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ALLIANZ RESEARCH

GROWING PAINS: THE FUTURE OF INCOMES FOR LOCKDOWN GEN-Z

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EXECUTIVE SUMMARY

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- **The youth labor market is highly sensitive to economic cycles, with young people more likely to be in precarious employment than any other age group. After the 2008 Great Financial Crisis (GFC), it took years to recover across Europe,** though youth incomes never went back to pre-GFC levels in Spain. We estimate that the five-year accumulated losses were higher for youth in Spain than the annual net median income pre-GFC (PPP[1] 17,067 or 118% of 2008 net median income or NMI). In France, we observed the second highest accumulated losses (PPP 12,337 or 79% of 2008 net median income) due to high pre-GFC income growth for this age cohort. Other countries had more "demure losses" (ITA: PPP 4,771 or 34% of 2008 NMI; AUT: PPP 7,137 or 37% of 2008 NMI; DEU: PPP 7,376 or 42% of 2008 NMI). Pre-crisis net median incomes were reached in Germany and Switzerland in 2011, while France recovered in 2012 and Italy in 2016.

- **It could take even longer to recover from the impact of Covid-, especially in Switzerland, Austria, Italy and Germany.** By forecasting the net median income for 18-24 year-olds and calculating the five-year cumulative losses, we find that Spain (PPP 12,174 or 85% of 2019 net median income) and France (PPP 7,407 or 40% of 2019 median income) will have lower losses compared to the pre-Covid-19 trend only because of their meager pre-crisis growth. But for all other countries, the impact of the pandemic far exceeds that of the GFC: CHE: PPP 9,625 or 35% net median income, AUT: PPP 9,446 or 39% of 2019 net median income, ITA: PPP 7,958 or 52% of 2019 NMI and DEU: PPP 17,232 or 81% of 2019 NMI. **It could take until 2024 for net median income levels to return to pre-crisis levels in most countries, but Germany and Switzerland might take an extra year to recover due to higher pre-Covid income growth.**

- With education also disrupted, especially for youth in Spain (46.5%), Austria (42%) and Switzerland (40.2%)[2], **the pandemic will hinder human capital accumulation, punishing young workers further and widening already present intergenerational inequalities.** This calls for policymakers to expand support programs focused on the youth, and support workers through this adjustment with (re)training and (re)skilling to avoid "job scarring", whereby young people are pushed into long-term unemployment, with consequences for the economic recovery.

1 PPP: One popular macroeconomic analysis metric to compare economic productivity and standards of living between countries is purchasing power parity (PPP). PPP is an economic theory that compares different countries' currencies through a "basket of goods" approach.
2 Allianz Financial and risk literacy survey – Resilience in times of Corona, November 2020

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29%

of the respondents of our survey aged 18-24 reported decreased income.

