

Intensity and income distribution effects of job retention schemes in Italy during Covid-19 pandemic

CARLO DE GREGORIO (cadegreg@istat.it), ANNELISA GIORDANO (giordano@istat.it), ISABELLA SICILIANI (sicilian@istat.it)¹

DRAFT

Abstract

Covid-19 has been an extraordinary case for a large scale application of job retention schemes. In 2020 the goals of Italian job retention schemes have been almost generalised in scope: before pandemic they mainly covered permanent employees in specific sectors (for the most part in industry) and above specific firm-size thresholds. As a result, layoff allowances involved almost 7 mln employees in the private sector. They correspond to nearly 45% of the employees in the private non-agricultural sectors: the related per capita expenditure from social security (net of social contribution) amounted to about 2 thousand euro in order to partly compensate a corresponding gross earnings reduction of about 4 thousand euro. This paper provides an analysis of the Italian employees involved in such schemes, based on the integration of social security microdata, Istat statistical registers on individuals and firms and LFS microdata. The focus is on 2020 events, though data are extended backwards to 2018. Employees are classified according to the intensity of working time reduction during the year: their socio-economic and job-quality characters are consequently analysed in order to identify the selection induced by the scheme. Furthermore, distributional effects are analysed to evaluate how the reduction in actual earnings affects income distribution. Finally, business side is also analysed, by measuring at firm level the intensity in the use of job reduction schemes, with a focus relating their intensity to business structure, performance and to the quality of the jobs they offer.

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Introduction

This paper provides some insights into the use of the wide set of job retention schemes adopted in Italy to support employment during 2020. Those schemes were mainly pre-existent and have been modified and amplified in scope since the burst of pandemic. They are considered here as a whole and briefly referred to with the acronym CIG². This work in particular does not go into the details of these measures that as a whole concerned all private business in industry and services³. Our work aims to provide additional evidence on the widespread use of CIG through the intensive exploitation and enhancement of Istat sources, integrating for this purpose the microdata of statistical registers, surveys and administrative archives: a huge amount of work has been done already on these subjects with the development of important new contributions, especially in the last two years⁴.

We analysed CIG during 2020 following two distinct perspectives. On the side of the individuals, we analysed the characteristics of the nearly seven million employees involved in CIG events in 2020, with a focus on the flows that during the year marked the use of job retention schemes, the intensity and impact of these events on individuals and on their incomes. These aspects have been analysed running through the main socio-demographic characteristics of the employees themselves and of their households. For this purpose we combined the exhaustive set of administrative data with LFS samples in order to exploit and analyse the original information gathered with the survey and, in particular, detailed aspects relating to the condition of individuals in the labour market.

Secondly, we focused on the business side. Nearly one million of firms adopted CIG schemes in 2020: so we examined the numbers and flows with which companies made use of the tool in each month of 2020, with in-depth analysis of aspects linked to the size of economic units, the sector of activity, and the recent evolution of their structure and performance indicators.

Given the richness of the information base made available, and above all in consideration of the novelty of much of the integrated information that it brings to the attention of researchers and to ourselves, the expositive strategy adopted in this work is mainly descriptive. Under this respect it represents in fact a first stage in a learning process that undoubtedly concerns the authors of this work and that is judged as indispensable before fielding more complex analytical tools. Moreover, it intends to prepare the ground and the discussion in view of the countless in-depth studies made possible by the large datasets that Istat prepared for this purpose, also in view of the potential further expansion that the evolution of Istat integrated system of statistical registers will allow in the months to come.

The description of the databases used for this work occupies section 1. Section 2 follows, which is dedicated to the analysis of individuals, and then section 3, where businesses are on the spotlight. The concluding section suggests a first set of possible further developments. References and a statistical appendix close the work.

1. Databases

The paper is founded on the integrated analysis of three types of databases: Istat statistical registers, Labour force survey (LFS), and an exhaustive integrated database based on social security data detailing the use of job retention schemes⁵.

² CIG is the acronym for Cassa Integrazione Guadagni, the main job retention scheme historically adopted in Italy, that might sound in English like Found for pay integration.

³ These aspects have been treated and detailed in several works dedicated to this theme in recent months. As a milestone of pre-existing legislation see for example the text of the “D. Lvo n. 148/2015 - Disposizioni per il riordino della normativa in materia di ammortizzatori sociali in costanza di rapporto di lavoro, in attuazione della legge 10 dicembre 2014, n. 183. <https://www.gazzettaufficiale.it/eli/id/2015/09/23/15G00160/sg>”. A very incisive reading putting together normative aspect and actual evolution of job retention schemes in Italy can be found in Lo Bello (2021). European legislation might be found in European commission (2020).

⁴ In Italy we mention without any pretention of being exhaustive the recent works of Lo Bello (2021), Biasi et al. (2021), Bovini et al. (2020), Inps (2021), Inps-Banca d'Italia (2020), Naticchioni (2020), Venditti et al. (2021). Given the international extent of job retention burst, several studies go beyond Italian borders: Anderton et al. (2020), Dias da Silva et al. (2020), Dorigatti (2020), Drahokoupil et al. (2021), Eurofound (2020, 2021), Mosley (2020), Muller et al. (2020), OECD (2020a, 202b, 2021), Stuart et al. (2021),

⁵ All the databases use pseudonymized with anonymous codes separately generated by Istat for businesses and individuals. The sources listed here are indicated in the tables and charts that follow with the same names that we introduce in this section.

The integrated database on CIG measures (CIG-IUM⁶)

This is a database built-up at Istat in order to perform in-deep analyses of job retention schemes during pandemic. It collects and integrates information on CIG measures represented in social security archives reporting detailed information on a weekly basis on all employee jobs in industry and services. Each record in the database is identified by the codes of the individual and of the economic unit, and by the month. It is currently available for the years 2018 through 2020⁷. It consists of 160 mln monthly records, referred to almost 16 mln distinct individuals employed each year by the 1.5 mln firms with employees during the year.

For each monthly job, this database provides detailed information on several characteristics of the job. For instance: the amount of potentially workable hours⁸; an estimate of the hours absorbed by CIG; the hours actually worked and the ensuing gross earnings actually paid by the enterprise; the value of CIG salary integration for the hours absorbed by CIG; the value of the gross earnings not paid by the enterprise (and partly compensated with CIG integration); other indicators relating to the nature of the employment relationship (for instance, whether part or full time, fixed term or open-ended), and the specific CIG measures that have been chosen. This database can be linked through the individual code to other statistical sources relating to individuals (registers and surveys) and through the code of the economic unit to the statistical registers on economic units.

The Business Register (ASIA)

It covers all firms in industry and services. It contains information at the level of each economic unit regarding the main structural characteristics: employees and persons employed, legal form, Nace, territory. This information is detailed for the 4.5 mln Italian firms. It is available since early 1990's: the latest available year is 2019. For this work, the years from 2018 to 2019 were used. The LEED register associated to ASIA gives the possibility to link units to all the persons employed, employees and entrepreneurs⁹.

The SBS Register (Frame-SBS)

This is the register that adds the main profit & loss account variables referred to all the firms included in the business register. For instance: turnover, value added, personnel costs, labour cost. Exported turnover and costs deriving from imported goods are also been associated to each economic unit. This register has been furtherly widened for this purpose by integrated some other information derived from other registers available at Istat. In particular from the LEED register we introduced at firm level a *tenure* indicator: it is aimed at measuring at firm level the average duration of job relationships between the firms and its employees (it is an average duration of existing employment relationships). Furthermore, we introduced an indicator, defined at firm level, summarising the average level of education of employees (average years of attendance of schools and universities). Frame-SBS is available since 2013, and the years 2018 to 2019 were used for this work.

Income Statistical Register (BDR-I module)

BDR-I is one of the modules of Istat Income Statistical Register. It is available for the years from 2015 to 2019, although only 2019 data were used in this paper. It reports individual taxable and non-taxable incomes traced in the available administrative sources (mainly tax statements and social security sources). For each year, income data are available for about 40 million individuals. The integrated use with the LFS microdata allows the estimation at individual level of equivalent income measures by exploiting the information on the composition of actual households reported in the survey questionnaire.

LFS survey

This is the most important household survey conducted by ISTAT: it is based on almost 600,000 interviews relating (net of the panel component) to about 350,000 individuals. It can be linked to other sources on

⁶ The last part of the name of the database is an acronym that recalls that each record corresponds to a monthly job as is identified by concatenating a specific Individual, who is an employee of a specific economic Unit in a specific Month.

⁷ 2020 data are anyway provisional. Definitive social security data are expected by the end of 2021. In the past years the final update only added 0.3% observation to the provisional version, mainly concentrated in the last month of the year (1.2%).

⁸ The number of hours that would have been ordinarily worked and paid for by the employee for a specific employer in a specific month.

⁹ A significant portion of entrepreneurs is actually in the pay-roll of the firm they own, so they are formally employees of their firm, at least for a part of the year. These individuals are thus at the moment included in the analysis.

individuals through the individual code, and indirectly to the other databases on economic units. In this work the use is restricted to LFS from 2018 to 2020¹⁰.

2. The individual side: employees in job retention schemes in 2020

Overview

In 2020 almost seven million employees¹¹ in the non-agricultural private sector were involved in job retention schemes: this is one out of eight individuals in entire population and just under one out of five in the working-age population (15-64 years old; Table 2.1). If we consider the almost six million households of those involved in job retention schemes, the total number of people involved in CIG events - directly or indirectly - is about 17.7 million, slightly under 30% of total population.

On the other hand, the 15.7 million individuals who make up the total number of non-agricultural employees represent more than 40% of the working age population, and their families concentrate more than half of total population. More than three quarters of the 15 million households with individuals in working age have at least one employee in non-agricultural sectors and almost 40% have at least one employee who has been involved in job retention schemes: excluding smaller households made just by one person, almost one half of the remaining households have been affected by CIG events.

The incidence of CIG events on the total number of employees came close to 45% in 2020, exceeding 50% for employees with full-time and open-ended contracts; this incidence exceeded 40% also for those with part-time contracts. Employees with fixed-term contracts were generally less affected by CIG, which in any case comprises 761 thousand employees (totalling 2.3 million households' members), of whom 355 thousand (and 1.1 million household's members) with fixed-term part-time contracts. More than one out of four individuals had at least one full-time permanent employee in CIG in his family, and slightly less than one out of eight had at least one part-time employee in CIG in his household.

The incidence of CIG was slightly lower for the female employees. This can be essentially envisaged as deriving from a composition effect. In fact, females represent less than one-third of full-time permanent employees and two-thirds of part-time employees.

¹⁰ The estimates that use LFS individuals, obviously carry with themselves the weighting, and the sampling and non-sampling errors of the survey. The sub-populations of the individuals with CIG events in 2020 correspond to about 55 thousands LFS interviews.

¹¹ From now on we use interchangeably individuals o employees: unless different meanings are explicitly mentioned, any reference to employees is meant to be referred to headcounts and not jobs.

Table 2.1

Employees in the private non agricultural sectors (a), by type of contract and involvement in job retention schemes. Year 2020 (Estimates on LFS 2020 sample)									
Employees and type of contract	Employees			Households with at least one employee					
	Totale	Male	Female	Total		Singles	Larger families		
				Households	Individuals		Households	Individuals	
				<i>NUMBER (.000)</i>					
Total	15.730	9.159	6.571	11.429	32.751	1.973	9.456	30.778	
Part-time (b)	5.075	1.773	3.303	4.532	13.936	516	4.015	13.420	
Fixed term (b)	4.162	2.200	1.961	3.678	11.410	446	3.232	10.964	
Part-time & fixed term (b)	1.830	776	1.053	1.703	5.426	177	1.525	5.248	
Full time open-ended (b)	10.219	6.917	3.302	8.434	24.321	1.405	7.029	22.916	
Employees in job retention schemes	6.984	4.211	2.773	5.963	17.652	841	5.122	16.811	
Part-time (c)	2.137	677	1.460	2.033	6.253	213	1.820	6.040	
Fixed term (c)	761	438	323	740	2.308	82	659	2.227	
Part-time & fixed term (c)	355	129	226	349	1.123	31	319	1.093	
Full time open-ended (c)	5.413	3.615	1.798	4.818	14.256	686	4.132	13.570	
				<i>INDICATORS</i>					
<i>% on total population</i>									
Total employees	26,3	31,5	21,4	43,8	54,8	22,3	54,9	60,5	
Employees in job retention schemes	11,7	14,5	9,0	22,9	29,5	9,5	29,7	33,0	
<i>% on working age population</i>									
Total employees	41,1	48,0	34,3	75,3	85,6	44,8	87,7	90,9	
Employees in job retention schemes	18,3	22,1	14,5	39,3	46,1	19,1	47,5	49,7	
<i>Incidence % job retention schemes (d)</i>									
Total	44,4	46,0	42,2						
Part-time	42,1	38,2	44,2						
Fixed-term	18,3	19,9	16,5						
Part-time & fixed-term	19,4	16,6	21,4						
Full time open-ended	53,0	52,3	54,5						
Source: Istat, LFS 2020; CIG-IUM 2020 (provisional)									
Notes: (a) Individuals with at least one day of contract as an employee; (b) Employees with at least one day of contract of the kind specified; (c) employees with at least a CIG event associated to the specified type of contract; (d) Share of employees with CIG events									

In order to appreciate the exceptionality of 2020, notice that the number of employees involved in CIG events in 2020 has been almost ten times larger than that recorded in 2019. The trend in the use of job retention schemes has been relatively regular in 2018 and 2019, and until February 2020: in this period, the number of employees in CIG never exceeded at a monthly level the threshold of 350 thousand units. From March 2020 it exploded, to reach its maximum in April (almost six million employees) and then fell back reaching a minimum (in any case well above one million units) in the middle of the second half of the year and then re-approaching again the two million employees in CIG in the final months of the year (Chart 2.1).

Chart 2.1



For those who were involved in job retention schemes in 2020, the per capita amount of hours absorbed by CIG was slightly over 330 hours on a yearly basis: the gross earnings due for these hours were omitted by employers and partially substituted by social security through CIG integrations. The amount of per capita CIG hours in 2020 is significantly higher than in previous years (Table 2.2). In 2020, CIG therefore affected a much larger audience and with greater intensity, reaching nearly the 20% of the total amount of the hours workable by the individual involved in CIG events, a figure that is about five p.p. higher than the previous years' one. Consequently, the total amount of CIG integrations, which exceeded 14 billion euros, was 12 times higher in 2020: in per capita terms the sum exceeded 2.000 euros, 16% higher than the ones recorded in the previous years.

CIG events of 2020 can be traced back to the more than 28 billion euros of wages not received by the employees and correspondingly unpaid by employer¹², which were partially compensated with the 14.2 billion euros integrated by CIG (Table 2.2 and Table 2.3). The partial coverage of the wage loss that was guaranteed by CIG integration has, however, entailed a loss of 8.6% in gross wages for all the individuals involved in CIG¹³, compared with a saving of 17.5% in potential wages by their employers.

