

Low wages, employees and employers in Italy: a longitudinal analysis

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Executive summary

- This experimental exhaustive analysis of the Italian regular labour incomes is based on the integrated use of Istat statistical registers on income, population and businesses, and on microdata from social security records. The observed time span is 2015-2022.

Part 1. Labour incomes from employee jobs

- Between 2015 and 2022 real per capita labour income of 21 million Italian employees decreased significantly. COVID19-pandemic and 2022 inflation are mostly responsible for this trend, although even before 2020 the structural weakness of dependent work produced a sluggish income dynamics.
- A large share of employees shows very low labour income levels, with 25% of employees barely above 10,000 euro in 2022 and a half of them below 20,000 euro (at constant 2015 prices).
- Low-learnings mostly originates from the private sectors. Let alone agriculture and domestic workers, where low incomes and undeclared work coexist, industry and services produce a large portions of low-earnings.
- The distribution of incomes in the public sectors is less critical, although public employment witnessed a constant reduction in real gross earnings in the first part of the period, with a decrease of about 2,000 euro (-7%) in its median level between 2015 and 2020.
- The structural weakness of incomes is also reflected by the gender gap, especially in the private sectors. Between 2015 and 2022 it has been only slightly reduced, more often in presence of higher education level.

Part 2. Employees with low earnings in industry and services between 2015 and 2022

- Yearly gross earnings (YGE) declined in real terms: in general YGE were hit by the increased adoption of labour contracts of lower quality, namely short-term and part-time jobs, although in 2022 the effect on inflation worsened the situation.
- A substantial and rather stable share of employees dropped in the low-wage areas, especially low YGE, essentially due to the low-intensity of jobs. This affected their personal income with severe consequences even at the household level.
- Over the entire period, about 60 per cent of employees in 2022 experienced at least one year under the low-pay thresholds. In particular, only a minor share of these employees managed to bring their pay back above the thresholds, usually through better quality contractual conditions. A larger portion of the others either exited the status of employment or never succeeded to get rid of the "low pay trap" permanently.
- The tie between standard jobs and the level of hourly wages inevitably implies that the firms providing better pay conditions are also those where full-time, permanent jobs prevail. This is a relatively small subset of firms although they are large enough to involve an important amount of non-agricultural workforce; these firms belong to the more advanced service and industry activities where average hourly wage is set on more than 15 euros.

Part 3. Employers and low-earnings

- As one moves away from these wage levels, operating on the wage spectrum is possible only by acting on job intensity through part-time and fixed-term contracts. Low-paid employees gradually experiences lower intensities and durations, while hourly wages remain quite below the average.
- Micro-enterprises and individual firms produce very low per capita annual earnings due to lower levels of all the wage components: lower hourly earnings and lower intensity and duration of jobs.
- The economic activities with a high propensity to pay low wages emerge quite clearly. Most of them belong to services. In Horeca and recreation, heavily affected by undeclared work, more than two employees out of three is below YGE threshold. In support services, education and other household services more than 50% of employees have low annual earnings.
- Quitting low-pay sectors is generally the only way to escape low earnings, in as much as there are a few sectors there may be better opportunities to improve pay conditions. A higher propensity to change employer and economic activity is thus associated to improvements in earnings conditions.

Introduction

In Italy, the level and distribution of employees' labor earnings has been at the center of a both academic and political debate, sometimes messy and mainly focused on the opportunity to set a minimum wage, generally intended as a minimum threshold of hourly earnings. This attention derives from the fact that Italy, at present, is among the five EU countries without a legal minimum wage. Although the European Parliament Directive 2022/2041 on adequate minimum wages does not compel Italy to enforce it by law, due to the high coverage rate of collective bargaining, the issue has remained on top of the agenda of the public debate. Most of the analyses emphasize the presence of a large share of low-wage workers in the private sector, and often stress the importance of disentangling all the components determining the wage level. The spread of non-standard forms of regular dependent employment – in particular part-time and short-term contracts - makes it compelling to look into annual and monthly earnings by separating the effects due to hourly earnings (once clearly defined) from those due to working time. This means going beyond hourly earnings (the usual target of minimum wage proposals) to take more properly into account the income flows deriving from earnings².