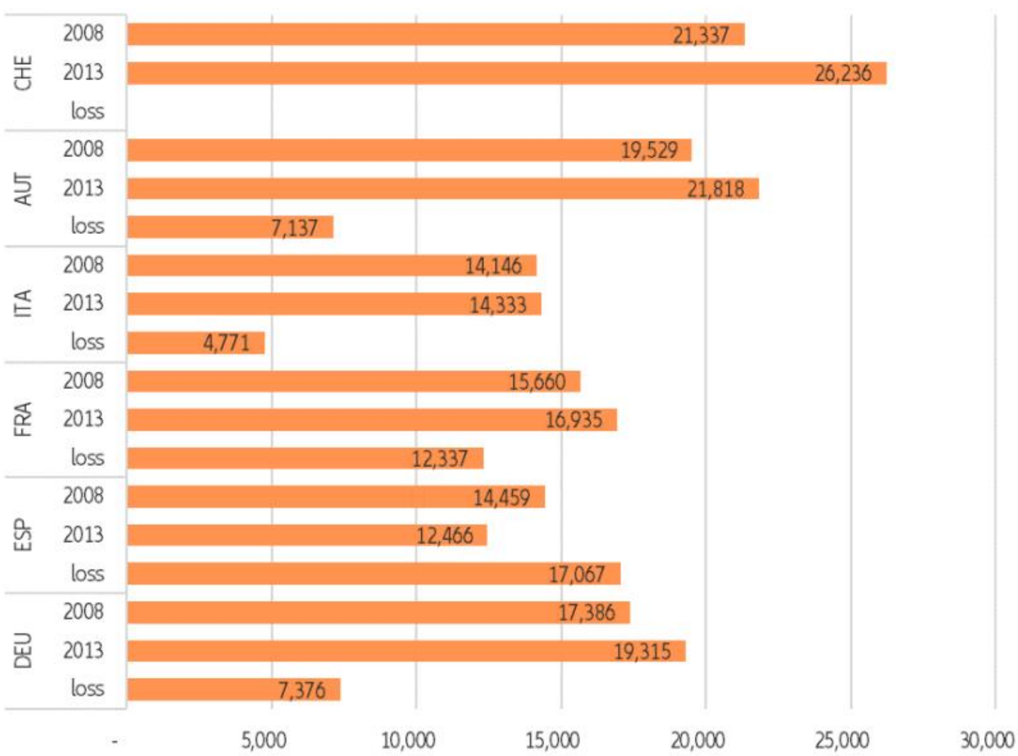
THE EXPERIENCE FROM THE GREAT FINANCIAL CRISIS

The youth labor market is highly sensitive to economic cycles as young people's incomes are less dependent on unobservable factors such as career tenure or their earnings profile. Therefore, when a crisis hits, it starts with the young. After the GFC, the 18-24 age cohort was the most affected in terms of net median income. In Germany, this group suffered two consecutive years of losses and did not see a return to pre-crisis levels until 2011 (PPP 17,933). If their income had followed the pre-GFC trend, they would have accumulated an extra PPP 7,376 or 42% of 2008 net median income (Figure 1).

In Spain, the GFC came along with the burst of the Spanish housing bubble and it hit Spanish youth hard: the pre-crisis net income was PPP 15,281 and has yet to go back to that level: we calculate the five-year accumulated losses in income to be PPP 17,067 (118% of 2008 net median income). As of 2019, the median annual income stood at PPP 14,387.