For 6.3 million employees, CIG events in 2020 represented a "first time in CIG" at least since 2018 (Table 2.3). Slightly less than one out ten of the employees in CIG in 2020 on the other hand, had already been in CIG in the previous two-year period: specifically, more than 80% of all 861 thousand employees in CIG in 2018-19 ended up in CIG in 2020 as well. While in 2020 CIG involved almost 45% of total employees, its weight is somewhat greater, and close to 50%, if calculated in terms of monthly jobs and hours worked. Overall, more than 28 million monthly jobs and 2.3 billion hours were involved in CIG events. On average, individuals involved in CIG in 2020 spent just under one-fifth of their workable hours there, nearly one out of four for the cohort related to those who had already been in CIG in the previous two years: this cohort stands out as having more intensive use of CIG.

¹² The sums here estimated are net of the component relating to the notional social contribution.

¹³ This relative loss in 2020 is thus about one and a half p.p. higher than in the previous two years.

Table 2.2

Employees in job retention schemes by year. Years 2018-2020 (Estimates on LFS 2018-2020 samples)												
Year	Employees		Hours in CIG				CIG compensations (euro)		Unpaid gross earnings (e)		Impact of CIG events (f)	
	N(.000)	Incidence % (a)	N(min)	per capita (b)	Incidence % (c)		Total (min)	per capita (d)	Total (min)	per capita (d)		
					Employees in CIG	Total employees						
2018	676	4,3	177	262	14,1	0,7	1.161	1.718	2.529	3.741	7,2	
2019	652	4,1	177	271	14,4	0,7	1.142	1.751	2.379	3.646	7,0	
2020	6.984	44,4	2.325	333	19,3	9,6	14.219	2.036	28.101	4.024	8,6	

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

Notes: (a) % share of employees in CIG on total employees; (b) Hours in CIG per employee in CIG; (c) Share of hours in CIG on total workable hours; (d) Average per employee in CIG; (e) Gross earnings saved by firms due to job retention schemes; (f) % difference between the amounts accrued by the employees in CIG (actual gross earnings plus CIG compensation) and the amounts they would have earned if they had actually worked aso the hours in CIG.

Table 2.3

Employees in the private non-agricultural sectors, by inclusion in job retention schemes. Year 2020 (Estimates on LFS 2020 sample)																								
	Employees		Monthly jobs (.000) (f)						Workable hours (min)						Actual gross earnings (a)		CIG compensations (b)		Unpaid gross earnings (c)		CIG impact upon employees (d)		upon firms (e)	
			Total		of which: Involved in CIG events				Total		of which: CIG hours				min euro		min euro		min euro		%		%	
			N	%	N	%	N	%	Incid.%	N	%	N	%	Incid.%	min euro	%	min euro	%	min euro	%	%	%		
Total employees	15.730	100	164.056	100	28.458	100	17,3	24.207	100,0	2.325	100	9,6	335.515	100	14.219	100	28.101	100	-3,8	-7,7				
Involved in CIG in 2020	6.984	44,4	80.554	49,1	28.458	100	35,3	12.072	49,9	2.325	100	19,3	132.574	39,5	14.219	100	28.101	100	-8,6	-17,5				
involved also in 2018-19	686	4,4	8.017	4,9	3.824	13,4	47,7	1.330	5,5	321	13,8	24,1	14.475	4,3	2.027	14,3	4.098	14,3	-11,1	-22,1				
involved for the first time in 2020	6.298	40,0	72.537	44,2	24.634	86,6	34,0	10.742	44,4	2.004	86,2	18,7	118.099	35,2	12.192	85,7	24.003	85,7	-8,3	-16,9				
Not involved in CIG in 2020	8.746	55,6	83.502	50,9				12.135	50,1				202.941	60,5										
involved in CIG in 2018-19	175	1,1	1.691	1,0				267	1,1				4.856	1,4										
never in CIG since 2018	8.571	54,5	81.811	49,9				11.869	49,0				198.085	59,0										

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

Note: (a) Gross earnings actually paid by the employers; (b) sums corresponding to CIG compensations; (c) Gross earnings that would have been paid by the employer if the CIG hours had been actually worked; (d) % difference between the amounts accrued by the employees in CIG (actual gross earnings plus CIG compensation) and the amounts they would have earned if they had actually worked aso the hours in CIG.; (e) % difference between the actual gross earnings paid by the employers and the amounts they would have paid if CIG hours had been actually worked.

Monthly flows

Access to CIG in 2020 was decidedly concentrated in a few months (Table 2.4). Eighty-five percent of those involved had CIG events in April: the two contiguous months (March and May) concentrate about two-thirds of the individuals with CIG events in the year. The month of April alone concentrates about 30% of the hours of CIG of the whole year and of the corresponding amount of compensations: between March and May there is a concentration of almost 60% of hours and compensations. The second half of the year contributes as much to CIG as the month of April alone.

The monthly stock of employees put under CIG regime has been relatively small in the first two months of the year (mostly individuals who had already been under CIG in the immediately preceding years). It literally exploded in March, with over 4 million individuals accessing CIG compensations for the first time since 2018. Then it reached its peak in April (almost 6 million), the month in which there were about 1.4 million new individuals entered the job retention scheme. About 87% of all employees involved in 2020 entered job retention schemes between March and April. From May onwards, new entrants decreased sharply while the number of individuals leaving CIG increased sharply. This consistent flow of exits continues up to July and August, and contributes to a decisive reduction in the stock of employees in CIG who reach a relative minimum in September (1.2 million). From that month onwards, the flow of new entrants is reactivated, rising to 1.8 million in November. Moreover, the last months of the year are characterized by a considerable rate of persistence (individuals who remain in CIG since the previous month).

Table 2.4

Monthly flows of the employees involved in job retention schemes. Year 2020 (Estimates on LFS 2020 sample)															
Month	Employees in CIG					Flows					Rates				
	Stock (.000)	Incid. %	of which: already in CIG in 2018- 19 (.000)	Incid. %	Incid. %	New entrants	distr.%	Persistent	Re- entering	Exited	New entrants	distr.%	Persistent	Re- entering	Exited
	(a)=(d)+(e)+(f)	(b)	(c)	(b)	(b)	(d)	(b)	(e)	(f)	(g)	(h)	(i)	(j)	(m)	(n)
January	191	2,7	179	93,5	26,1	12	0,2		179		6,5		93,5		
February	301	4,3	185	61,3	26,9	109	1,7	136	56	56	36,2	70,9	18,8	29,1	73,4
March	4.758	68,1	565	11,9	82,5	4.080	64,8	283	395	18	85,8	94,0	8,3	6,0	94,4
April	5.951	85,2	611	10,3	89,2	1.410	22,4	4.465	76	293	23,7	93,8	1,3	6,2	29,9
May	4.614	66,1	453	9,8	66,0	255	4,0	4.303	55	1.647	5,5	72,3	1,2	27,7	42,4
June	3.144	45,0	385	12,2	56,2	118	1,9	2.839	187	1.774	3,7	61,5	6,0	38,5	66,1
July	1.985	28,4	272	13,7	39,7	51	0,8	1.773	162	1.372	2,6	56,4	8,2	43,6	79,8
August	1.299	18,6	218	16,8	31,8	29	0,5	1.015	254	970	2,3	51,1	19,6	48,9	96,5
September	1.246	17,8	231	18,5	33,7	32	0,5	812	402	487	2,6	62,5	32,3	37,5	73,9
October	1.373	19,7	252	18,4	36,8	48	0,8	939	386	307	3,5	75,4	28,1	24,6	54,0
November	1.786	25,6	215	12,0	31,3	118	1,9	1.079	589	293	6,6	78,6	33,0	21,4	56,0
December	1.693	24,2	252	14,9	36,8	36	0,6	1.380	276	406	2,1	77,3	16,3	22,7	42,4
Total (p)	6.984	100	686	9,8	100	6.298	100								

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

Note: (a) Employees in CIG in the month; (b) % share of total individuals in CIG in 2020; (c) % share of total individuals in CIG in the month; (d) Employees in CIG in month m for the first time since 2018; (e) Employees in CIG in month m and m-1; (f) Employees in CIG in month m, already in CIG before but not in month m-1; January 2020 includes all the employees in CIG in 2018-2019; (g) Employees in CIG in month m-1 but not in month m; (h) New entrants/Total; (i) Persistent/Total m-1; (j) Re-entering/Total; (m) Exited/Total m-1; (n) (New entrants+Exited+Re-entering)/Stock; (p) Total of distinct individuals

An analysis of the individual monthly cohorts of entry shows that the two main cohorts, those of April and March, arrived in July reduced by three quarters and in September reduced to about 15% of the initial consistency (Table 2.5). Both, and above all that of March, have regained consistency with re-entering flows in the last quarter: almost a quarter of the individuals in the March cohort were in CIG in December. The cohorts that entered between April and July dried out more rapidly: the June cohort lost half of its individuals as early as July and continued to decline until December, when it was dried up to a residual of less than 20%. Similar trend for the July cohort. The subsequent entry cohorts, closer to the end of the year, instead arrived in December fuller. In the last month of 2020, the cohort that started before the pandemic and the cohort of 2018-2019 are still relatively consistent, and persistent (between 30% and 40% of initial consistencies).

In December, on the other hand, almost 1.7 million individuals were still in CIG, about a quarter of all those in CIG in 2020. More than half of those who were in CIG in December (957 thousand) belong to the cohort that entered in March, even if only a small part (a little more than 200 thousand) were in CIG continuously for ten months. Overall, almost one out of four of the individuals who entered CIG in March was also in CIG in December. More than one-third of the cohorts that had CIG events in 2018-2019 or January 2020 were still in CIG in December. The other fairly large cohort, the employees who entered CIG in April, contribute with over 200,000 individuals to the stock of December. Finally, less than 10% of the employees in CIG in December (about 155 thousand) came from cohorts that entered CIG for the first time in the last three months of the year.

Almost half of the more than 4 million individuals who entered CIG for the first time in March exited definitively after four months, and more than a quarter after three months (net of any interruptions). Something similar happens in April: a quarter of these leave the following month. The month of May appears, for the cohorts that entered in March and April, as a month of a strong thinning of the number of employees in CIG. On the other hand, about a quarter of the entrants in March and April survive in CIG, respectively, for more than six and five months: they are individuals who continue to undergo CIG events in the last five months of the year.

More persistent in general are the stocks of employees for whom CIG was activated in the first two months of the year (those of January are almost only individuals already in CIG in previous years). Two-thirds of the employees who entered CIG in February had at least five months of CIG in 2020. Cohorts entering CIG for the first time from August onward are quite small until November and show a lapse rate after the first month very similar to that seen in the second quarter.

Table 2.5

Employees involved in job retention schemes by month of first entry and month. Year 2020 (Estimates on LFS 2020 sample. Index. Base: Entry cohort=100)													
Entry cohort	N(.000)	Year 2020											
		January	February	March	April	May	June	July	August	September	October	November	December
Already in CIG in 2018-19	686	26,1	26,9	82,5	89,2	66,0	56,2	39,7	31,8	33,7	36,8	31,3	36,8
January	12	100	60,1	87,0	88,9	77,5	64,1	46,6	37,4	32,2	40,6	39,9	35,6
February	109		100	93,1	87,6	78,1	62,9	26,9	23,1	21,5	15,6	18,7	17,7
March	4.080			100	93,7	69,1	43,6	25,9	16,1	15,8	18,1	25,6	23,4
April	1.410				100	70,3	44,2	28,3	17,3	14,2	14,2	17,5	15,5
May	255					100	64,3	41,5	23,2	19,0	18,3	18,4	14,9
June	118						100	55,1	30,6	27,5	22,1	20,3	18,0
July	51							100	52,2	37,8	23,6	21,6	17,6
August	29								100	34,9	28,5	15,7	23,6
September	32									100	64,3	49,4	35,9
October	48										100	75,6	66,7
November	118											100	73,9
December	36												100

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

Note: in bold the case of increase with respect to the previous month

The examination of these flows suggests some hypotheses regarding a possible classification criterion of the employees in CIG based on the month of entry and on the duration of the events. This classification is used for expositive purposes later in the work (Table 2.6). In particular, we isolate a first cohort of individuals with CIG events in the previous two years and in the first two months of 2020. This cohort includes about 800 thousand individuals, for whom almost one half of the total monthly positions are involved in CIG events, with an average incidence of the hours absorbed by CIG equal to almost a quarter of total workable hours on an annual basis, and with an average negative impact of CIG events on potential gross earnings equal to 11.3% (Table 2.6).

The remainder of the cohorts is composed of individuals with no CIG events since 2018 and through February 2020, thus in this sense "new" to CIG. A second cohort gathers more than a third of the employees in CIG in 2020 (about 2.5 million): it is made up of individuals who enter CIG for the first time between March and May and with a definitive exit by May: these events are all contained in the "first phase in the narrow sense" of pandemic. They are, therefore, individuals with a limited stay in CIG. The monthly jobs of these individuals actually involved in CIG events are less than 20% of their yearly total: the incidence of CIG on total workable hours is less than 10% with an average impact on potential gross earnings of slightly more than 4%.

A third cohort of a not negligible size (comprising a little less than 18% of those in CIG in 2020, about 1.2 million) is made up of the rest of the individuals who, having entered from March onwards, definitively end their CIG cycle in July: their CIG events all occur within the "first phase in a larger sense" of pandemic. Also in this case their stay in CIG is relatively limited, although higher than the previous cohort: less than one third of the monthly jobs and just over one sixth of the working hours are involved in CIG events, whose negative impact on potential gross earnings is 7.6%.

The complementary cohort is made up of the rest of the individuals who entered CIG between March and July but with CIG events also from August onwards. Their CIG events cover both first and second phase of the 2020 pandemic¹⁴. It is also a quite large cohort, since it accounts for almost one-third of the 2020 employees in CIG (2.1 million). This cohort is characterized by a more significant incidence of such events, which involve more than a half of the monthly jobs, over 30% of the workable hours, with an average impact on potential gross earnings exceeding 13%. This cohort actually absorbs almost half of the total monthly jobs involved in CIG in 2020.

Finally, the cohort of employees who entered CIG for the first time from August onwards is kept distinct, even though its size is relatively small (263 thousand individuals, 3.8%). For this cohort, CIG assumes similar characters to those of the cohort with CIG events only in the first three months of the pandemic. Distinctive of this cohort is obviously the higher incidence of individuals still in CIG in December (three-quarters of the nearly 120 thousand who entered CIG in November) and thus, potentially, with continuing episodes in 2021.

¹⁴ The timing of pandemic is here defined based on Italian experience.