This paper does not enter directly into this debate nor into the details of what kind of minimum wage should or should not be introduced or what the exact definition of wage should be considered. Based on previous research conducted in Istat on the quality and on the earnings of employees³, it tries instead to provide details and descriptive evidence on a longitudinal perspective (2015-2022) regarding a wide range of issues that surround the more general theme of incomes from dependent employment. Many tables and charts are used in order to document the empirical evidence of our investigations, and are founded on the use of large scale databases such as Istat statistical registers on incomes, population and businesses. The integrated use of those registers offers uncountable opportunities to deepen the analysis and to describe exhaustively the topic of incomes from employment, with special attention to low incomes. A short premise provides thus a general overview of the statistical sources used in this paper and of the methodological context and concepts through which our analyses are developed.

Part 1 of the paper is dedicated to employees' labour incomes. The analysis mainly focuses on some distributive aspects of these incomes and it is based on individual data for more than 20 million employees, examined for the first time by domain⁴: public sector and private sector, separately for industry and services, agriculture and domestic workers. In this analysis we show the heterogeneity of incomes, and provide some insights on the low income areas. In Part 2 the attention is shifted towards the gross earnings coming from the private non-agriculture sectors, the largest and most heterogeneous set of Italian employees. Here the analysis targets notional (or contractual) earnings in order to disentangle their nature independently from the windfall factors influencing effective labour earnings. The elementary components of gross earnings are thus investigated with reference to the nature of labour contracts: hourly earnings and working time components are jointly analysed in order to determine which effects lay behind the areas of low earnings. Longitudinal data in the eight-year period 2015-2022 helped us to characterize the cohorts of employees who succeeded to escape from the low earnings trap and those who never came out from low earnings conditions. Part 3 finally extends the analysis of part 2 in order to find evidences on the characteristics of employers and their role in generating poor employment conditions. At the end of the paper some conclusions are drawn and some of the numberless areas of further research are evidenced.

Sources, methodological aspects and concepts

In this paper, we integrate anonymized microdata from Istat statistical registers and administrative data. In particular, the population register reports for each individual some basic demographic information concerning

² Bavaro 2022, Bavaro, Raitano 2023, Crettaz, Bonoli 2010, Filandri, Struffolino 2019, Grimshaw 2011, Hallerod et al. 2015, Jansson et al. 2020, Marucci, De Minicis 2019, Ministero del lavoro 2021, Raitano et al. 2019.

³ Anitori, Arcieri, et al. 2019, Anitori, De Gregorio et al. 2019, De Gregorio, Giordano 2014, 2016, De Gregorio, Giordano, Siciliani 2021, Istat 2019, 2022, 2023.

⁴ Many hints concerning the analysis of employees' incomes have been extracted from Atkinson (2008), though our rich database pushed us towards a more descriptive approach.

age, gender, citizenship and educational level. Additional information identifies the individuals actually resident in Italy, flagging those who are resident in private households. The available data used in the paper range from 2015 to 2022 and we refer to residents in private households at 31 December of each year⁵. Thus, we exclude from the analysis all employees not belonging to resident population, (about 3% of business register total employment), the entrepreneurs who are employees in the same enterprise they own and all the individuals who are in old-age pension schemes. In some analysis we also restrict the observed population to those aged 15-64 years.

The income register also refer to years 2015-2022 and it is structured in modules⁶: in this paper we focus on gross labour incomes that include social contributions paid by the worker and income taxes⁷. We partitioned the employees in four subgroups depending on the nature of the employer: public sector, private industry and services⁸, private agriculture and domestic workers (where, though, the employer is a private household). This partitioning, especially when referred to public administrations and private businesses, is based upon criteria that might not correspond exactly with the official allocation of economic units used in S13 but it can be improved in time as soon as Istat labour register will be available. In the paper we will also experiment a provisional allocation of labour incomes by type of employer as provided by the business register. Moreover we will also use data from the module of the income register dedicated where total disposable income is estimated, mainly based on tax reports integrated with other non-taxable incomes, and from the module on pensions, used to identify and exclude the retirees from the analysis. All the information we derive from the income register is referred to regular incomes and does not include irregular incomes deriving from irregular jobs or from irregularly worked hours within regular jobs (as in the case of false part-time jobs⁹). It is useful to remind that, in the case of dependent employment, the irregularity rate is estimated by National Accounts over 11%, with peaks of 32% in agriculture and more than 50% in domestic services. This information should be kept in mind where examining the results described in Part 1 of the paper. According to the most recent report from the Ministry of Economy and Finance, in 2020 the tax gap deriving from dependent employment was 2,4% corresponding to 3,9 billion euro, to be added to an additional amount of 10,9 billion euro of gap in social contributions, 2,5 billion of which to be paid by the workers¹⁰.