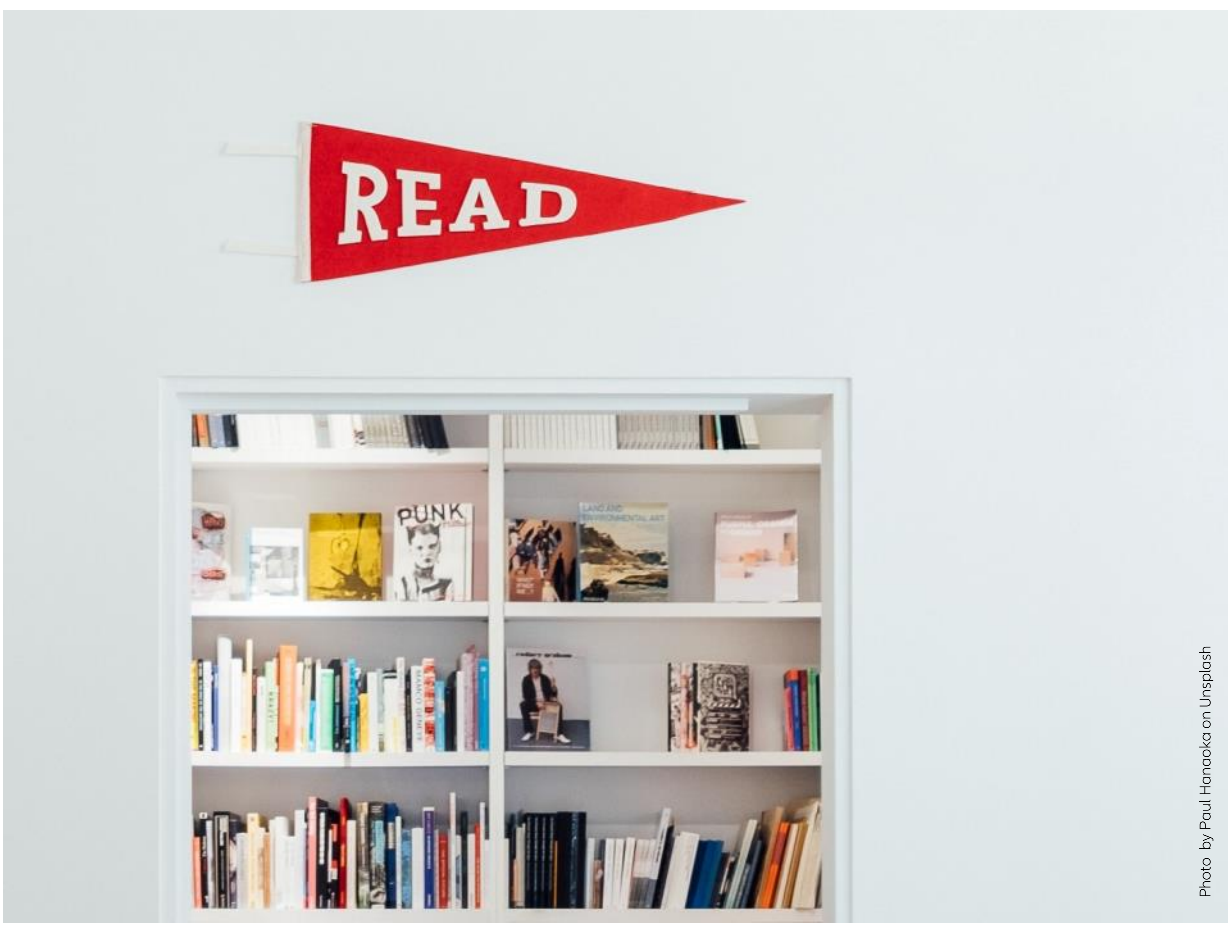
Figure 1: The path to recovery

Net median income for 18-24 year-olds post-GFC in PPP and cumulative losses compared to pre-crisis trend



Sources: Eurostat; Allianz Research.

In France in 2009, the 18-24 age cohort was the only one to see median income decrease (-2.7% y-o-y) and it was not until 2012 that it recovered. When estimating the trend post-GFC versus the trend before the GFC, we find that French youth lost PPP 12,337 (79% of NMI) over a five-year span. In Italy, the effects of the crisis were felt until 2010 when the median income of 18-24 year-olds decreased by -3.6%, by far the largest decrease of all age cohorts. The Italian pre-GFC income trend was not very high, thus the accumulated loss versus trend was PPP 4,771 (34% of NMI) and the median income recovered to pre-crisis levels in 2016. In Austria, the net income of the young did not slump after the GFC but it more or less stagnated during the following decade (+1.9% ten-year compound annual growth rate) Nevertheless, compared to the pre-GFC trend, youth in Austria lost PPP 7,137 (37% of NMI). In 2008, Swiss youth were once again the only age cohort that saw less money in their pockets (-1.2% median income growth y-o-y). Nonetheless, their median income recovered quickly and the rebound offset the losses caused by the GFC.



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QUANTIFYING THE LOSS OF INCOME FOR THE YOUNG GENERATION AFTER COVID-19

Young people entering the labor market during a recession will face numerous challenges as the lack of vacancies will make the job market tighter, wages lower and the risk of losing jobs higher. Some of the labor market dynamics that will determine the youth outcomes during the Covid-19 crisis can be seen in Figure 2.