Table 2.6

Employees in job retention schemes, by entry and duration cohort. Year 2020 (Estimates on LFS 2020 sample)											
Coorti	Employees		avg. Months in CIG	Monthly jobs with CIG events		Hours in CIG	Actual gross earnings	CIG compensations	Unpaid gross earnings	CIG impact (%)	
	N (.000)	%		incid.%	distrib.%	incid.%	per capita	per capita	per capita	on employees (g)	On employers (h)
In CIG before March 2020 (a)	807	11,6	5,6	47,9	15,9	24,6	19.907	2.900	5.811	-11,3	-22,6
In CIG only in the first phase (narrow) (b)	2.549	36,5	2,1	18,3	18,6	9,8	20.546	1.015	1.986	-4,3	-8,8
Others in CIG only in the first phase (large) (c)	1.241	17,8	3,7	32,0	16,1	17,2	19.802	1.801	3.580	-7,6	-15,3
Others in CIG during first and second phase (d)	2.123	30,4	6,4	53,4	47,6	30,2	16.729	3.224	6.356	-13,6	-27,5
Others entered in CIG in the second phase (e)	263	3,8	1,9	20,5	1,8	10,1	15.345	806	1.569	-4,5	-9,3
Total	6.984	100	4,1	35,3	100	19,3	18.983	2.036	4.024	-8,6	-17,5

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

Note: (a) Employees in CIG before February 2020; (b) Employees entered CIG from March and definitively exited within May; (c) Employees entered CIG from March and definitively exited within July; (d) Employees entered CIG between March and July with CIG events after July; (e) Employees entered CIG after July; (g) % difference between Actual gross earnings plus CIG compensations and Potential gross earnings; (h) % difference between Actual gross earnings and Potential gross earnings

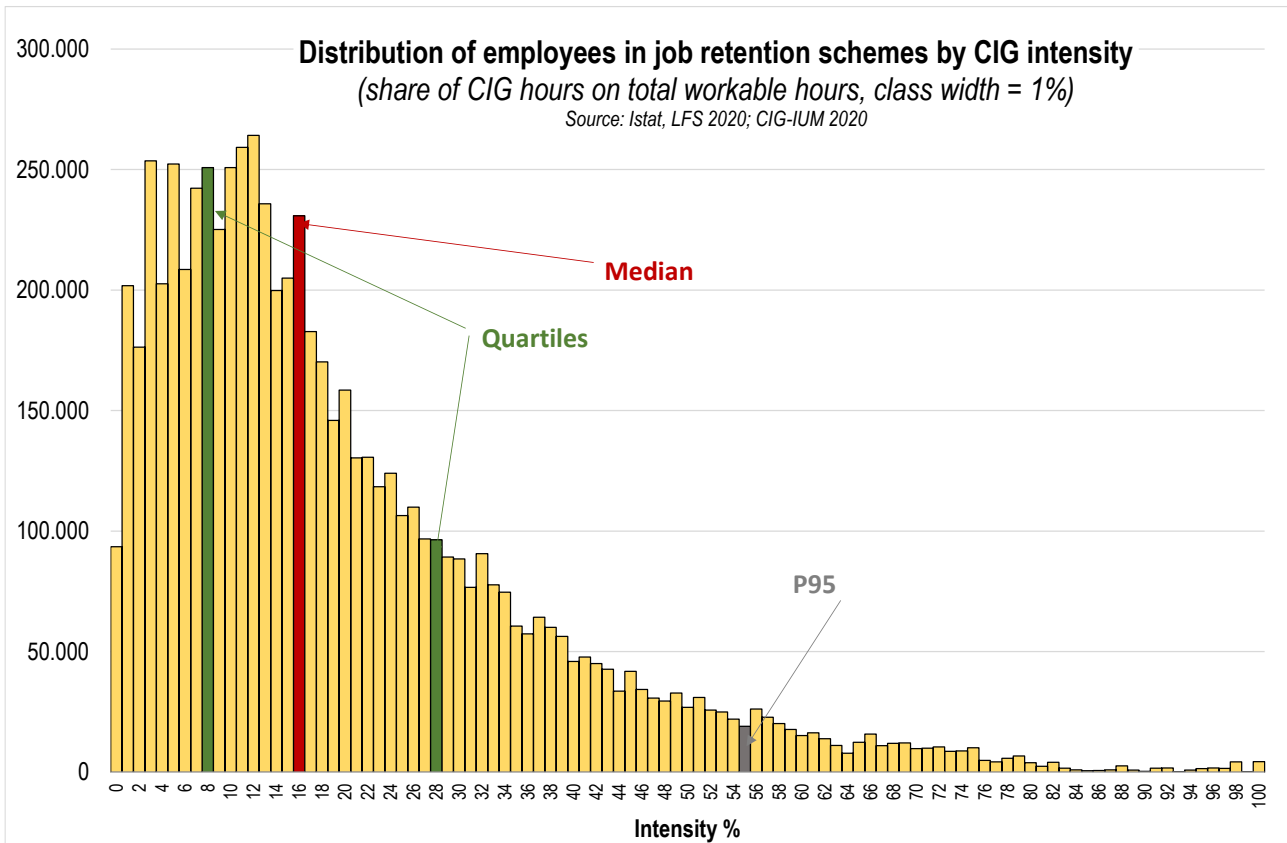
The intensity of CIG events

On average, the almost seven million individuals involved in job retention schemes in 2020 had absorbed by CIG about 333 of their workable hours on an annual basis: this is a rather asymmetrical distribution, since the average exceeds by 30% the value assumed by the median (256 hours). Still on an annual basis, between 15% and 20% of individuals spent less than 100 hours in CIG, and 20% more than 500 hours.

The intensity with which each employee was involved in CIG events in 2020 has been measured on an annual and monthly basis in relative terms, by relating the hours of CIG to the number of workable hours in the corresponding period. The distribution of employees by CIG intensity on an annual basis (Chart 2.2) shows a clear asymmetry: it is concentrated on the left tail with a long right tail showing relatively low frequencies. For half of the individuals, the number of hours in CIG accounted for between 8% and 28% of workable hours (the first and third quartiles), with the median at 16%. For 6.5% of individuals (about 480 thousand) the intensity on a yearly basis was greater than 50%.

The strong characterization on a monthly basis of CIG events is also reflected in the monthly distribution of its intensity. In April, the month in which almost six million individuals were placed in CIG, half of them spent more than four out of five workable hours in CIG and over 1.6 million spent 100% of workable hours. In March, the individual intensity of events was lower: it was the month of entry into CIG for over 4 million individuals. From May to July it fell considerably: the median value fell from 83.3% in April to 36.4% in July. In August it rose again, returning in November to the levels registered in May (median at 50% and third quartile at 84%). Compared with the first two months of the year, CIG at the end of 2020 concerns an almost six times larger number of employees with a median intensity twice as high.

Chart 2.2



The same distributions, examined by cohort of access and duration of CIG, show how a large part of the individuals in CIG in the first phase (narrow definition) are obviously concentrated in the lowest intensity classes, up to 20% (Table 2.7). Slightly higher is the intensity recorded for the rest of the individuals in the first phase (large definition), 15% of whom have intensities calculated on an annual basis of more than 30%. More frequent is the presence of incidences above 50% in the cohort that went through both pandemic phases. While the cohort that entered with the second phase has high frequencies in the lowest intensity classes, it also shows significant frequencies in the intensity classes above 30%, on an annual basis.

Monthly events obviously have a different profile. Overall, there are more than two million individuals who had at least one month in 2020 in which CIG absorbed all the hours that could be worked, and another 1.7 million had at least one month with an intensity of CIG hours greater than 80%. The high incidence of high-intensity months cuts across all cohorts: it is highest in the cohort with CIG episodes before pandemic, and in those who had CIG events in both first and second phases.

Table 2.7

Employees in job retention schemes, by entry and duration cohort and classes of yearly and monthly intensity. Year 2020 (Estimates on LFS 2020 sample)							
Intensity classes (% ore di CIG) (f)	In CIG before March 2020 (a)	In CIG only in the first phase (narrow) (b)	Others in CIG only in the first phase (large) (c)	Others in CIG during first and second phase (d)	Others entered in CIG in the second phase (e)	Total	
						distr.%	N (.000)
<i>Intensity on an annual basis</i>							
up to 10%	17,9	51,4	26,2	8,9	53,0	30,2	2.107
10-20%	30,9	38,6	31,9	21,6	21,6	30,7	2.145
20-30%	21,3	5,8	25,4	23,2	12,7	16,6	1.161
30-40%	12,5	2,1	10,4	19,3	5,7	10,1	707
40-50%	8,5	1,0	3,2	11,4	3,0	5,5	384
50-80%	7,0	1,0	2,8	15,0	3,1	6,3	443
>80%	1,9	0,2	0,2	0,5	1,0	0,5	37
Total	%	100	100	100	100	100	
	N (.000)	807	2.549	1.241	2.123	263	6.984
<i>Maximum intensity on a monthly basis</i>							
up to 50%	16,4	28,8	22,5	11,6	47,9	21,7	1.517
50-80%	20,4	26,3	23,1	20,0	19,5	22,9	1.598
80-100%	23,1	22,9	24,9	28,3	17,8	24,7	1.728
100%	40,2	22,0	29,5	40,1	14,8	30,7	2.141
Total	%	100	100	100	100	100	
	N (.000)	807	2.549	1.241	2.123	263	6.984

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

Note: (a) Employees in CIG before February 2020; (b) Employees entered CIG from March and definitively exited within May; (c) Employees entered CIG from March and definitively exited within July; (d) Employees entered CIG between March and July with CIG events after July; (e) Employees entered CIG after July.

Based on this evidence, we propose (among the many that are possible) a classification of employees by CIG intensity classes. It is based on synthetic indicators of annual and monthly CIG intensity: annual indicators use the quartiles of distribution, while monthly indicators are classified using the median and third quartile of the maximum monthly value of the share of CIG hours. The definition of the classes is based on the annual criterion (which defines three: low, medium, high) cut with the monthly criterion, with the median dividing the low intensity cases into two and the third quartile cutting the medium intensity cases.

As a result of this classification, among the employees who have undergone CIG with lower intensity (less than 10% of CIG hours on an annual basis), those who experienced relatively low monthly intensities (1.3 million individuals) are distinguished from those who in some months have had an important share of the workable hours absorbed by CIG (at least 50%). For the latter (slightly less than 800 thousand) the average annual intensity is almost double that of the previous compared to a slightly lower number of months spent in CIG. For both low-intensity classes, the impact of CIG events on potential gross earnings is less than 5%, remaining higher in the class with monthly peaks.

Among the employees with a medium intensity (between 10% and 25%: they amount to about 2.8 million individuals) we distinguish those with a high share - at least 80% - of hours absorbed by CIG at least in one month. They are more than a quarter of the individuals in CIG in 2020, and are characterized by a relatively low number of monthly jobs affected by CIG events but also by a somewhat higher hourly intensity on an annual basis. For both these classes, the average impact, calculated on an annual basis, of CIG events on potential gross earnings is between 7% and 8%: what distinguishes them is the extent of the lower gross earnings actually paid by companies, which is greater for individuals with high CIG compensations.

The high-intensity segment consists of more than 2 million individuals who have had at least a quarter of the workable hours on an annual basis absorbed by CIG. On average, these are individuals who have been engaged in CIG events for more than six months. The share of the working hours absorbed by CIG is for them, on an annual basis, larger than 40% and consequently the negative impact on potential gross earnings is larger, just slightly under 20%.

Table 2.8

Employees in job retention schemes, by CIG intensity class. Year 2020 (Estimates on LFS 2020 sample)											
Intensity class	Employees		avg. months in CIG	Monthly jobs in CIG		Hours in CIG	Actual gross earnings	CIG compensations	Unpaid gross earnings	CIG impact	
	N (.000)	%		incid.%	distrib.%	incid.%	per capita	per capita	per capita	Employees (g)	Employers (h)
Low (a)	1.314	18,8	2,1	17,7	9,6	4,2	27.366	501	1.142	-2,2	-4,0
Low with monthly peaks (b)	793	11,4	2,0	16,1	5,5	7,5	23.799	874	1.853	-3,8	-7,2
Medium (c)	1.004	14,4	4,3	37,9	15,2	15,2	20.459	1.575	3.410	-7,7	-14,3
Medium with monthly peaks (d)	1.806	25,9	3,5	29,1	22,0	16,8	18.489	1.849	3.564	-7,8	-16,2
High (e)	2.066	29,6	6,5	60,5	47,7	41,1	11.520	3.845	7.389	-18,7	-39,1
Total	6.984	100	4,1	35,3	100	19,3	18.983	2.036	4.024	-8,6	-17,5

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

Note: (a) Less than 10% on an annual basis and never more than 50% on a monthly basis; (b) Less than 10% on an annual basis and more than 50% in at least one month; (c) Between 10% and 25% on an annual basis and never more than 80% on a monthly basis; (d) Between 10% and 25% on an annual basis and more than 80% in at least one month; (e) More than 25% on an annual basis; (g) % difference between Actual gross earnings plus CIG compensations and Potential gross earnings; (h) % difference between Actual gross earnings and Potential gross earnings

Key characteristics of the employees involved in job retention schemes

Socio-demographic characters

The households of the employees involved in CIG events in 2020 include on the whole about 17.7 million individuals. All them are therefore, in part indirectly, involved in such events (Table 2.9): they represent almost 30% of the entire population, with a somewhat higher incidence in the northern regions - where one household out of three has been involved - and a relatively lower one in the South (less than one household out of four). In this sub-population, there is a higher than average representation (around 40%) of the under-50 age group, foreign citizens, and persons living in households made up of couples with children. Correspondingly, let alone the elderly, those with the lowest educational qualifications and households consisting of isolated persons or couples without children are under-represented (at around 10% or less).

Eighty percent of the employees in CIG in 2020 are aged between 25 and 54: between one-fifth and one-quarter of the population in this age group had a CIG event in 2020, and about two out of five had at least one person in CIG in their household. The intensity and impact of CIG were fairly uniform with respect to age: there is a tendency for them to be just higher in the later age groups.

The lower presence in absolute terms of employees with CIG events in the South, however, is accompanied by a greater CIG intensity, with a difference of about 5 p.p. compared to the North. The per capita value of CIG integrations is considerably higher, as it is the negative impact on potential gross earnings, on average just over 10%. A clear gender imbalance is also noted, in favour of the male component, accompanied also in this case by greater intensity and impact of CIG on the female component.