Table 1

Rate of non regular employment by economic activity. Year 2021	
Economic activity	%
Agriculture	32,0
Industry	4,8
Construction	14,3
Trade	5,5
Transportation	5,8
Horeca	14,9
Information	3,8
Finance	2,3
Other business services	6,1
Education	4,9
Human health	5,1
Recreation	19,4
Domestic services	51,8
Total	11,3
Source: Istat, National accounts	

⁵ The age of individuals is referred to 31 December of the year.

⁶ Modules relate to labour income (regular and irregular), pensions, non-pension monetary transfers and taxes.

⁷ Istat income register follows quite steadily the guidelines fixed in Unece Canberra Handbook (Unece 2011).

⁸ Often we shall refer for simplicity to these activities as “industry and service” omitting their private nature.

⁹ De Gregorio, Giordano (2014).

¹⁰ Ministero dell’Economia (2023). Notice that in the case of self-employment, the estimated income tax gap was 69,7% in 2020.

The business register is referred to 2015-2021¹¹. It contains structural business statistics data on the enterprises in industry and services. There are about 4,5 million units in this domain, 1,5 million of which had at least one employee enrolled in some part of the year. From this register we also derive structural (NACE, size, governance) and performance indicators (profit and loss accounts) of each business. In particular, from the associated linked employer-employee register we also draw some information on those business owners enrolled as employees in the same enterprise they own.

Detailed data on the employees in the private non-agriculture sectors, and in particular on their jobs and labour contracts, are derived from original social security data. From this source, it is possible to classify jobs according to qualitative and quantitative data, like gross earnings, gross hourly earnings, and contractual working time. Earnings in particular include social contributions paid by the worker and income taxes. We deliberately chose to concentrate on the individual variables defined in labour contracts in order to exclude all the events that affecting effective gross earnings (like public subsidies to employment such as labour retention schemes). This remark has to be kept in mind to understand what is at the core of the paper. The analysis in Part 1 in fact is based on effective (and strictly) labour incomes and this explains why, for example, the effects of the pandemic come out so clearly. In Part 2 and Part 3 where we focus on the quality of jobs, considering pay and duration of labour contracts, the extraordinary slump in labour earnings happened in 2020 is much less visible.

Part 1. Incomes from dependent employment

1.1. Italian employees during years 2015-2022

Between 2015 and 2022, the number of individuals involved in dependent employment grew consistently in Italy though the level and dynamics of their labour incomes have been overall weak and could not resist the double impact of pandemic and inflation. Although these events were quite recent, the weakness of employees' gross incomes appeared quite clearly also in the first part of that period: 25% of employees could count on slightly more than 10.000 euro in the year before pandemics, and half of them hardly arrived at 20 thousand euro (Table 1.1).

According to Istat income register, in 2022 there were about 21 million individuals with incomes from employee jobs in Italy, accounting for a total of more than 460 billion euro in labour gross earnings¹². Compared to 2015, when there were just over 18 million employees, total earnings increased by 6,1 per cent, recovering the sharp decline in 2020 due to the pandemic. Between 2021 and 2022, however, this catch-up has been partially eroded by inflation: HICP grew in fact by 8,8% in 2022, and as a whole by 14,2% since 2015. As a result, average per capita income in 2022 was at the lowest level (just over 22,000 euro) of the entire time span, lower even than in the year of pandemics.

The distribution of per capita annual gross earnings shows quite heterogeneous dynamics depending on income level. In 2015, for example, the median annual gross earning was slightly above 21,000 euro; in subsequent years, median income suffered a slight erosion until 2019 and a conspicuous slowdown during pandemics, while 2022 inflation nullified the partial recovery registered the year before. The labour incomes laying above the median were, in general, progressively more resilient to the effects of pandemics, actually heavily losing purchasing power only when inflation picked up: during 2020, job retention schemes were in fact applied more intensively to individuals in the medium and lower wage classes¹³ and this helped to preserve higher incomes. Lower deciles, on the other hand have shown substantial resilience over time (with the exception of 2020),

¹¹ The 2022 version was made available late march 2024, too late for this paper.

¹² According to the definitions adopted in the income register, and derived from the Canberra Manual (Unecce 2011), labour income from dependent employment consists in the flows actually accruing to the employee from the employer, gross of income tax and of social contributions charged on employees, excluding any transfer for social security purposes but including job retention schemes. In this sense, in Part 1, we use the terms labour income and gross earnings as synonyms. All values referred to in this section are at constant prices 2015.