Figure 2: Labor markets and Covid-19

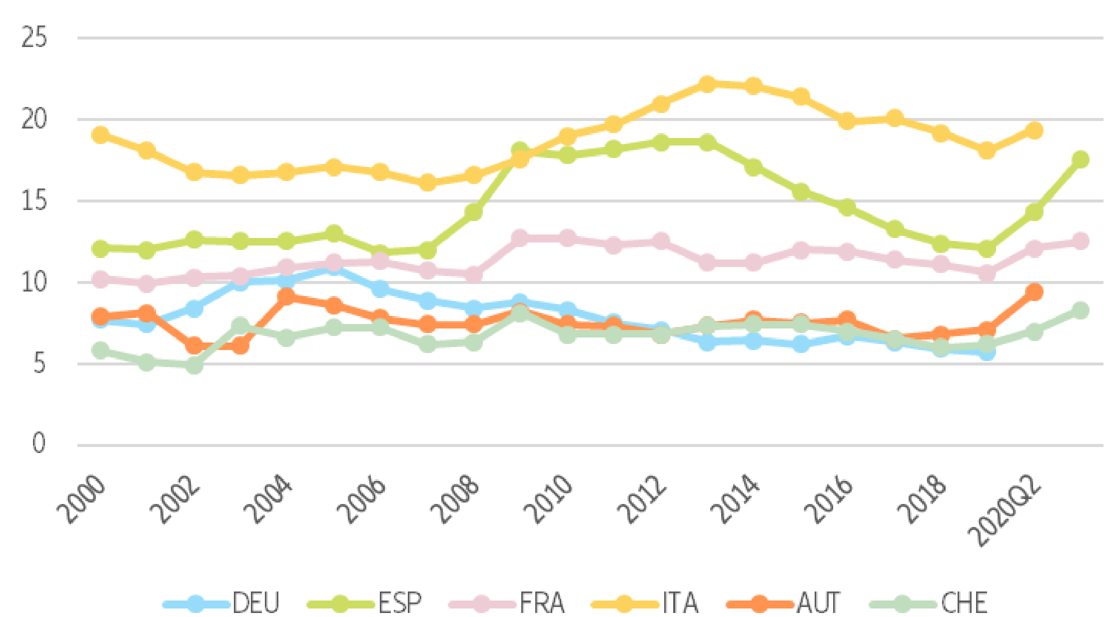
Labor market dynamics	Effects on labor market	Covid-19 Pandemic
Gross flows between 'states' of employment (employed, unemployed, not wanting to work, etc.)	A larger volume of flows allows for people not staying long unemployed	Smaller number of vacancies and more zombie firms will decrease flows
Labor and job turnover rates i.e. hirings and separations	A healthy turnover can be beneficial for young people trying to enter the labor market as vacancies are opened	Lower number of vacancies, tighter labor market and lower wages
Births and deaths of firms and their lifecycle	High levels of entrepreneurship create a more dynamic labor market	Closing of start-ups and small and medium companies will create a tighter labor market for jobseekers
Job tenure and security	Makes separations harder	Not applicable for youth
Frequency and length of periods of unemployment	The longer a worker is unemployed, the harder it is for them to re-enter the labor market	Longer periods of unemployment in early careers are associated with lower average wages
Labor market flexibility and mobility	It promotes entering the labor market	The labor market is going digital. This is an advantage for the digital natives
Profile of earnings over time	Reduce the influence of the business cycle on wages	Not applicable for youth, they do not have long careers to fall back on
Re-entry into labor market because of illness or children	Re-entering the labor market after interruptions can be detrimental to finding a suitable position	Not generally applicable for youth in Europe
Transition from full-time education into the labor force	Young people are more likely to start off their career in services, retail, or sales-related occupations	Longer periods of transition from education into labor force. Artificially longer education periods and less employment opportunities in the affected sectors by Covid-19
Move from work into retirement	Income not tied to wages, but to retirement provisions	Not applicable for youth

In October[3], as part of our Allianz Pulse survey, we found that an overwhelming amount of young people had already seen their education interrupted and their earnings decreased. Spain (41.9%), Italy (33.3%) and France (30.1%) showed the highest number of young people impacted, while in other countries between one-fourth to one-fifth of youth had seen less income since March.

Now, to estimate the long-term effects on the younger generation in terms of lost income, we focus on six European countries for which we have comparable data: Germany, France, Italy, Austria, Spain and Switzerland. We use purchasing power parity (PPP) as it accounts for differences in the cost of living across the countries and net median income data from Eurostat to build age-earning profiles and forecast youth income losses. Median income depicts a clearer picture of the middle class than mean income as low and high earners do not skew it.

For the countries for which we have data for 2020, we can see that the youth not in employment, education or training (NEET) rates have been increasing: they currently stand at 17.6% in Spain, 12.5% in France and 8.5% in Switzerland. The DACH region (Austria, Germany and Switzerland) has low NEET rates and will probably stay lower than in other countries because of heavy public investments in household stability. To weather the pandemic storm, some of the young (the ones that can afford it) will stay longer in education. Those who leave school early earn market wages for more years on average than those who partake in extended schooling, but those with more schooling typically earn higher wages over their lifetimes. However, this is not observable in the age cohort that we will focus on.