Almost two out of three employees with CIG events have continued their studies after the third year of secondary school: upper secondary education graduates certainly prevail (one out of eight has graduated). Amongst the employees in CIG there is more than one third of high school graduates and less than one quarter of all university graduates. Those who did not go further than lower secondary education (Isced level 1), have experienced more intensely CIG events, with higher average compensations, and stronger negative economic impacts of CIG. Something similar occurs for the subpopulation of single-parent workers, who had more intense CIG events: in this case, as in those seen above, the greater intensity is due to the greater frequency in these subpopulations of part-time contracts.

Table 2.9

Socio-economic characteristics of the employees in job retention schemes. Year 2020 (Estimates on LFS 2020 sample)														
Characters	Employees in CIG				Households with at least one employee in CIG		CIG hours				CIG compensations (b)			
	N (.000)	distr. %	Incid. % on total pop.	Incid. % on total employees	Individuals (.000)	Incid. % on total pop.	N (mln)	distr. %	Intensity (a)/(b)	per capita (b)	Total (mln euro)	distr. %	per capita	Impact % (c)
TOTAL	6.984	100	11,7	44,4	17.652	29,5	2.325	100	19,3	333	14.219	100	2.036	-8,6
AGE CLASS														
0-14				36,0	3.032	38,9								
15-24	488	7,0	8,3	34,6	2.311	39,3	149	6,4	20,6	305	858	6,0	1.759	-8,4
25-34	1.532	21,9	23,7	44,3	2.660	41,2	506	21,8	19,7	331	3.020	21,2	1.972	-8,5
35-44	1.893	27,1	24,3	47,0	2.998	38,5	631	27,1	18,9	333	3.867	27,2	2.043	-8,4
45-54	2.037	29,2	21,1	47,3	3.571	37,0	676	29,1	18,6	332	4.209	29,6	2.066	-8,6
55-64	974	13,9	11,5	41,6	2.276	26,8	345	14,9	20,1	355	2.154	15,1	2.212	-9,3
65-74	58	0,8	0,8	32,7	557	8,2	17	0,7	21,9	300	106	0,7	1.842	-10,5
75 e più				33,1	247	3,6	0							
GENDER														
Men	4.211	60,3	14,5	46,0	9.056	31,1	1.401	60,3	17,9	333	8.613	60,6	2.045	-7,9
Women	2.773	39,7	9,0	42,2	8.596	28,0	924	39,7	21,7	333	5.607	39,4	2.022	-10,1
NUTS1														
ITC-North-west	2.257	32,3	14,1	46,0	5.362	33,6	705	30,3	17,4	312	4.352	30,6	1.928	-7,9
ITH-North-east	1.663	23,8	14,4	45,6	4.036	34,9	491	21,1	16,3	295	3.037	21,4	1.826	-7,5
ITI-Centre	1.415	20,3	11,9	44,3	3.535	29,7	531	22,8	22,0	375	3.226	22,7	2.279	-9,9
ITF&ITG-South & Islands	1.648	23,6	8,1	41,4	4.719	23,2	598	25,7	23,2	363	3.605	25,4	2.187	-10,3
ATTAINED LEVEL OF EDUCATION (d)														
No education	31	0,4	2,0	53,3	137	9,0	12	0,5	24,1	398	73	0,5	2.349	-9,9
Isced 1	156	2,2	2,3	47,8	672	10,0	57	2,5	22,4	367	344	2,4	2.199	-10,0
Isced 2 - Lower secondary	2.326	33,3	13,9	50,4	5.380	32,2	790	34,0	19,5	340	4.786	33,7	2.058	-8,6
Isced 3 - Upper secondary (2-3 yrs.)	653	9,4	23,0	52,1	1.111	39,1	202	8,7	17,2	309	1.229	8,6	1.881	-7,5
Isced 3 - Upper secondary (4-5 yrs.)	2.908	41,7	18,0	44,4	5.467	33,8	970	41,7	19,5	334	5.942	41,8	2.043	-8,7
Isced 5 or more	907	13,0	11,4	31,1	1.853	23,3	292	12,6	18,8	322	1.842	13,0	2.030	-8,8
CITIZENSHIP														
Italian	6.156	88,2	11,3	43,7	15.521	28,4	2.045	88,0	19,2	332	12.556	88,3	2.039	-8,7
EU	271	3,9	17,3	50,6	618	39,5	85	3,7	17,9	314	508	3,6	1.876	-7,8
Extra-EU	557	8,0	15,5	50,3	1.513	42,0	195	8,4	20,6	351	1.156	8,1	2.077	-8,8
HOUSEHOLD TYPE														
Single	976	14,0	9,6	43,0	1.208	11,9	341	14,7	19,9	349	2.089	14,7	2.141	-8,9
Couple with children	4.312	61,7	13,3	44,7	13.024	40,3	1.402	60,3	18,8	325	8.579	60,3	1.989	-8,5
Couple without children	1.025	14,7	8,9	46,6	1.858	16,1	348	15,0	19,1	340	2.142	15,1	2.091	-8,5
Single-parent male	120	1,7	13,0	41,5	271	29,3	41	1,8	19,5	342	248	1,7	2.072	-8,7
Single-parent female	551	7,9	11,5	41,8	1.291	26,8	193	8,3	22,2	351	1.161	8,2	2.106	-10,2

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

Note: (a) % share of CIG hours on total workable hours; (b) the indicator is estimated with reference to the employees in CIG; (c) % difference between Actual gross earnings plus CIG compensation and potential gross earnings; (d) only population aged 15-64 yrs.

The cohorts defined in the previous pages appear strongly characterized (Table 2.10). For example, the individuals who had already been in CIG before pandemic are, on average, more unbalanced towards the older components, male, resident in the South, with medium-low qualifications, with a greater presence of foreigners, especially from the EU. The other cohorts undoubtedly see a larger presence of young people (especially the cohort entering CIG with the second phase), of women (except for the cohort in CIG only in the "narrow" first phase), and a higher level of education. The cohort that entered CIG in the second phase of pandemic is distinguished by a stronger youth component, a relatively high education level, and a high frequency of single-parent households.

Therefore, year 2020 starts with a sub-population of about 300,000 employees in CIG in February, with clear-cut connotations (elderly, male, Southern Italy, low level of education, many couples with children). After March this sub-population literally explodes and progressively transforms part of its characteristics as the succession of the cohorts goes on: the last cohort is very different from the initial one: young people, women, high level of education, single-parents. The strongest weight of Southern regions remains to characterize strongly the beginning and the end of 2020.

Even CIG intensity shows quite clear-cut characters. The employees with a low intensity of CIG show on average a larger presence of males and residents in the North (Table 2.11). The portion that experienced low intensity CIG on a monthly basis as well has also significantly higher education levels and appears more

concentrated in the middle age groups. On the contrary, the individuals with a high intensity of CIG are to a greater extent resident in the Centre-South and with lower levels of education. There is thus a fairly sharp discrimination induced by the intensity of CIG, at least on these variables.

Table 2.10

Socio-demographic characters of the employees in job retention schemes and their households by cohort of entry in CIG. Year 2020 (Estimates on LFS 2020 sample; Indices. Base: theoric frequency (independence) =100; In bold indices larger than 110)												
Characters	In CIG before March 2020	In CIG only in the first phase	Others in CIG only in the first phase (large)	Others in CIG during first and second phase	Others entered in CIG in the second phase	Totale	In CIG before March 2020	In CIG only in the first phase	Others in CIG only in the first phase (large)	Others in CIG during first and second phase	Others entered in CIG in the second phase	Totale
	(a)	(b)	(c)	(d)	(e)		(a)	(b)	(c)	(d)	(e)	
	EMPLOYEES IN CIG						INDIVIDUALS IN THE HOUSEHOLDS WITH AT LEAST ONE EMPLOYEE IN CIG					
Total (.000)	807	2.549	1.241	2.123	263	6.984	2.197	6.084	3.128	5.628	616	17.652
AGE CLASS												
0-14							110	101	101	96	91	100
15-24	34	112	83	106	219	100	101	101	93	101	116	100
25-34	59	102	108	105	128	100	76	102	105	103	113	100
35-44	104	99	100	100	93	100	105	99	102	99	97	100
45-54	130	98	95	98	71	100	111	100	95	100	82	100
55-64	127	95	107	94	75	100	94	98	105	101	108	100
65-74							82	101	105	101	124	100
>75							106	93	95	110	86	100
GENDER												
Men	120	108	94	88	89	100	115	108	95	90	92	100
Women	70	88	110	118	117	100	77	88	107	115	112	100
NUTS1												
ITC-North-west	101	101	97	101	96	100	100	99	96	104	90	100
ITH-North-east	97	108	99	94	86	100	95	109	98	95	84	100
IT-Centre	84	92	102	117	77	100	85	94	102	114	76	100
ITF&ITG-South & Islands	115	98	103	90	139	100	115	98	104	90	143	100
ATTAINED LEVEL OF EDUCATION (f)												
No education	134	109	72	94	97	100	135	94	85	95	160	100
Isced 1	135	112	71	93	74	100	115	104	80	100	109	100
Isced 2 - Lower secondary	127	101	89	96	93	100	115	101	94	97	94	100
Isced 3 - Upper secondary (2-3 yrs.)	112	108	91	94	77	100	104	108	89	97	86	100
Isced 3 - Upper secondary (4-5 yrs.)	81	101	106	103	101	100	88	99	105	102	103	100
Isced 5 or more	75	87	121	107	134	100	81	92	120	104	111	100
CITIZENSHIP												
Italian	100	98	103	100	100	100	98	98	103	100	101	100
EU	113	125	62	92	90	100	126	122	63	89	81	100
Extra-EU	94	106	80	107	101	100	108	107	79	101	102	100
HOUSEHOLD TYPE												
Single	89	105	100	99	103	100	89	100	99	105	102	100
Couple with children	106	99	100	98	100	100	105	100	100	98	99	100
Couple without children	103	100	101	101	75	100	101	102	100	100	77	100
Single-parent male	79	118	95	88	155	100	76	110	94	97	153	100
Single-parent female	68	96	97	115	129	100	66	93	99	118	128	100

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

Note: (a) Employees in CIG before February 2020; (b) Employees entered CIG from March and definitively exited within May; (c) Employees entered CIG from March and definitively exited within July; (d) Employees entered CIG between March and July with CIG events after July; (e) Employees entered CIG after July; (f) only population aged 15-64 yrs.

Table 2.11

Socio-demographic characters of the employees in job retention schemes and their households by class of CIG intensity. Year 2020 (Estimates on LFS 2020 sample; Indices. Base: theoretic frequency (independence) = 100; In bold indices larger than 110)												
Characters	Low (a)	Low with monthly peaks (b)	Medium (c)	Medium with monthly peaks (d)	High (e)	Totale	INDIVIDUALS IN THE HOUSEHOLDS WITH AT LEAST ONE EMPLOYEE IN CIG					
							Low (a)	Low with monthly peaks (b)	Medium (c)	Medium with monthly peaks (d)	High (e)	Totale
EMPLOYEES IN CIG												
Total (.000)	1.314	793	1.004	1.806	2.066	6.984	2.888	1.848	2.485	4.782	5.650	17.652
AGE CLASS												
0-14							109	102	102	102	92	100
15-24	59	75	92	112	120	100	90	100	96	103	104	100
25-34	89	94	105	100	104	100	92	95	105	100	104	100
35-44	111	106	98	97	96	100	108	102	96	99	98	100
45-54	111	107	102	98	93	100	104	104	102	98	97	100
55-64	95	95	97	101	104	100	92	95	99	99	106	100
65-74							91	102	91	95	112	100
>75							99	85	109	96	105	100
GENDER												
Men	112	112	96	104	90	100	102	102	99	101	98	100
Women	82	82	106	94	116	100	98	98	101	99	102	100
NUTS1												
ITC-North-west	122	119	103	93	89	100	122	117	105	92	87	100
ITH-North-east	127	114	116	99	78	100	131	117	111	98	75	100
IT-Centre	77	91	92	101	116	100	80	97	93	101	113	100
ITF&ITG-South & Islands	63	67	87	110	124	100	64	68	89	110	125	100
ATTAINED LEVEL OF EDUCATION (f)												
No education	71	92	119	100	108	100	60	104	99	109	111	100
Isced 1	69	78	80	118	115	100	88	86	93	107	107	100
Isced 2 - Lower secondary	88	95	86	113	102	100	92	98	90	108	103	100
Isced 3 - Upper secondary (2-3 yrs.)	103	117	95	109	89	100	108	114	97	105	90	100
Isced 3 - Upper secondary (4-5 yrs.)	99	103	104	96	101	100	99	101	105	97	100	100
Isced 5 or more	137	93	127	71	97	100	130	100	118	79	94	100
CITIZENSHIP												
Italian	101	100	102	99	100	100	100	99	102	99	100	100
EU	92	127	88	111	92	100	105	125	86	108	88	100
Extra-EU	89	92	85	107	108	100	99	100	85	106	102	100
HOUSEHOLD TYPE												
Single	120	114	105	87	95	100	107	104	104	89	103	100
Couple with children	97	98	98	104	100	100	101	100	99	102	98	100
Couple without children	103	96	108	99	98	100	105	100	104	98	98	100
Single-parent male	90	143	84	107	93	100	88	135	87	99	101	100
Single-parent female	83	93	98	93	116	100	81	94	99	91	119	100

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

(a) Less than 10% on an annual basis and never more than 50% on a monthly basis; (b) Less than 10% on an annual basis and more than 50% in at least one month; (c) Between 10% and 25% on an annual basis and never more than 80% on a monthly basis; (d) Between 10% and 25% on an annual basis and more than 80% in at least one month; (e) More than 25% on an annual basis; (f) only population aged 15-64 yrs.

In responding to the LFS questionnaire, more than 90% of the individuals undergoing CIG in 2020 classify themselves among employees with reference to their main job. The residual portion, in the reference week of the interview, is positioned among the self-employed or among the non-employed. This portion is characterized by a stronger incidence of part-time or fixed-term contracts. Fixed-term contracts especially characterise the non-employed ones.

If we consider strictly those who are employed according to LFS, blue collars and apprentices were the professional figures most affected by CIG: more than a half of them had at least one hour absorbed by CIG. On the other hand, CIG affected little more than a quarter of intermediate officers and even fewer managerial positions. On the other hand, the share of hours spent in CIG on the total number of hours worked is, on the whole, rather stable by type of employees. For those who according to LFS 2020 were self-employed or not in employment, the incidence of those in CIG is lower if compared to that of blue and white collars. This appears quite reasonable, given the less continuous nature of their jobs. Nevertheless, CIG incidence (for the same reason) is higher for them if we calculate it in terms of hours.