¹³ De Gregorio et al. (2021).

especially with respect to inflationary pressures perhaps due to the likely impossibility of further earnings compression.

On the other hand, over the period under observation, the growth in the number of employees came with some appreciable changes in the composition of this workforce (Table 1.2). In 2015, more than 70 per cent of Italian regular employees were in the non-agricultural private sector, around 20 per cent in the public sector whilst the rest was almost equally divided between agriculture and domestic work¹⁴. Over 60 per cent of employees were between 35 to 54 years old, males prevailed over females by around 8 p.p. and the presence of workers with foreign citizenship was limited to a modest 10 per cent. Almost half employees had an upper secondary level of education, one third primary or lower secondary education, and the remaining 22 per cent a bachelor or doctoral level¹⁵.

This picture has not changed much over time, or changed very slowly. In the overall period, the share of employees in the non-agricultural private sector has increased by 2 p.p. as of 2022, notwithstanding the difficulties due to pandemics in 2020 and partially in 2021. At that time, social protection measures avoided mass redundancies but some personnel cuts occurred all the same¹⁶. In specular contrast, the share of employees in the public sector lost more than 1 p.p. between 2015 and 2022. The share of agriculture, on the other hand, remained more or less constant until 2020 - a year in which it grew slightly, benefiting from the fact that agriculture was not subject to the economic lockdowns - and started to reduce from 2021. The share of domestic workers¹⁷ declined steadily, with the exception of 2020 when layoffs were discouraged through job retention.

Looking at the composition by age, we observe a progressive reduction of individuals belonging to the middle aged classes and a consequent increase in employees with 55 to 64 years. This trend was mainly caused by the demographic ageing of the Italian population¹⁸. Also the number of new and younger employees progressively increased, whilst the workers with 25-34 years decreased steadily up to 2020 and then showed a small recover in the following years. Meanwhile, the presence of female remained substantially stable, with a slight increase only at the end of the period. The share of employees with education above ISCED 3 also increased, quite slowly though, while that of individuals with Italian citizenship slightly decreased.

If we divide the time span into two intervals, the first from 2015 to 2019 and the second from 2019 to 2022 (Table 1.3), we observe that in the first sub period the overall number of employees has grown by 1.9 per cent but at the same time real per capita incomes did not move. This has been mainly due to the employees in industry and services who, although grown in number by 2.5 per cent, registered an unchanged per capita labour income. On the contrary, in the public sector the slight increase of the employees has been mirrored by a slight reduction in per capita income. In agriculture, though, both the number of employees and per capita YGE had increased, whilst domestic workers experienced a reduction in number but a growth of their incomes. Looking at the dynamics by age group, between 2015 and 2019, there was a clear reduction in the number of workers between the ages of 35 and 44 (with per capita gross earnings essentially unchanged) and an increase in the extreme age classes, mostly due to the effect of demographic trends. It should be noted, however, that per capita income of these classes shrunk, albeit slightly. The share of foreign employees from Africa and Asia also increased, but only the former had suffered a reduction in the average income.

In the second sub-period from 2019 to 2022, total employment has increased by 1.6 per cent but per capita gross earnings sharply declined by 2 per cent, and this contraction has been quite generalized. Public employees suffered more than others the impact of inflation and pandemic: all age groups were affected, and women more than men, regardless to occasional employment growth. Between 2019 and 2022, the average

¹⁴ From now on, we intend by domestic employees the personnel employed in activities of private households as employers, corresponding to section T of NACE classification.

¹⁵ The data on the level of education are derived from the Population register, and the available series starts from 2018.

¹⁶ Most of them were probably retirements of voluntary exits.

¹⁷ The share of regular employees in agriculture and the household sector is very small due to extensive use of undeclared or 'grey' work for tax and social contributions evasion purposes.

¹⁸ See Istat 2023.

gross earnings of those with upper secondary education has also lost ground and this also happened to immediately higher ISCED levels.