Figure 3: Youth not in employment, education or training (NEET), percentage of polulation aged 15-24



Sources: Eurostat;Allianz Research.

3. Allianz Financial and risk literacy survey – Resilience in times of Corona, November 2020

The early career can determine wages for years after the first job. As salary increases are a percentage of the current salary, today's young generation is bound to lose income compared to workers that entered the labor market in non-crisis times, and it might take years to catch up. According to our estimations, the earnings profile at the beginning of the career is statistically relevant for the next cohort (25-49). The age-related earnings profile is usually a bell-shaped curve. Workers typically increase their earnings and income as they age, peaking in their fifties. During retirement, income decreases again (see Figure 4 for the age-related earnings profiles after the GFC and before the pandemic, 2019).

Figure 4: Age-related median income profiles (Median income in PPP selected years in Europe)

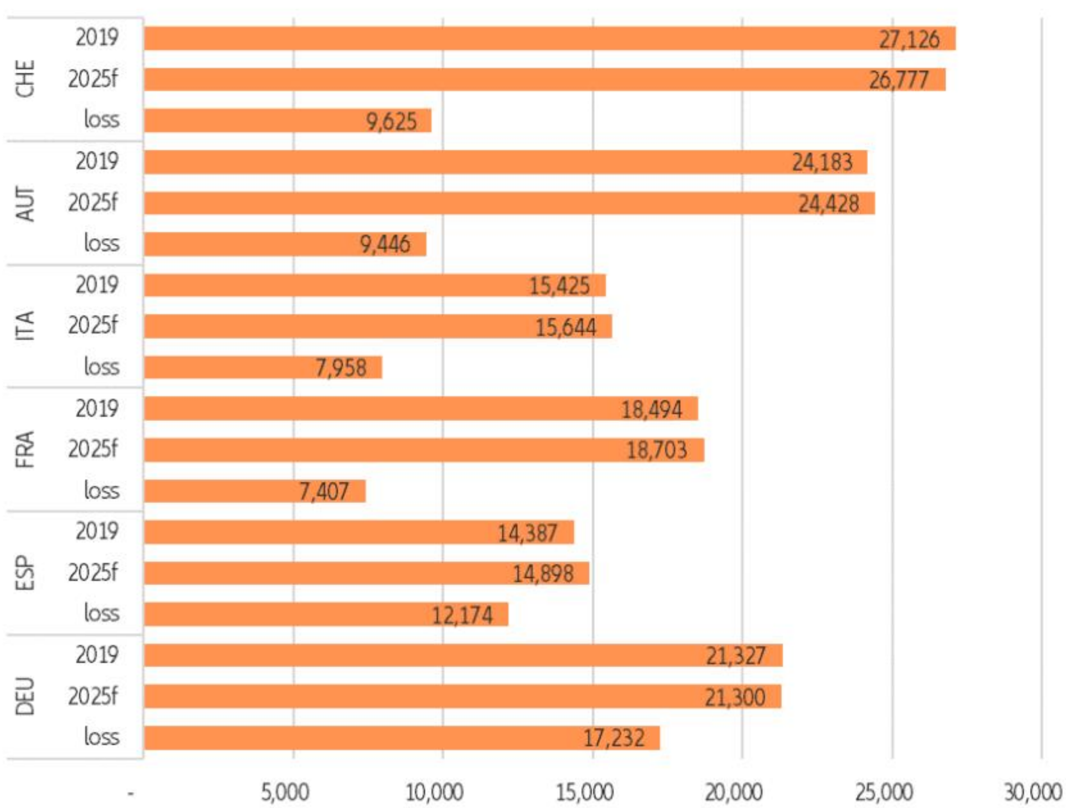
Sources: Eurostat;Allianz Research.

We used these age-related earning profiles and macroeconomic expectations for the coming years to compute plausible losses in median income for young people aged 18-24 in these six countries. According to our assumptions and expectations, there is a lag in the decrease in median income. As policies focused on keeping workers in the labor market start to fade in 2021, we will observe further labor market tightening for the young.