Table 2.12

Employees, by inclusion in job retention schemes and type of profession (Estimates on LFS 2020 sample)											
Type of profession (a)	Total employees (.000)	of whom: in job retention schemes									
		N (.000)	CIG intensity (%)		CIG compensations		CIG impact (d)	CIG hours			
			Employees (b)	CIG hours (c)	Total (mln)	per capita		Total (mln)	per capita	of which: fixed term (%)	of which: part- time (%)
Employees	12.917	6.315	48,9	18,7	12.927	1.001	-8,4	2.110	163	4,8	18,5
Managers	180	23	12,7	15,3	46	254	-8,7	7	38	5,3	7,2
Intermediate officers	673	170	25,3	16,3	357	531	-8,7	53	79	2,1	10,3
White collars	5.425	2.372	43,7	18,7	4.871	898	-8,7	780	144	3,9	22,6
Blue collars	6.514	3.676	56,4	18,8	7.511	1.153	-8,2	1.245	191	5,5	16,4
Apprentices etc.	124	74	59,8	18,7	142	1.147	-6,9	25	202	2,6	19,3
Self-employed (e)	385	138	35,9	23,5	290	755	-10,7	48	125	5,6	22,1
Not in employment (f)	2.428	531	21,9	30,0	1.002	413	-13,8	168	69	17,8	24,1
Total	15.730	6.984	44,4	19,3	14.219	904	-8,6	2.325	148	5,8	19,0

Source: Istat, LFS 2018-2020; CIG-IUM 2018-2020 (2020 provisional)

Note: (a) this variable is collected by LFS, and is referred to the reference week of the interview; (b) employees in CIG as percentage of totale employees; (c) CIG hours as percentage of total workable hours; (d) % difference between Actual gross earnings plus CIG compensation and potential gross earnings; (e) Individuals who reported to LFS a condition of self-employment in the reference week of LFS interview; (f) Individuals who reported to LFS a condition different from employment in the reference week of LFS interview..

Incomes and vulnerability of the employees in job retention schemes

In order to understand whether CIG recipients in 2020 were worse or better off economically than those who were not involved in job retention schemes, we compare here their incomes referred to the year preceding the outbreak of pandemic (2019). The income taken into account is the equivalent disposable income, in order to account for the household economic context and, therefore, the resources available to satisfy household needs.

The average income of the employees involved in CIG events is 7.3% lower than that of the rest of the employees, and the median income is 2.5% lower (Table 2.13). CIG events therefore involved a segment of employees belonging to households that were on average more vulnerable. This evidence, however, takes on more specific connotations if the principal socio-demographic characteristics are considered. In fact, the income gap characterizes the population in the highest age classes, above 35 years: in the 55-64 age class, for example, the median income of individuals in CIG was in 2019 7.1% lower than the rest of employees in that age class and the gap, measured with reference to the average income, exceeds 13%. Conversely, below the threshold of 35 years the opposite occurs: the subpopulation in CIG had median and mean household incomes that were closer to, if not higher than, the rest of their non-CIG peers. This circumstance is related to two interrelated elements: on the one hand, younger age groups are characterized by a higher incidence of fixed-term and part-time contracts; on the other hand, these two types of contract (and especially the fixed-term ones) are less affected by CIG events (Table 2.14). CIG, therefore, selects a sub-population made with a higher frequency of full-time and permanent employment, which is more disadvantaged with respect to full-time and permanent employment not involved in CIG, but which is at the same time in better conditions with respect to the part-time or fixed-term components¹⁵. These, in turn, have a specific impact on some very distinctive segments (by gender, age, sector and territory). For this reason, in the younger classes CIG has ended up by selecting a less disadvantaged sub-population.

From this same mechanism it might derive that employees in CIG with the lowest educational qualifications have higher values of their equivalent income than their counterparts not involved in such events. For these workers, characterised by a higher incidence of fixed-term or part-time contracts, the placement in CIG is more likely the more durable and less unstable is their contractual condition in 2020. In this case, CIG has therefore selected the most advantaged component of employees, probably due to the greater incidence of individuals with fixed-term or part-time contracts, which, in turn, are less affected by CIG. As the level of education

¹⁵ For fixed-term employees, in particular, the probability linked to the occurrence of CIG events also depends on the temporary nature of their contracts and, therefore, on the possibility that they may not be on the pay-roll of the companies at the moment in which they use the job retention scheme. With reference to part-time employees, moreover, the probability of being placed in CIG may also depend on the percentage of part-time work: furthermore firms might have chosen to place in CIG employees with higher percentages of part-time work. Moreover, with reference to fixed-term employees, it should not be underestimated that the alternative to recourse to job retention schemes is simply determined by the non-renewal of their contracts.

increases, less disadvantaged contractual solutions prevail and the picture is reversed: CIG events end up by selecting components that are vice versa more disadvantaged.

Something similar can also be noted when observing the composition by gender: the male sub-population of employees in CIG presents median and average equivalent disposable income that are significantly lower than the rest of the employees of the same gender. For women, the two subpopulations are equivalent on the median income measure and differ relatively little on the average measure. A similar divide concerns households (where single-parent families involved in CIG are in better conditions than similar figures not involved in the measure) and citizenship (in this case, the foreign component is characterized by a relatively "richer" CIG subpopulation). As far as the territory is concerned, the sub-population in CIG also appears relatively more vulnerable in the regions of the Centre and the North-west, both to a median extent (with gaps of around 6-8%) and to an average extent (over 10%).

In general, therefore, there seems to be a dual selection mechanism associated with CIG and its greater incidence on permanent and full-time figures. On the one hand, when it operates on full-time permanent workers, it identifies a relatively more vulnerable sub-population, On the other hand, when it involves segments of employees characterized by higher incidences of fixed-term and part-time contracts, it identifies a relatively less vulnerable sub-population.

The analysis by type of contract confirms this interpretation (Table 2.14). The average income of employees involved in CIG is in fact relatively lower in the segment of full-time and permanent employees. Compared to individuals who have not undergone CIG belonging to the same segment, these have a median income 11% lower and an average income 16.5% lower. On the contrary, in the segment of part-time employees, and in particular in those segments in which part-time and fixed-term contracts are present at the same time, individuals who have experienced CIG have higher median and average household incomes than the rest of the segment. In this case the gap on the median (around +6/+7%) is greater than that found on the average (close to +4%). On fixed-term employees alone, on the other hand, the selection made with CIG is almost neutral.

Table 2.13

Equivalent disposable income in 2019 of the employees, by socio demographic characters and involvement in job retention schemes.											
Year 2020 (Estimates on LFS 2020 sample)											
	N. employees (.000)			Median income			Average income			% without available income data	
	In CIG	Incidence % on total	Not in CIG	In CIG (a)	Not in CIG (b)	(a)/(b) diff.%	In CIG (c)	Not in CIG (d)	(c)/(d) diff.%	In CIG	Not in CIG
Total	6.984	44,4	8.746	18.700	19.190	-2,5	19.636	21.186	-7,3	0,1	0,4
AGE CLASS											
15-24	488	34,6	921	17.034	15.156	12,4	17.953	16.489	8,9	0,3	0,3
25-34	1.532	44,3	1.922	18.749	18.654	0,5	19.477	19.972	-2,5	0,1	0,6
35-44	1.893	47,0	2.137	18.375	19.220	-4,4	19.143	20.626	-7,2	0,1	0,5
45-54	2.037	47,3	2.274	18.600	19.847	-6,3	19.597	22.286	-12,1	0,1	0,3
55-64	974	41,6	1.368	20.283	21.836	-7,1	21.607	24.879	-13,2	0,2	0,4
65-74	58	32,7	119	19.511	19.898	-1,9	22.148	23.769	-6,8	0,5	0,4
GENDER											
Men	4.211	46,0	4.948	18.288	19.028	-3,9	19.093	21.119	-9,6	0,2	0,5
Women	2.773	42,2	3.798	19.318	19.415	-0,5	20.461	21.274	-3,8	0,1	0,4
NUTS1											
ITC-North-west	2.257	46,0	2.648	20.607	21.872	-5,8	21.724	24.511	-11,4	0,1	0,3
ITH-North-east	1.663	45,6	1.988	21.137	21.370	-1,1	21.995	23.193	-5,2	0,0	0,1
ITI-Centre	1.415	44,3	1.777	18.403	19.820	-7,1	19.379	21.725	-10,8	0,1	0,5
ITF&ITG-South & Islands	1.648	41,4	2.333	13.444	13.815	-2,7	14.601	15.258	-4,3	0,4	0,8
ATTAINED LEVEL OF EDUCATION (a)											
No education	31	53,3	27	11.022	11.153	-1,2	12.297	12.629	-2,6	1,5	0,0
Isced 1	156	47,8	171	13.308	12.082	10,1	14.370	12.974	10,8	0,3	0,6
Isced 2 - Lower secondary	2.326	50,4	2.292	16.721	15.030	11,2	17.295	16.195	6,8	0,2	0,7
Isced 3 - Upper secondary	653	52,1	600	18.995	18.314	3,7	19.512	19.203	1,6	0,0	0,3
Isced 3 - Upper secondary	2.908	44,4	3.641	19.580	19.644	-0,3	20.411	21.093	-3,2	0,1	0,4
Isced 5 or more	907	31,1	2.013	22.438	24.866	-9,8	24.400	28.430	-14,2	0,2	0,3
HOUSEHOLD TYPE											
Single	976	43,0	1.296	19.518	20.557	-5,1	19.702	22.643	-13,0	0,8	1,7
Couple with children	4.312	44,7	5.340	17.966	18.585	-3,3	18.870	20.346	-7,3	0,1	0,2
Couple without children	1.025	46,6	1.173	23.031	24.187	-4,8	24.215	26.583	-8,9	0,0	0,3
Single-parent male	120	41,5	169	19.954	19.498	2,3	20.598	21.227	-3,0	0,0	0,4
Single-parent female	551	41,8	768	15.539	14.814	4,9	16.796	16.345	2,8	0,0	0,6
CITIZENSHIP											
Italian	6.156	43,7	7.933	19.442	19.893	-2,3	20.317	21.895	-7,2	0,1	0,4
EU	271	50,6	264	15.785	14.217	11,0	16.366	15.438	6,0	0,2	0,9
Extra-EU	557	50,3	549	12.772	12.397	3,0	13.676	13.662	0,1	0,4	0,8
Source: LFS2020, CIG_IUM 2020, BDR-I 2019											
Note: (a) Only individuals over 15 years old											

Table 2.14

Equivalent disposable income in 2019 of the employees, by type of contract and involvement in job retention schemes. Year 2020 (Estimates on LFS 2020 sample)											
Type of contract	N. employees (.000)			Median income			Average income			% without available income data	
	In CIG	Incidence % on total	Not in CIG	In CIG (a)	Not in CIG (b)	(a)/(b) diff.%	In CIG (c)	Not in CIG (d)	(c)/(d) diff.%	In CIG	Not in CIG
Total	6.984	44,4	8.746	18.700	19.190	-2,5	19.636	21.186	-7,3	0,1	0,4
Part-time (a)	2.325	45,8	2.751	15.850	14.961	5,9	16.899	16.272	3,9	0,2	0,8
Fixed-term (b)	1.095	26,3	3.067	14.899	14.812	0,6	15.766	16.133	-2,3	0,5	1,0
Part-time & Fixed term (c)	524	28,7	1.305	13.994	13.108	6,8	14.733	14.197	3,8	0,7	1,3
Full-time open-ended (d)	4.145	49,2	4.279	20.499	23.044	-11,0	21.518	25.760	-16,5	0,1	0,1
Source: LFS2020, CIG_IUM 2020, BDR-I 2019											
Note: (a) Employees with at least one part-time contract in 2020; (b) Employees with at least one fixed-term contract in 2020; (c) Employees with at least one part-time fixed term contract in 2020; (d) Employees with at least one full-time open-ended contract in 2020.											

The analysis of the monthly stocks of employees in CIG in 2020 shows that the most critical months of the first and second waves were not only characterized by extensive use of this instrument, but were also those in which CIG involved more people from more vulnerable households (Table 2.15). In March and April, the income differential between CIG and non-CIG employees in the month was close to 15% on median and close to 20% on average. The selection mechanism induced by CIG operated most consistently in these two months. In the following months, income differentials gradually decreased and then regained strength in the last months of the year.

CIG intensity, measured at a monthly level, appears to be associated with a greater vulnerability of the employees involved. In fact, for those who had CIG for 100% of their workable hours or with an intensity greater than 80% of the working hours, the selection made by CIG has been decidedly sharper. In particular, in March, for those employees the value of equivalent income was around 25% lower on the median and almost 30% lower on the average than the segment of employees not in CIG in the month, and similarly in the following month of April (around 20% lower on the median and on the average). During the second wave of pandemic, CIG similarly affected economically weaker individuals and households to a greater extent, with relative gaps to the rest of employees around 15%.

Table 2.15

Equivalent disposable income in 2019 of the employees, by involvement in job retention schemes and month of involvement. Year 2020 (Estimates on LFS 2020 sample)														
	Median income							Average income						
	In CIG (a)	of whom: intensity=10 0% (a1)	of whom: others with CIG intensity >80% (a2)	Not in CIG (b)	(a)/(b) diff.%	(a1)/(b) diff.%	(a2)/(b) diff.%	In CIG (c)	of whom: intensity=1 00% (c1)	of whom: others with CIG intensity >80% (c2)	Not in CIG (d)	(c)/(d) diff.%	(c1)/(d) diff.%	(c2)/(d) diff.%
Total	18.700			19.190	-2,5			19.636			21.186	-7,3		
January	18.250	15.304	16.717	19.876	-8,2	-23,0	-15,9	19.195	16.601	17.932	21.540	-10,9	-22,9	-16,7
February	17.961	15.137	15.374	19.876	-9,6	-23,8	-22,7	18.729	16.574	16.157	21.538	-13,0	-23,0	-25,0
March	17.869	15.678	15.849	21.005	-14,9	-25,4	-24,5	18.725	16.550	16.516	22.934	-18,4	-27,8	-28,0
April	18.615	17.608	17.779	21.243	-12,4	-17,1	-16,3	19.517	18.515	18.723	23.362	-16,5	-20,7	-19,9
May	18.543	17.838	17.008	20.642	-10,2	-13,6	-17,6	19.536	18.975	18.380	22.508	-13,2	-15,7	-18,3
June	19.109	17.664	17.215	19.896	-4,0	-11,2	-13,5	20.133	18.773	18.675	21.677	-7,1	-13,4	-13,8
July	19.471	18.363	18.030	19.659	-1,0	-6,6	-8,3	20.538	20.490	19.662	21.323	-3,7	-3,9	-7,8
August	19.596	17.311	18.030	19.581	0,1	-11,6	-7,9	20.645	18.860	19.431	21.224	-2,7	-11,1	-8,5
September	19.214	18.331	16.850	19.601	-2,0	-6,5	-14,0	20.250	20.013	17.970	21.223	-4,6	-5,7	-15,3
October	18.759	17.825	17.110	19.729	-4,9	-9,6	-13,3	19.743	19.277	17.954	21.332	-7,4	-9,6	-15,8
November	18.070	16.895	16.915	19.889	-9,1	-15,1	-15,0	19.055	18.021	17.956	21.533	-11,5	-16,3	-16,6
December	17.791	15.374	16.709	19.953	-10,8	-22,9	-16,3	18.784	17.021	17.827	21.594	-13,0	-21,2	-17,4

Source: LFS2020, CIG_IUM 2020, BDR-I 2019

By using the cohorts define before, it can be seen that the adverse selection mechanism operated by CIG was stronger in the cohort that entered CIG in the final months of the year, whose median income is 16% lower than the similar indicator calculated on employees with no CIG events in 2020 (Table 2.16) . For the other cohorts, selection effects of a significant consistency are certainly found on the cohort of employees already in CIG before the pandemic (the differential is close to 9%) and for those involved in CIG events only in the first phase and by the month of May.

