.9 per cent in 2020Q4.

Clearly, a reduction of employment compensated by an increase in education is, in principle, more desirable than an increase in NEET rates. Young people remaining in education longer may gain useful knowledge and competencies to help them later in life. However, in the current circumstances, the situation is more complicated due to disruptions to the provision of education as these institutions have had to grapple with the complications of providing online learning. Moreover, increased educational participation by itself will not create employment; without a recovery in job creation, there will be few options for these young people to go once they do enter the labour market. At the same time, many young people cannot afford to remain in education. According to UNESCO's estimates, 24 million children and young people are at risk of dropping out of school.⁸

In any event, beyond understanding better why – and under what conditions – youth employment fell so much more than prime-age adult employment did, it is also important to better understand the observable movement into inactivity and indeed, what is happening to the young people who cannot find a placement in the labour market. Above all, it will be important to try and avoid the creation of a lockdown generation with large swathes of young people excluded long-term from education and employment, with the accompanying penalties to their – and societies' - long-term earnings and welfare.

⁷ These contributions can be identified using the simple identity: working-age population = employment + unemployment + inactivity, while the residual from the working-age population – employment – NEET represents the inactive who are in education or training.

⁸ [One year into COVID-19 education disruption: Where do we stand? \(unesco.org\)](https://www.unesco.org/en/education/2020/04/one-year-into-covid-19-education-disruption-where-do-we-stand?unscd=1)

3. *Digging a little deeper: Why did youth employment fall so much?*

In this section we examine the issue of why youth employment fell by so much more than the employment of prime-age adults. We also look at the related issue of to what extent were decreases in youth (and adult) employment mitigated by protective labour market institutions?

3.1 *Data and model*

In order to look at these issues, we construct a dataset containing cross-country differences in employment from 2019Q2 and 2020Q2 using labour force surveys for as many countries as possible (i.e. 44). This is a slightly reduced sample compared to that used for the more extensive descriptive analysis above, which is driven by the availability of some of the explanatory variables used in this section. However, the descriptive statistics reported here illustrate that the variations in youth and adult employment in the dataset used for the econometrics are comparable to those reported above (Table 1). While for the entire sample the average percentage difference in employment is -7.5, it is almost three times lower for the youth (-17.5 per cent) compare to adults (-6.5 per cent).

We combine the employment information with two other important determinants of employment losses in a country – the size of the economic impact of COVID-19 and the degree of protective labour market regulation.

Here, we measure the size of the COVID-19-induced economic contraction using a country's real GDP growth rate in 2020, which ranges from -11 per cent to 2.9 per cent. Although it would be preferable to capture this effect by using differences in economic activity from 2019Q2 to 2020Q2, we use the annual difference as provided by the IMF since quarterly GDP data are unavailable for our sample countries.

With regard to the strength of a country's protective labour market regulations, we construct an index using 7 indicators from ILO's EPLex database, which brings together, in a comparative manner, national provisions on employment protection.⁹ The index, moreover, attaches a score to each country depending on the number of protective labour regulations that are in place. Although in principle the index is bound between zero (no regulations in effect) and seven (seven regulations in effect), in our sample, the average score is 2.25, with a range of zero to five protective regulations.

⁹ The seven indicators used are based around three themes: "legal coverage of employment protection", "regulations of the use of a fixed-term contract", and "procedures of individuals dismissals".

Table 1. Descriptive statistics by age group

| | Total | | | | Adults | | | | Youth | | | |
|--|--------|-----------|--------|------|--------|-----------|--------|------|---------|-----------|-------|------|
| | Mean | Std. Dev. | Min | Max | Mean | Std. Dev. | Min | Max | Mean | Std. Dev. | Min | Max |
| Difference in employment (2020-2019) | -1842 | 3786.9 | -19364 | 45.6 | -1334 | 2790.2 | -14502 | 57.6 | -508.11 | 1015.4 | -4862 | 20.2 |
| % difference in employment (2020-2019) | -7.5 | 10.6 | -51 | 2 | -6.5 | 10.21 | -48.3 | 2 | -17.5 | 14.5 | -62 | 2 |
| Real GDP growth rate (%) | -5.189 | 3.125 | -11.1 | 2.9 | -5.189 | 3.125 | -11.1 | 2.9 | -5.189 | 3.125 | -11.1 | 2.9 |
| Labour market regulation index | 2.25 | 1.081 | 0 | 5 | 2.25 | 1.081 | 0 | 5 | 2.25 | 1.081 | 0 | 5 |
| Observations | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |

Source: Authors' own elaboration of labour force survey data from 44 high and middle income countries

We present here cross section estimations at the country level from before and amidst the global pandemic (i.e. 2019 and 2020). The following relationship is estimated by age group using a cross section of 44 countries at different degrees of economic development:

$$Y_i = \beta_1 Growth_i + \beta_2 INC_i + \beta_3 LMI_i + \mu_i$$

Where Y_i is measured by the percentage change in employment between the second quarters of 2019 and 2020. $Growth_i$ is a country's real GDP growth rate in 2020, which encompasses the impact that the demand and supply side shocks have had on economic activity. We assess the differences in employment losses owing to stage of development by considering INC_i , which is a categorical variable with three categories – high income (reference), upper middle income, and lower middle income. LMI_i is an index signifying the degree to which protective labour market regulation is present in a country, while μ_i denotes the error term with a constant variance and an expected value of zero.

3.2 Main Results

For the most part, the results presented in Table 2 are consistent across models with all explanatory variables displaying the same sign, as well as similar magnitudes and levels of statistical significance.