In Spain and Italy, our forecast scenario yields a decrease in median incomes of -11.7% and -4.5%, respectively, in 2021 and an accumulated five-year loss (compared to the pre-Covid-19 trend) of PPP 12,174 (85% of 2019 NMI) and PPP 7,958 (52% of 2019 NMI), respectively. Countries like Germany and Austria could see a decline of -3.5% and -4.2%, respectively. We estimate an accumulated loss of PPP 17,232 (81% of 2019 NMI) and PPP 9,446 (39% of 2019 NMI) in Germany and Austria, respectively, compared to pre-Covid-19 trend. In France and Switzerland, we might see two periods of negative growth in income. We estimate the loss versus the pre-Covid-19 trend to be PPP 7,407 (40% of 2019 NMI) in France and PPP 9,625 (35% of 2019NMI) in Switzerland.

We expect most countries to return to pre-Covid-19 levels only by 2025. Losing competitiveness in the labor market for young people poses a huge problem for Southern European countries, and has become a reason for the "brain drain" in Spain and Italy.

Figure 5: Forecasts for median net income for ages 18 to 24, in PPP



Sources: Eurostat; Allianz Research.

4 Allianz Financial and risk literacy survey – Resilience in times of Corona, November 2020

A CALL FOR ACTION

The scars of the Covid-19 crisis will linger on for a long time: Lost schooling and lost experience (hysteresis) will impede the reallocation of workers from sectors likely to shrink on a long-term basis to growing sectors. Thus, after the pandemic, it is very likely that we will observe an inefficient labor market where there is a quantitative as well as qualitative mismatch between demand for and supply of jobs and thus the “price” or wage will decrease.

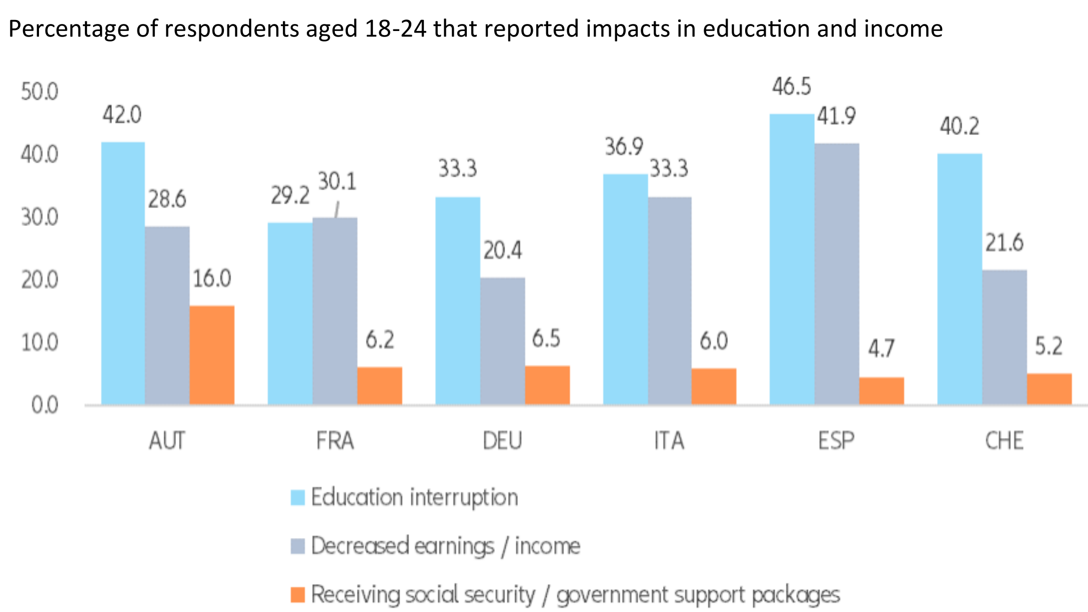
Ideally, you want an equilibrium between the vacancies in the market and the number of people seeking employment. There should be some leeway for companies to negotiate salaries and to remain profitable. Nonetheless, workers should also be able to have a salary that accommodates their skills and needs.