The association between the selection mechanism operated by CIG and the intensity of CIG itself is more eloquent: CIG has in fact involved more intensely the most economically vulnerable workers. As intensity increases, the income gap with respect to individuals not involved in CIG also grows considerably. In particular, in the low-intensity segment, individuals selected by CIG have higher median incomes (in some cohorts even considerably higher) than individuals not in CIG. For those involved in CIG events with medium intensity on an annual basis accompanied with monthly peaks, the median equivalent disposable income is 11.5% lower than that of those not in CIG. This indicator arrives at 15.6% for those who have been in CIG with a high intensity, driven mainly by the cohort who entered the second phase, whose median income is 40% below that of those who have not been in CIG, and by those who were involved in CIG only in the first narrow phase (32%).

Table 2.16

Equivalent disposable income in 2019 of the employees in job retention schemes, by cohort and CIG intensity class.						
Year 2020 (Estimates on LFS 2020 sample)						
Cohorts	Intensity class					Total
	Low (f)	Low with monthly peaks (g)	Medium (h)	Medium with monthly peaks (i)	High (j)	
	<i>MEDIAN INCOME</i>					
In CIG before March 2020 (a)	19.759	18.357	19.179	16.642	16.744	17.543
In CIG only in the first phase (narrow) (b)	20.127	18.966	15.814	16.143	13.022	17.819
Others in CIG only in the first phase (large) (c)	21.659	20.555	19.819	18.109	15.072	18.560
Others in CIG during first and second phase (d)	21.304	18.285	20.185	18.025	16.933	18.116
Others entered in CIG in the second phase (e)	20.020	17.930	12.864	14.235	11.497	16.092
Total	20.555	19.044	18.852	16.986	16.205	17.930
	<i>% difference with respect to the median income of employees not in CIG</i>					
In CIG before March 2020 (a)	3,0	-4,3	-0,1	-13,3	-12,7	-8,6
In CIG only in the first phase (narrow) (b)	4,9	-1,2	-17,6	-15,9	-32,1	-7,1
Others in CIG only in the first phase (large) (c)	12,9	7,1	3,3	-5,6	-21,5	-3,3
Others in CIG during first and second phase (d)	11,0	-4,7	5,2	-6,1	-11,8	-5,6
Others entered in CIG in the second phase (e)	4,3	-6,6	-33,0	-25,8	-40,1	-16,1
Total	7,1	-0,8	-1,8	-11,5	-15,6	-6,6

Source: LFS2020, CIG_IUM 2020, BDR-I 2019

Note: (a) Employees in CIG before February 2020; (b) Employees entered CIG from March and definitively exited within May; (c) Employees entered CIG from March and definitively exited within July; (d) Employees entered CIG between March and July with CIG events after July; (e) Employees entered CIG after July; (f) Less than 10% on an annual basis and never more than 50% on a monthly basis; (g) Less than 10% on an annual basis and more than 50% in at least one month; (h) Between 10% and 25% on an annual basis and never more than 80% on a monthly basis; (i) Between 10% and 25% on an annual basis and more than 80% in at least one month; (j) More than 25% on an annual basis

Compared to total employees in non-agricultural sectors, those who were in CIG in 2020 are somewhat more concentrated in the central quintiles of the distribution of pre-pandemic equivalent disposable income (Table 2.17). In the central part of the distribution, the cohort of those who entered CIG prior to the pandemic is the one most represented. In the poorest quintile, on the other hand, the cohort that entered only in the second phase of the pandemic is over-represented (29% as opposed to 19.2% of employees under CIG). On the other side of the distribution, the cohort that joined CIG during the first phase (large) of pandemic, is more represented in the richest quintile (19.9% as opposed to 16.7% of employees under CIG).

The association between CIG intensity and vulnerability seems thus confirmed. Individuals affected by more intense CIG events are more represented in the lower quintiles, while individuals placed in low intensity CIG are more present in the higher ones.

The gap between the gross earnings that the employees would have received if all hours of CIG had been actually worked and regularly paid (potential gross earnings) and the actual gross earnings plus CIG compensation can be interpreted as the gross earnings lost in 2020 by employees. On average this loss represents 6% on pre-pandemic household income (both measures are expressed in equivalent terms) (Table 2.18). For half of the workers in CIG, the impact weighed more than 5%, while for a quarter of them the impact was more than 9.3%. More substantial impacts are found for cohorts of employees already in CIG before pandemic (on average 8.6%) and when CIG started in the first phase and went along the second phase (on average 8.8%). As expected, moreover, individuals with a higher CIG intensity experienced the most significant impacts, exceeding 10% on average in the last intensity class.

Table 2.17

Equivalent disposable income in 2019 of the employees, by involvement in job retention schemes, income quintiles, cohort and CIG intensity class. Year 2020 (Estimates on LFS 2020 sample. % distribution by quintile)							
Employees	Quintiles of disposable equivalent income in 2019 (k)						% income data not available
	First	Second	Third	Fourth	Fifth	Total	
Total employees	20,0	20,0	20,0	20,0	20,0	100	0,3
Employees not in CIG	20,6	19,0	18,5	19,3	22,6	100	0,4
Employees in CIG	19,2	21,3	21,8	20,9	16,7	100	0,2
<i>Cohort</i>							
In CIG before March 2020 (a)	18,3	25,1	23,3	20,8	12,4	100	0,0
In CIG only in the first phase (narrow) (b)	19,7	21,4	21,6	21,2	16,2	100	0,2
Others in CIG only in the first phase (large) (c)	18,6	19,5	21,2	20,8	19,9	100	0,2
Others in CIG during first and second phase (d)	18,2	20,7	22,5	21,3	17,3	100	0,1
Others entered in CIG in the second phase (e)	29,0	21,7	17,9	16,4	15,1	100	0,4
<i>Intensity class</i>							
Low (f)	11,3	17,0	21,5	25,7	24,5	100	0,1
Low with monthly peaks (g)	14,9	18,9	22,4	24,8	19,0	100	0,1
Medium (h)	17,4	19,5	20,9	23,1	19,0	100	0,1
Medium with monthly peaks (i)	20,8	24,2	23,1	18,9	13,0	100	0,1
High (j)	25,4	23,2	21,3	17,1	13,1	100	0,2
Source: LFS2020, CIG_IUM 2020, BDR-I 2019							
Note: (a) Employees in CIG before February 2020; (b) Employees entered CIG from March and definitively exited within May; (c) Employees entered CIG from March and definitively exited within July; (d) Employees entered CIG between March and July with CIG events after July; (e) Employees entered CIG after July; (f) Less than 10% on an annual basis and never more than 50% on a monthly basis; (g) Less than 10% on an annual basis and more than 50% in at least one month; (h) Between 10% and 25% on an annual basis and never more than 80% on a monthly basis; (i) Between 10% and 25% on an annual basis and more than 80% in at least one month; (j) More than 25% on an annual basis; (k) quintiles defined on total employees							

Table 2.18

CIG impact measure on 2019 equivalent income, by cohort and intensity class (<i>Estimates on LFS 2020 sample</i>)				
	Impact (*)			
	Mean	First quartile	Median	Third quartile
Total employees in CIG	6,0	2,4	5,0	9,3
<i>Cohort</i>				
In CIG before March 2020 (a)	8,6	4,0	7,2	12,6
In CIG only in the first phase (narrow) (b)	3,4	1,5	3,0	5,4
Others in CIG only in the first phase (large) (c)	5,2	2,6	4,9	8,5
Others in CIG during first and second phase (d)	8,8	4,7	8,3	13,7
Others entered in CIG in the second phase (e)	3,4	1,0	2,6	5,8
<i>Intensity class</i>				
Low (f)	2,0	0,8	1,7	3,2
Low with monthly peaks (g)	3,0	1,7	2,8	4,4
Medium (h)	4,8	2,9	5,0	7,8
Medium with monthly peaks (i)	5,9	3,4	5,4	8,2
High (j)	11,6	6,3	10,7	16,7
Source: LFS2020, CIG_IUM 2020, BDR-I 2019				
Note: (*) The impact is measured by the ratio of the difference between potential gross earnings and (actual gross earnings plus CIG compensation). All measures are provided in equivalent scale; (a) Employees in CIG before February 2020; (b) Employees entered CIG from March and definitively exited within May; (c) Employees entered CIG from March and definitively exited within July; (d) Employees entered CIG between March and July with CIG events after July; (e) Employees entered CIG after July; (f) Less than 10% on an annual basis and never more than 50% on a monthly basis; (g) Less than 10% on an annual basis and more than 50% in at least one month; (h) Between 10% and 25% on an annual basis and never more than 80% on a monthly basis; (i) Between 10% and 25% on an annual basis and more than 80% in at least one month; (j) More than 25% on an annual basis; (k) quintiles defined on total employees				

3. The business side: the firms that used job retention schemes in 2020

Overview

By limiting the analysis to the firms included in the business register (the reference year is 2019) we can observe that just under two out of three firms with employees experienced entered job retention schemes in 2020. As a whole, these schemes involved 18% of monthly jobs (over 27.5 million of monthly jobs¹⁶) and a little over 10% of total workable hours (2.3 billion). CIG compensations amounted to around 13.8 billion euro¹⁷ against an amount of gross earnings saved by employers running near to 27.6 billion euro¹⁸.

The firms that used job retention schemes in 2020 were about 938 thousand: in four out of five cases (over 770 thousand firms) these are microenterprises with fewer than 10 persons employed (Table 3.1). Microenterprises, however, are also the size class where the incidence of firms entering those schemes compared to all firms with employees¹⁹ is lowest, although it remains above 50%. The incidence of companies under CIG grows with a convex trend until it reaches 80% as the size class increases (Chart 3.1) at the threshold of 40 employees, then it decreases slightly remaining however above 75%. This average trend presents some sector-specific characteristics. In trade activities (212 thousand companies undergoing CIG) the incidence does not exceed

¹⁶ Monthly jobs are identified by the couple employer-employee on a monthly basis.

¹⁷ This sum is net of notional social contributions.

¹⁸ This indicator measures the gross earnings that the worker would have received if the hours spent in CIG had actually been worked.

¹⁹ To be precise, the denominator is made by all firms in the business register with employees tracked in social security sources in 2020. It is therefore possible that some of these firms had no employees in 2019: in fact, there are almost 71 thousand of them, only 2 thousand of which have more than 3 employees. Thus, more than 20% of the enterprises in the first class of employees that used CIG in 2020 had no employees the year before. Half of them operate in trade and construction.

70% except for the segment of small and medium-sized companies (10-50 employees). In manufacturing (150 thousand firms) the incidence exceeds 80% over the threshold of 10 employees. In the hotel and restaurant reception sector (149 thousand firms) the incidence of companies undergoing CIG is close to 100% above the threshold of 50 employees. In the construction sector (126 thousand firms) it exceeds 90% over 10 employees. All sectors share a lower incidence in the first size class²⁰.

The picture is different if we analyse the incidence of CIG hours on the overall total of workable hours, which decreases in a rather regular manner as the size of the companies increases (Chart 3.2; Table 3.2): in fact, it goes from about 15% for the smallest companies as a whole to 9% for medium-large companies. In small businesses, therefore, there are slightly fewer companies that use CIG, though they have made more intensive use of it. This trend is common to almost all sectors, which differ somewhat in the level of this incidence. In Horeca sectors, more than a quarter of the working hours were absorbed by CIG, with trends by size class that were, however, fairly constant. Manufacturing, construction and other service activities also accounted for more than 10%. We will return to these aspects shortly.

Chart 3.1

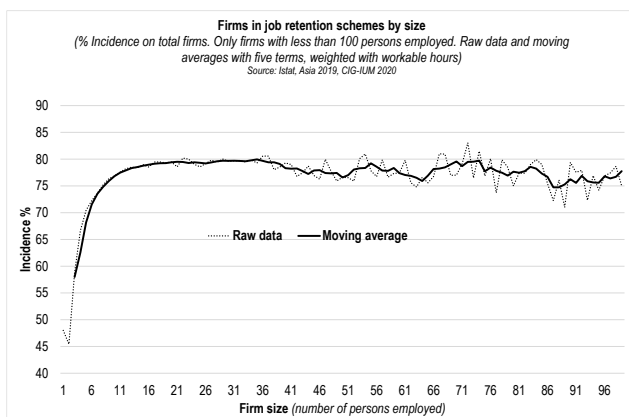
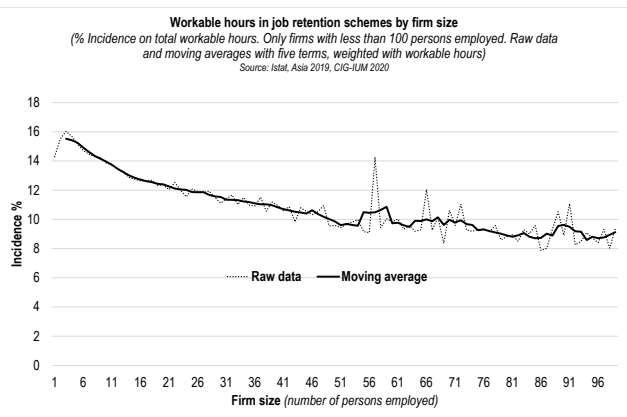


Chart 3.2



²⁰ This may be due both to the reduced temporal coverage of employment relationships (because they began during the course of the year, for example) and to a choice made by firms, which may also reflect possible organizational limits. However, if we limit the measurement of the incidence to only those firms with employment relationships in all 12 months of the year, the incidence of companies in CIG in the first size class actually reaches 68%, while it drops to 31% for companies with employees only in a part of the year.