As would be expected, countries with higher GDP growth rates experienced fewer job losses (in percentage terms) from 2019Q2 to 2020Q2. There is a moderate difference in the association between variations in GDP and the percentage change in youth and adult employment, respectively. This is consistent with the ubiquitous finding, already mentioned, that youth employment is more sensitive to variations in GDP than adult employment is.

At the same time, the negative association between (middle income) country group and employment losses, reflects the fact that high income countries lost a smaller proportion of their employment compared to upper middle income countries and lower middle income countries. This finding is most pronounced amongst youth populations, thereby suggesting that youth employment differences between those in non-HICs and HICs are higher compared to their adult counterparts.

Table 2. Employment losses, COVID-19, income group, and labour market regulations

| Variables | Total | | | Youth | | | Adults | | |
|---------------------------------|---------------------|---------------------|----------------------|--------------------|---------------------|--------------------|---------------------|----------------------|----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| GDP growth rate (2020) | 0.013*** (0.004) | 0.012*** (0.004) | 0.01** (0.004) | 0.016** (0.006) | 0.015** (0.006) | 0.015** (0.006) | 0.013*** (0.004) | 0.012*** (0.003) | 0.01** (0.004) |
| Income group (compared to HICs) | | | | | | | | | |
| Upper-middle income | | -0.098*** (0.03) | -0.097*** (0.029) | | -0.12*** (0.045) | -0.122** (0.04) | | -0.094*** (0.029) | -0.093*** (0.028) |
| Lower-middle income | | -0.124*** (0.04) | -0.104** (0.042) | | -0.11* (0.061) | -0.111* (0.065) | | -0.119*** (0.039) | -0.098** (0.04) |
| Labour market regulation index | | | 0.025* (0.015) | | | 0.004 0.24 | | | 0.027** (0.015) |
| Observations | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| R ² | 0.15 | 0.39 | 0.43 | 0.12 | 0.28 | 0.28 | 0.15 | 0.4 | 0.44 |

Note: GDP growth rate, labour market regulation index, and an income group categorical variable are regressed on the percentage change in employment from 2019 to 2020. All variables are computed at the country level, using three different samples – those aged 15+, youth, and adults. Robust standard errors are in parenthesis.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Regarding the labour market regulation index, column (3) of Table 2 confirms that, in our sample of countries, protective labour market institutions matter and are associated with reduced job losses owing to the pandemic. Countries with more protective labour market regulations in place prior to the pandemic, suffered proportionately fewer job losses compared to those countries with less. However, looking at columns 6 and 9, one may observe that this association only applies to adults. LMIs tended to protect adult, but not youth, employment. Here then is one element of the explanation for why youth employment fell to the extent that it did.

Comparison of columns (3), (6) and (9) also points to another related finding. Whereas the inclusion of LMIs reduces the role of GDP (columns (9) and (3)) in explaining variations in adult (and aggregate), for young people (column (6)), the inclusion of the LMI variable has no effect on the estimated relationship between employment and GDP change. Note that the change in GDP in part reflects the adoption or not of fiscal stimuli often working through job retention and income support measures introduced during the pandemic. One plausible interpretation of this is that the positive effects of GDP on adult employment seem primarily to have worked through protective labour market institutions – e.g. job retention measures, whereas, for young people, the ameliorative effects of protective labour market institutions were almost entirely absent and although fiscal stimuli had a protective role vis-à-vis youth employment, this operated almost entirely through its GDP multiplier effects.

4. Concluding remarks

The COVID-19 crisis has laid bare labour market vulnerabilities across the world, adversely affecting labour market outcomes in terms of both the numbers and quality of jobs. Typically, young people are disproportionately affected by economic downturns compared to adults. This has been the case this time around too; indeed, even more so than usual as we have seen above. Unlike other crises, the pandemic has meant both demand and supply-side shocks, with the former reducing individuals' willingness to purchase goods and services (e.g. fear of contagion) and the latter limiting a country's ability to produce owing to lockdowns and other containment measures. Moreover, also in contrast to previous crises, falling youth employment has translated primarily into increased inactivity and (inactive) NEET rather than into growing youth unemployment.

But to what extent has the unusually disproportionate impact on young people been the result of the engagement of young people in sectors vulnerable to closure and reduced labour demand as a consequence of lock-down and recession and to what extent have they been the consequence of response measures missing out on young people?

The results presented here, albeit very preliminary, point to a role for both factors. Certainly, youth employment is disproportionately concentrated in sectors affected by lockdown measures. Moreover, young people by virtue of their (on average) relatively weak and recent attachment to the labour market were, on average, less likely than adults to be able to access income support and job retention measures implemented in the wake of the crisis. One of the more subtle – and we think – interesting findings presented here suggests that indeed, young people were missed out, even where there were protective labour market institutions, although the results are consistent with them benefitting indirectly from the knock-on effects of fiscal stimuli packages. These findings also find resonance in other ILO research in this area which identify the almost complete absence of youth specific job support measures, above-all outside high income countries.¹⁰ The rapid increases in NEET and in particular NEET inactive serve as reminder of the importance of acting now to ensure short term exit from the labour market does not turn into long-term exclusion with all the concomitant effects – for individuals and societies - of the long-term scarring of young people’s employment and income prospects.

¹⁰ Barford et al. Forthcoming. *A global review of COVID-19 policy responses to tackle (un)employment and disadvantage among young people*, ILO working paper.