With these long-term effects on income, Covid-19 could also further aggravate the generational conflict that has intensified in recent years amid accelerating climate and demographic change. Although younger people are not as vulnerable to the coronavirus as older generations, they are more susceptible to the economic fallout posed by social distancing.

With education also disrupted by social distancing measures, especially for youth in Spain (46.5%), Austria (42%) and Switzerland (40.2%) , the pandemic will also hinder human capital accumulation, punishing young workers further. Even if remote learning is a viable option for some, there will be losses in peer-to-peer education and idea sharing. There is evidence that missing one hour of education per week can have an impact on test scores and schooling achievement.

This calls for continued and expanded social programs that are focused on youth, especially as the labor market plays a pivotal role in the economic recovery. It might take time for workers that have been laid off to re-enter the labor market but if this transition is prolonged, their skills might wither and they might withdraw altogether. Thus, it is of utmost importance to support workers though this adjustment with (re)training and (re)skilling. What should be avoided is the so-called “job scarring”, whereby young people are pushed into long-term unemployment.

Figure 6: Impact of the Covid-19 pandemic for the youth



Sources: Allianz Research; Qualitrics.

5 Do Differences in Schools' Instruction Time Explain International Achievement Gaps? Evidence from Developed and Developing Countries (Lavy, 2015)

Appendix A: Overview of programs for the youth in the EU

Addressing youth problems is at the forefront of development policies in Europe. The European Commission has expanded some of the programs that were initiated in 2013 due to high levels of youth unemployment post-GFC, especially youth employment support to bridge jobs for the younger generations. It was expanded from including younger than 25 year olds to people younger than 30 years old and promising at least EUR22bn to youth employment support. Efforts will be focused on vocational training and promoting apprenticeships. It has also set up a fund that is accessible to all member states and urges them to partake in the funding available. The Youth Employment Support fund was meant to promote start-up grants and loans for young entrepreneurs, mentoring schemes and business incubators, bonuses for SMEs hiring apprentices, training sessions to acquire new skills needed on the labor market, capacity-building of public employment services, career management training in formal education and investments in digital learning infrastructure and technology. [6]

However, the European Commission itself has recognized that this is not enough. It urges young people to get involved in policymaking and reach out so that the solutions are tailor-made to their very specific need and a worse spike on youth unemployment is avoided.

Figure 7: Policies targeting consumer and youth recovery

	AUT	DEU	ESP	FRA	ITA	CHE
Education support / subsidies	✓	✓	✓	✓	✓	✓
Temporary debt relief		✓	✓		✓	✓
Targeted youth interventions	✓	✓	✓	✓	✓	✓
Expansion of existing programmes		✓	✓	✓	✓	✓
Wage subsidies	✓	✓		✓	✓	✓
Temporary tax relief		✓	✓			✓

Sources: IMF Policy Tracker, European Commission, Allianz Research.

6 Commission launches Youth Employment Support: a bridge to jobs for the next generation (EU Commission, 2020)

Appendix B: Data and income estimation

We adopted a specification from Center for Retirement Research at Boston College (1999) to forecast the future earnings of workers aged 18 to 24 years old. It is a simple specificatioin of the relationship between worker's ages and the change in their earnings as well as our macroeconomic expectations for the coming years.

$$Y_{it} = \mu_i + f(Age) + \epsilon_{it}$$

Where ages are equal to: $f(Age) = \beta_1 A_1 + \beta_2 A_2 + \beta_3 A_3 + \beta_4 A_4 + \beta_5 A_5$

$A_1 = less\ than\ 18, A_2 = 18\ to\ 24\ years\ old,$

$A_3 = 25\ to\ 49\ years\ old, A_4 = 50\ to\ 64\ years\ old,$

$and\ A_5 = over\ 65\ years\ old$

And μ_i is a vector of our macroeconomic expectations from 2020 to 2025.
We estimated the age profiles under a fixed-effect specification accounting for the differences across countries.

Data used for the analysis:

- GDP, in PPP
- Unemployment rate, in percentage
- Income distribution, by deciles
- Mean and Median income, by age in PPP
- Youth unemployment rates: inactive, wanting to work, not wanting to work and unemployed
- NEET rates (Youth not in education, employment or training)
- Youth at risk of poverty
- Education levels in adults
- Population distribution by ag.e

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