Table 3.1

Firms involved in job retention schemes, by Nace and size class. Year 2020													
Nace and short description	Size class (b)					Hours (mln)	Size class (b)					Total	
	up to 3	3-10	10-50	50-250	over 250		up to 3	3-10	10-50	50-250	over 250		
	NUMBER						INCIDENCE % ON TOTAL FIRMS						
B MINING AND QUARRYING	202	520	342	35	1	1.100	67,6	89,2	92,7	83,3	25,0	84,8	
C MANUFACTURING	24.651	71.251	45.952	7.461	1.131	150.446	51,9	71,5	82,7	83,2	83,9	70,6	
D ENERGY	338	293	171	40	15	857	29,9	44,7	41,6	40,8	36,6	36,7	
E WATER SUPPLY	638	1.877	1.151	255	76	3.997	44,9	62,3	64,2	52,9	52,8	58,3	
F CONSTRUCTION	47.305	61.290	16.007	1.101	80	125.783	59,1	85,6	91,5	92,1	90,9	73,8	
G TRADE	75.927	109.761	24.374	2.047	371	212.480	50,0	65,6	72,4	67,5	66,5	59,6	
H TRANSPORTATION	6.408	13.198	7.870	1.533	323	29.332	38,9	59,6	71,9	75,4	81,8	56,4	
I HORECA	40.007	85.670	22.396	1.027	139	149.239	55,1	76,3	90,0	98,0	97,2	70,7	
J INFORMATION	7.528	9.335	3.117	579	100	20.659	49,0	56,0	56,7	60,8	53,5	53,4	
K FINANCE	4.035	5.789	897	56	39	10.816	44,1	56,5	52,7	14,0	24,5	50,0	
L REAL ESTATE	10.272	6.274	431	27	2	17.006	52,5	66,5	69,5	67,5	50,0	57,3	
M PROFESSIONAL	28.264	27.875	5.010	646	105	61.900	51,5	61,6	67,4	70,4	65,2	57,0	
N SUPPORT SERVICES	10.886	14.041	6.070	1.622	459	33.078	47,6	62,4	68,4	79,9	89,6	58,3	
P EDUCATION	2.920	4.435	1.499	157	11	9.022	67,8	86,1	81,8	79,7	91,7	78,5	
Q HUMAN HEALTH	20.108	18.681	3.260	1.106	270	43.425	47,4	79,0	63,1	69,2	81,6	59,4	
R RECREATION	5.268	6.094	1.607	161	22	13.152	59,5	72,7	89,0	84,3	84,6	68,3	
S OTHER SERVICES	29.959	22.700	2.522	258	26	55.465	62,8	75,8	78,7	80,9	78,8	68,3	
Total	314.716	459.084	142.676	18.111	3.170	937.757	52,8	70,8	78,7	76,9	76,5	64,5	

Source: Asia 2019; CIG-IUM 2020

Note: (a) Only firms in the business register; (b) Size classes are based on the number of persons employed in the business register 2019; values on the right are included

Table 3.2

Hours in CIG, by Nace and size class. Year 2020													
Nace and short description	Size class (b)					Hours (mln)	Size class (b)					Total	
	up to 3	3-10	10-50	50-250	over 250		up to 3	3-10	10-50	50-250	over 250		
	NUMBER (mln)						INCIDENCE % ON TOTAL WORKABLE HOURS						
B MINING AND QUARRYING	0,1	0,8	1,8	1,0	0,0	3,7	16,0	15,1	13,7	12,8	0,0	6,7	
C MANUFACTURING	16,4	99,5	226,8	166,3	189,5	698,5	14,8	13,8	11,4	9,4	10,3	10,9	
D ENERGY	0,2	0,4	0,5	0,3	0,5	1,9	7,6	7,1	3,2	1,2	0,5	1,2	
E WATER SUPPLY	0,4	2,2	3,6	2,0	1,9	10,0	10,0	8,7	5,3	2,0	1,0	2,6	
F CONSTRUCTION	31,7	82,0	68,9	20,9	8,7	212,4	16,9	15,3	12,0	9,7	7,2	13,0	
G TRADE	37,3	118,4	104,7	42,8	64,2	367,3	14,9	12,7	10,4	8,1	6,4	9,9	
H TRANSPORTATION	5,0	18,2	36,5	33,5	47,9	141,1	9,5	10,0	9,0	9,1	5,8	7,7	
I HORECA	25,1	120,4	127,0	34,1	54,8	361,4	22,2	24,0	26,8	25,9	26,7	25,4	
J INFORMATION	5,0	12,1	12,2	8,5	7,7	45,6	13,2	9,9	6,3	4,7	1,9	4,9	
K FINANCE	1,8	4,3	2,6	0,9	6,9	16,4	10,6	7,7	4,9	1,0	1,0	1,9	
L REAL ESTATE	5,1	5,2	1,7	0,6	0,0	12,6	14,3	12,2	10,4	7,5	0,3	11,5	
M PROFESSIONAL	13,3	27,0	19,3	11,5	5,2	76,3	13,0	10,1	8,2	6,5	2,7	7,8	
N SUPPORT SERVICES	9,0	23,4	31,3	27,8	40,2	131,8	16,4	16,1	11,8	9,2	3,6	7,0	
P EDUCATION	1,6	6,1	8,2	3,0	0,7	19,7	20,5	21,3	19,6	13,4	12,2	18,4	
Q HUMAN HEALTH	6,3	15,6	11,8	15,6	22,8	72,0	11,5	12,5	7,0	5,7	5,9	7,1	
R RECREATION	4,0	10,6	11,1	4,0	4,8	34,3	28,4	29,1	32,5	28,5	20,6	28,3	
S OTHER SERVICES	12,8	24,7	13,3	5,4	2,3	58,5	17,7	17,3	16,0	12,3	9,1	15,9	
Total	175,1	570,9	681,2	378,1	458,2	2.263,5	15,7	14,7	12,1	8,9	6,4	10,3	

Source: Asia 2019; CIG-IUM 2020

Note: (a) Only firms in the business register; (b) Size classes are based on the number of persons employed in the business register 2019; values on the right are included

In 2020, the number of firms involved in CIG increased by about 15 times compared to the entire previous two-year period. In particular, in 2018-2019 the number of firms involved in CIG events was about 61 thousand (Table 3.3). Of these, about one in ten had no signs of employment in 2020, while more than 90 percent of the remaining 55 thousand firms also used CIG in 2020, accounting for just over 5 percent of the total units in CIG in the year of pandemic. In terms of CIG hours, however, the weight of these "veterans" is much greater (almost 20%) given their relatively larger size and the longer average duration of CIG events they experienced in 2020 (1.3 months longer on average than the rest of the firms). In contrast, there are approximately 886 thousand units that accessed CIG for the first time in 2020.

Table 3.3

Firms involved in job retention schemes by year. Years 2018-2020							
	Firms		CIG events				
	N (.000)	%	avg. duration (n.months) (b)	Jobs (.000)	%	Hours (mln)	%
In CIG in 2018-19 (a)	61						
of which: with employees in 2020	55						
of which: in CIG also in 2020	51	5,5	5,9	5.613	20,4	447	19,7
In CIG only in 2020	886	94,5	4,6	21.927	79,6	1.817	80,3
Total in CIG in 2020	938	100,0	4,7	27.540	100,0	2.264	100,0

Source: Istat, CIG_IUM2018-20; Asia 2019
Note: (a) firms in job retention schemes in 2018-2019; (b) number of months in job retention schemes (average by firm)

Almost all units with CIG events in 2020 recorded such events in April and around 80% in March and May (Table 3.4). Starting in June, their stock gradually declined until it fell below 200 thousand units between August and September, and then picked up again in the last two months of the year (over 300 thousand units). Over 95% of the 886 thousand "new" units began using CIG between March (over 700 thousand) and April (143 thousand). In May, the number of new entries fell drastically, although the overall stock of companies in CIG remained almost unchanged due to the high rate of persistence since the previous month. The re-absorption that took place in the months that immediately followed was determined by a gradual increase in the exit rate (between 30% and 50% between June and August) against a modest contribution from new entries. On the other hand, the number of units that resumed recording CIG events after one or more months of interruption began to increase over the months. Since October, the recovery in the number of companies with CIG events was determined both by the increase in the persistence rate and by the flow of units that began to use it again (especially in November) and by the number of companies that had not used CIG up to that point (also in this case, especially in November). These effects more than offset the exits. The more than 50 thousand companies that had already used CIG in the previous two-year period were partly involved in the recovery of CIG at the end of the year, approaching 10% of the stock of user companies.

Between September and December, about 16,500 "new" firms - i.e., that had not yet used CIG until then (and since 2018) - decided to access the tool, a number 50% higher than the stock of firms in CIG in January 2020.

Table 3.4

Entry/exit monthly flows in the adoption of job retention schemes of the firms in industry and services. Year 2020															
Month	Firms in CIG					Flows					Rates				Turnover
	Stock (.000)	Incid. %	of which: already in CIG in 2018-19	Incid. %	Incid. %	New entrants	distr. %	Persistent	Re- entering	Exiting	New entrants	Persistent	Re- entering	Exiting	
	(a)=(d)+(e)+(f)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
January	10.920	1,2	10.147	92,8	19,7	773	0,1		10.147		7,1		92,9		
February	15.902	1,7	11.065	63,7	21,5	4.270	0,5	7.130	4.502	3.790	26,9	65,3	28,3	34,7	79,0
March	754.764	80,5	47.807	6,1	92,9	702.031	79,2	15.528	37.205	374	93,0	97,6	4,9	2,4	98,0
April	884.628	94,3	49.193	5,4	95,6	143.347	16,2	739.215	2.066	15.549	16,2	97,9	0,2	2,1	18,2
May	738.871	78,8	36.052	4,7	70,0	12.684	1,4	722.815	3.372	161.813	1,7	81,7	0,5	18,3	24,1
June	457.464	48,8	26.331	5,5	51,1	3.830	0,4	442.863	10.771	296.008	0,8	59,9	2,4	40,1	67,9
July	317.038	33,8	18.183	5,5	35,3	1.830	0,2	295.782	19.426	161.682	0,6	64,7	6,1	35,3	57,7
August	190.620	20,3	14.729	7,4	28,6	999	0,1	163.519	26.102	153.519	0,5	51,6	13,7	48,4	94,8
September	189.885	20,2	19.357	9,9	37,6	1.223	0,1	137.458	51.204	53.162	0,6	72,1	27,0	27,9	55,6
October	223.790	23,9	23.653	10,2	45,9	3.210	0,4	154.690	65.890	35.195	1,4	81,5	29,4	18,5	46,6
November	323.598	34,5	21.770	6,4	42,3	9.722	1,1	194.554	119.322	29.236	3,0	86,9	36,9	13,1	48,9
December	307.394	32,8	26.454	8,2	51,4	2.354	0,3	275.963	29.077	47.635	0,8	85,3	9,5	14,7	25,7
Total (p)	937.757	100	51.484	100		886.273	100								

Source: Istat, CIG_IUM2018-20; Asia 2019
Note: (a) Firms in CIG in month m; (b) % share of total firms in CIG in 2020; (c) % share of total firms in CIG in month m; (d) Units in CIG in month m for the first time since 2018; (e) Units in CIG in month m and in month m-1; (f) Units in CIG in month m, that were in CIG before but not in month m-1; January 2020 datum includes all firms in CIG in 2018-19; (g) Units in CIG in month m-1 but not in month m; (h) New entrants/Total; (i) Persistent/Total m-1; (j) Re-entering/Total; (k) Exiting/Total m-1; (l) (New entrants+Exiting+Re-entering)/Stock; (m) Total distinct firms

The economic units that used CIG for the first time in 2020 almost always resorted to it for more than one month (95%) and on average for shortly more than five months. This distribution is certainly not uniform. In particular, almost 40% of firms have resorted to CIG for only two or three months (modal period) and almost a third for at least six months. For more than two thirds of the units, moreover, recourse was made in contiguous periods, that is, CIG was used starting from a given month and without interruption until definitive withdrawal from treatment. The remaining units have used CIG in an intermittent manner, and for the most part these are units that have resumed use of CIG in the autumn. Firms with a few months of CIG in 2020 have in fact concentrated its use in the first and second quarters, even if the new entries in the last months of the year are also significant. As the number of months of use of CIG increases, so does the incidence of cases of intermittent use of the instrument, according to a pattern that recalls the succession between the first and second phase of the pandemic. Approximately 60 thousand companies used CIG without interruption from March to December.

The longer duration of CIG for companies that had already made use of it in the previous two-year period is evident through a gradual increase in their incidence as one moves up the duration class, reaching around 8% among users for 8-10 months. Obviously, for obvious reasons, the "veterans" are the overwhelming majority in the classes of duration exceeding ten months.

The month of first access to CIG identifies rather well the profile of use of the instrument in the following months. The firms that accessed it in the first two months of the year show a greater propensity to use the instrument frequently: almost a quarter of the firms that entered in January and almost one in six of those that entered in February were still in CIG in December. Of the more than 700 thousand companies that entered in March, almost all of them stayed for at least two months. A quarter of them left after the third month of CIG (mainly in May, the last month of CIG for more than 300 thousand units). More than half stopped using CIG after five months and less than 8% (however, more than 50 thousand companies) were still in CIG in December. In April the trend was similar, except for the greater incidence of companies with only one month of CIG and the modal duration of two months for the exit in May. For those firms that entered in May, one in five permanently exited the following month, although compared to the previous two months, the incidence of firms present in December is higher. With the resumption of CIG events in September, the share of firms with only one month of CIG declined.

Just under two out of three of the companies that used CIG in 2020 applied the tool to over 70% of their employees during the year, while one in seven (14.6%) involved less than half of them. This scenario obviously differs according to the size of the companies. The degree of coverage with CIG measures for the number of employees decreases rapidly beyond the threshold of ten employees: in fact, over 40% of large companies and almost a third of medium-sized companies with between 50 and 250 employees have involved less than half of their staff in CIG.

Micro and small businesses with fewer than 50 employees generally have a higher incidence of part-time and fixed-term positions than larger businesses. However, if one selects the subset of those that have used CIG, it can be seen that they are characterized by a lower recourse to these contracts compared to the rest of the units in the same size class. On the other hand, for medium-large firms, recourse to CIG is associated with a greater incidence (in terms of jobs and workable hours) of part-time and fixed-term contracts (Table 3.5).

On the other hand, the lower propensity of small businesses to use CIG is associated with a greater intensity (compared to larger businesses) in its use. The microenterprises with 3 to 10 persons employed that resorted to CIG had an incidence of part-time and fixed-term jobs about 5 p.p. lower than those recorded in the remaining firms of that size. For large enterprises with more than 250 persons employed the relationship is reversed: those involved in CIG have a much higher incidence of these contractual figures compared to the other enterprises, especially of part-time jobs. Nevertheless, the intensity with which CIG has been used is appreciably lower in the larger units, being also in general higher for part-time jobs with respect to the fixed-term ones.

Table 3.5

Incidence of jobs and workable hours within fixed-term or part-time contracts in the firms with employees, by size class and involvement in job retention schemes. Year 2020									
Size class (a)	% fixed-term		% part-time		% part-time & fixed term		CIG intensity		
	Within the firms in CIG	Rest of the firms	Within the firms in CIG	Rest of the firms	Within the firms in CIG	Rest of the firms	Fixed term	Part-time	Part-time & fixed term
<i>JOBS</i>									
0-3	18,5	27,4	53,6	60,9	10,3	16,6	22,5	30,7	23,0
3-10	14,2	19,3	41,9	46,3	7,1	10,0	20,3	29,6	21,5
10-50	13,7	14,8	24,0	26,2	4,9	6,0	18,1	27,8	19,6
50-250	12,3	10,6	20,5	14,9	4,5	3,3	16,2	22,5	15,9
250 +	15,2	6,7	28,0	13,0	5,9	1,7	6,2	18,8	8,2
Total	14,2	13,4	29,6	27,0	5,8	5,9	14,6	25,3	16,3
<i>WORKABLE HOURS</i>									
0-3	15,9	23,2	38,6	44,6	6,4	10,7	16,6	21,5	17,3
3-10	11,4	15,5	29,2	32,6	4,1	5,9	14,9	19,7	16,0
10-50	11,1	12,0	15,8	17,3	2,7	3,4	12,2	17,6	14,0
50-250	10,1	9,1	13,5	10,0	2,5	1,9	9,6	12,9	10,2
250 +	12,7	5,9	18,8	9,1	3,3	1,0	3,3	10,6	5,1
Total	11,7	10,6	19,7	17,5	3,3	3,2	9,5	15,8	11,3

Source: Istat: CIG-IUM 2020 (provisional), Asia 2019

Note: (a) size classes are based on the number of persons employed as estimated in the Business register: they are closed on the left.

Structure and performance of the firms in job retention schemes

The magnitude of the phenomenon does not actually offer a clear-cut characterization of firms that used CIG in 2020. In fact, the firms that between 2018 and 2019 showed a negative dynamic of the main economic and profit&loss account indicators all show a greater propensity to a more intensive use of CIG or, on the contrary and to a lesser extent, not to use the instrument at all (Table 3.6). Above all, companies with declining turnover (more than one in five) show a concentration in the high-intensity segment 21% higher than the average, while in the other cases the differential is around 10%. Only in the case of gross profit margin per employee do firms with declining profitability reveal a greater tendency to resort to CIG, even with medium intensity.

Firms with growing indicators tend, depending on the case, to concentrate either in the segments with low or medium intensity of CIG (growing turnover or added value), or in those that do not use CIG (where apparent labour productivity or gross profit margin per employee grow). However, these are not sufficiently pronounced differentials. Finally, companies classified according to the dynamics of labour costs do not show clear trends in the use of CIG.

Table 3.6

Specialization index (b) in the use of job retention schemes by firms classified on the basis of the dynamics (f) of performance indicators between 2018 and 2019. Year 2020											
NUMBER OF PERSONS EMPLOYED						TURNOVER					
CIG intensity (a)	Dynamics 2018-2019				Distr. Firms %	CIG intensity (a)	Dynamics 2018-2019				Distr. Firms %
	Reduction	Stable	Increase	Total			Reduction	Stable	Increase	Total	
Low	90	100	105	100	16,2	Low	85	104	104	100	16,2
Medium	92	99	105	100	32,5	Medium	96	100	103	100	32,5
High	109	95	105	100	16,3	High	121	91	98	100	16,3
Not in CIG	108	103	91	100	35,0	Not in CIG	101	102	97	100	35,0
Total	100	100	100	100		Total	100	100	100	100	
Distr. Firms %	15,6	54,5	30,0		100	Distr. Firms %	22,2	43,8	34,0		100
VALUE ADDED						APPARENT LABOUR PRODUCTIVITY (c)					
CIG intensity (a)	Dynamics 2018-2019				Distr. Firms %	CIG intensity (a)	Dynamics 2018-2019				Distr. Firms %
	Reduction	Stable	Increase	Total			Reduction	Stable	Increase	Total	
Low	88	109	101	100	16,2	Low	92	111	97	100	16,3
Medium	94	104	101	100	32,7	Medium	97	106	97	100	32,8
High	110	92	99	100	16,3	High	108	95	98	100	16,4
Not in CIG	106	96	99	100	34,8	Not in CIG	103	92	105	100	34,6
Total	100	100	100	100		Total	100	100	100	100	
Distr. Firms %	28,4	30,6	41,0		100	Distr. Firms %	32,4	32,2	35,4		
GROSS PROFIT MARGIN per person employed (d)						LABOUR COST per employee (e)					
CIG intensity (a)	Dynamics 2018-2019				Distr. Firms %	CIG intensity (a)	Dynamics 2018-2019				Distr. Firms %
	Reduction	Stable	Increase	Total			Reduction	Stable	Increase	Total	
Low	97	115	99	100	16,3	Low	92	106	94	100	16,9
Medium	102	97	99	100	32,8	Medium	94	103	97	100	33,9
High	108	77	97	100	16,4	High	101	97	104	100	16,9
Not in CIG	96	106	103	100	34,6	Not in CIG	111	95	104	100	32,3
Total	100	100	100	100		Total	100	100	100	100	
Distr. Firms %	45,8	10,5	43,6			Distr. Firms %	17,2	54,6	28,2		

Source: Istat: CIG-IUM 2018-2020 (2020 provisional), Asia 2018 and 2019, Frame SBS 2018 and 2019

Notes: (a) Intensity is based on the classification of units according to quartiles of the distribution of the share of hours in CIG with respect to the total number of working hours on an annual basis. The quartiles are calculated by size class, Nace and status of "closure" or "opening" due to pandemics defined at five-digit Nace (b) the indices are calculated on the basis of the ratio between the actual frequency of each cell and the theoretical frequency that would have been obtained if the variables had been independent. In practice: cell value/(Total row*Total column/Total)*100; (c) Ratio between value added and number of persons employed; (d) Gross operating margin corrected by subtracting an estimate of the remuneration of the company's independents, divided by the total number of employees. The estimate of the remuneration is obtained by imputing the average gross earnings per employee by 2-digit Nace and size class; (e) Personnel costs divided by the number of employees; (f) in classifying the dynamics of the variables, a company was defined as stable if the change in the economic indicator recorded in 2019 is contained within a range of ±10% of the value assumed in 2018.

A reading of CIG through the performance indicators of the companies appears clearer. In fact, there appears to be a neat tendency for companies with high productivity and gross operating profit per employee to place themselves among the non-users of CIG or among the low-intensity users (Table 3.7). A similar tendency is revealed for companies characterized by a higher level of labour costs. Conversely, low productivity and profitability seem to be clearly associated with a more intensive use of CIG.

Firms with higher labour costs per employee are also associated with less intensive use of CIG, although the opposite is not true for those with lower labour costs, which are possibly distinguished by less use of CIG.

The average level of education of the employees of the firms does not offer a clear association with the intensity with which they have used CIG. While there seems to be a greater propensity in general to use CIG for companies with younger employees and a more modest level of education, those with relatively older and more educated employees tend to be in the segments that use CIG more intensively. Lastly, tenure (the indicator that measures the duration of employment relationships held by each company over time) appears to be inversely associated with CIG intensity.

Exporting companies in general show a lower propensity to use CIG, tending to concentrate more (when they do use it) in the low-intensity segment.

The age structure of firms that used CIG in 2020 is broadly similar to that of firms with employees overall. Among microenterprises with fewer than 10 employees there seems to be a greater propensity to use CIG and a greater intensity in the use of CIG. Above the threshold of ten employees there are no significant associations between the use of CIG and the age of the businesses.

The structure by legal form of the firms reveals a greater incidence of recourse to CIG in limited liability companies, independently of the class of employees, although expressed in terms of share of total working hours, the intensity of the effective use of the instrument is substantially analogous to that of the other more widespread legal forms. One third of companies undergoing CIG are sole proprietorships, which show a slightly lower than average intensity of use of the tool within the various size classes.

Table 3.7

Specialization index (b) in the use of job retention schemes by firms classified on the basis of the dynamics (f) of structure and performance indicators. Year 2020											
APPARENT LABOUR PRODUCTIVITY (c)						GROSS PROFIT MARGIN					
CIG intensity (a)	Year 2019				Distr. Firms %	CIG intensity (a)	Year 2019				Distr. Firms %
	Low	Medium	High	Total			Low	Medium	High	Total	
Low	77	101	121	100	16,2	Low	80	102	116	100	16,2
Medium	98	105	92	100	32,5	Medium	99	105	91	100	32,5
High	122	100	77	100	16,2	High	125	100	76	100	16,2
Not in CIG	103	94	109	100	35,0	Not in CIG	99	94	113	100	35,0
Total	100	100	100	100		Total	100	100	100	100	
Distr. Firms %	25,0	50,0	25,0			Distr. Firms %	25,0	50,0	25,0		
LABOUR COST per employee (e)						AGE OF EMPLOYEES (avg)					
CIG intensity (a)	Year 2019				Distr. Firms %	CIG intensity (a)	Year 2019				Distr. Firms %
	Low	Medium	High	Total			Low	Medium	High	Total	
Low	81	100	118	100	16,8	Low	111	101	91	100	16,2
Medium	97	105	93	100	33,5	Medium	113	100	94	100	32,4
High	106	103	88	100	16,7	High	111	97	103	100	16,2
Not in CIG	110	93	104	100	33,1	Not in CIG	78	101	108	100	35,3
Total	100	100	100	100		Total	100	100	100	100	
Distr. Firms %	25,0	50,0	25,0			Distr. Firms %	12,8	63,8	23,4		
EDUCATION LEVEL OF EMPLOYEES (g)						TENURE (h)					
CIG intensity (a)	Year 2019				Distr. Firms %	CIG intensity (a)	Year 2019				Distr. Firms %
	Low	Medium	High	Total			Low	Medium	High	Total	
Low	100	102	96	100	16,3	Low	97	99	105	100	16,8
Medium	101	102	95	100	32,5	Medium	99	99	104	100	33,7
High	100	99	102	100	16,2	High	108	96	102	100	16,7
Not in CIG	99	98	105	100	35,0	Not in CIG	99	104	93	100	32,8
Total	100	100	100	100		Total	100	100	100	100	
Distr. Firms %	21,9	54,7	23,4			Distr. Firms %	20,5	55,0	24,5		

Source: Istat: CIG-IUM 2018-2020 (2020 provisional), Asia 2018 and 2019, Frame SBS 2018 and 2019

Notes: (a) Intensity is based on the classification of units according to quartiles of the distribution of the share of hours in CIG with respect to the total number of workable hours on an annual basis. The quartiles are calculated by size, Nace and status of "closure" or "opening" due to pandemics defined at five-digit Nace; (b) the indices are calculated on the basis of the ratio between the actual frequency of each cell and the theoretical frequency that would have been obtained if the variables had been independent. In practice: cell value/(Total row * Total column/Total)*100; (c) Ratio between value added and number of employees; (d) Gross profit margin corrected by subtracting the remuneration of the company's independents, divided by the total number of persons employed. The estimate of the remuneration of independent is obtained by imputing the average gross earnings per employee by 2-digit Nace and size class; (e) Personnel costs divided by the number of employees; (f) in classifying the level of indicators as Low/Medium/High, the quartiles of the distribution of the indicator by 2-digit Nace and size class were used; (g) the indicator is obtained by translating the educational qualification of the individual employee into the number of year of school or university attendance; (h) the indicator measures the average number of years of duration of the employment relationship between employer and employee; (i) the indicator measures the average number of years of duration of the employment relationship between the employer and the employee; (j) the indicator measures the number of years of duration of the employment relationship between the employer and the employee.

Concluding remarks

The integration of the available statistical sources offers several perspectives of knowledge and analysis. Statistical registers on business and individuals give the possibility of examining - and keeping -together demand supply issues with high detail and large possibilities for investigating several underpinning issues. Our purpose was that of stimulating further research and analyses given the large possibilities that data integration

offers. Though still in a draft and provisional version, the integrated database on job retention schemes can reveal several (possibly new) aspects and characteristics of the individuals involved in those schemes, on their households, on their economic conditions, on their past and present jobs, on the characteristics of the firms for whom they work, on the characteristics of their economic structure and performance, on the quality of the jobs they offer, on sector specific issues.

The facts that took place during pandemic were clearly exceptional. When shortly less than one half of employees in industry and services run into CIG, the real point at stake has to do with the analysis of the effects of pandemic much more than with “how job retention schemes actually work”. In 2020 the almost 7 million employees in CIG had a levelling effect in the selection of their sub-population with respects to “normal” years, and so did the fact that more than two thirds of the firms used CIG. The measures moved indeed large sums: little more than 2 thousand euro per capita on average were used to compensate little more than 4 thousand of unpaid gross earnings per capita with an average impact of 6% on the equivalent disposable income of the employees in CIG and of their households.

Nevertheless, it is still evident that CIG kept on selecting, even during such an extraordinary crisis, a sub-population of employees that is as a whole relatively more vulnerable as compared to those who were left out of CIG treatments. Intensity and duration of CIG are important variables which introduce further details on the mechanism of selection and stress some possible associations, so does the type of job, in understanding the asymmetries in the mechanisms of selection.

It is a fact that the employees with full-time open-ended jobs have more frequently been in CIG: little more frequently than those with part-time jobs, much more than those with fixed-term jobs. A large portion of the fixed-term jobs with short-term expirations, simply have not been renewed. Those with longer expirations where more probably hoarded by firms through CIG: this mechanism might have contributed to the selection of fixed-term employees relatively less economically vulnerable than those who were not involved in CIG, and it acted more evidently in the segments of the population where they are relatively more present (for instance, younger employees). Something similar happened to part-time jobs: the selection might have “privileged” those with a higher percentage of part-time. Therefore, the employees with part-time and fixed term jobs that were selected by CIG show similar or better conditions as compared to the rest of employees with those type of jobs. On the contrary, the employees with full-time open-ended jobs where selected by CIG more “traditionally”: in fact, this segment is economically more vulnerable as compared to its complement, and it is quite characterised (for instance, older ages, men, Northern regions).

This is just an example of the possible issues that need further investigations that go beyond the descriptive choice of evidences reported in this work. They might concern, for example, a more in-depth integrated analysis of the employees and of the economic units and the quality of the jobs they offer, or the application of multivariate approaches in order to better classify individuals and firms involved in CIG events. While we performed the analysis of individuals through the lenses of the LFS survey, the use of the exhaustive population might open the field to more accurate territorial analyses and to a more accurate analysis of a lower number of socio-economic variable, those present in the population register. Under this respect, the availability of integrated statistical information will keep on being useful also in “normal” times, once pandemic will be over, hopefully. For the time being, it is our purpose to extend backward our in-depth integrated analysis of the employees and of the economic units involved in job retention schemes before 2020.

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