Table 1.1

Distribution of gross earnings of total employees (a) by year. Years 2015-2022 (values at constant prices 2015. Index: base 2015=100)								
Indicators	2015	2016	2017	2018	2019	2020	2021	2022
N. employees (000)	18.324	18.633	19.130	19.500	19.729	19.646	20.073	20.705
<i>Index (2015=100)</i>	100	101,7	104,4	106,4	107,7	107,2	109,5	113,0
Total Income (000)	433.721	446.619	449.720	459.541	466.108	443.232	466.207	460.128
<i>Index (2015=100)</i>	100	103,0	103,7	106,0	107,5	102,2	107,5	106,1
Per capita Income	23.669	23.970	23.509	23.566	23.625	22.561	23.226	22.223
<i>Index (2015=100)</i>	100	101,3	99,3	99,6	99,8	95,3	98,1	93,9
<i>Percentiles</i>								
p5	2.658	2.768	2.651	2.648	2.683	2.424	2.565	2.615
p10	4.612	4.834	4.644	4.636	4.706	4.021	4.427	4.566
p15	6.572	6.941	6.657	6.652	6.746	5.683	6.305	6.568
p20	8.596	9.035	8.714	8.709	8.800	7.398	8.252	8.494
<i>First quartile</i>	<i>10.546</i>	<i>10.996</i>	<i>10.654</i>	<i>10.651</i>	<i>10.775</i>	<i>9.216</i>	<i>10.184</i>	<i>10.335</i>
p30	12.633	13.109	12.731	12.724	12.875	11.147	12.195	12.279
p35	14.887	15.407	14.972	14.949	15.096	13.230	14.353	14.260
p40	17.241	17.677	17.230	17.173	17.295	15.333	16.545	16.214
p45	19.383	19.681	19.268	19.209	19.279	17.394	18.608	17.950
<i>Median</i>	<i>21.206</i>	<i>21.486</i>	<i>21.070</i>	<i>21.022</i>	<i>21.067</i>	<i>19.298</i>	<i>20.471</i>	<i>19.537</i>
p55	22.823	23.079	22.684	22.712	22.725	21.148	22.199	21.024
p60	24.435	24.634	24.218	24.248	24.235	23.004	23.782	22.548
p65	26.153	26.264	25.846	26.012	25.923	24.816	25.490	24.083
p70	28.227	28.281	27.842	27.924	27.860	26.836	27.430	25.865
<i>Third quartile</i>	<i>30.510</i>	<i>30.577</i>	<i>30.134</i>	<i>30.263</i>	<i>30.192</i>	<i>29.291</i>	<i>29.703</i>	<i>28.193</i>
p80	33.085	33.186	32.774	33.069	32.979	32.183	32.476	30.940
p85	36.606	36.640	36.245	36.609	36.530	35.865	36.088	34.397
p90	42.109	42.043	41.646	41.844	41.909	41.376	41.617	39.560
p95	54.062	54.281	53.528	53.464	53.699	53.301	53.748	50.575
Sources: Istat, Income Register 2015-2022, Population Register 2015-2022								
Notes: (a) Only individuals with annual gross earnings over 1.000 Euro								

Table 1.2

Total employees (a), by economic sector, main demographic characters and year. Years 2015-2022 (%)								
Economic sector, Demographic characters	2015	2016	2017	2018	2019	2020	2021	2022
<i>ECONOMIC SECTOR (b)</i>								
Public sector	19,9	19,6	19,1	18,9	18,6	19,1	19,0	18,7
Private Industry and services	71,6	72,1	72,6	72,9	73,2	72,4	72,8	73,6
Agriculture	4,1	4,1	4,1	4,1	4,0	4,2	4,1	3,8
Domestic employees	4,1	4,0	3,9	3,8	3,7	4,0	3,9	3,6
<i>AGE CLASS (c)</i>								
15-24	5,7	5,8	6,3	6,6	6,8	6,4	7,0	7,5
25-34	19,5	19,3	19,0	18,9	18,8	18,7	18,9	19,2
35-44	27,7	26,9	25,9	24,9	24,0	23,5	22,7	22,1
45-54	29,2	29,2	29,0	28,8	28,6	28,7	28,2	27,6
55-64	16,8	17,5	18,1	18,7	19,4	20,2	20,6	20,9
<i>GENDER</i>								
Females	46,0	46,0	46,0	45,9	45,9	45,8	45,9	46,1
Males	54,0	54,0	54,0	54,1	54,1	54,2	54,1	53,9
<i>EDUCATION LEVEL</i>								
Up to Lower secondary education (ISCED 0-2)				31,0	30,3	29,3	28,7	27,6
Upper secondary education (ISCED 3)				47,6	48,0	48,0	47,9	48,2
Up to short-cycle tertiary education (ISCED 4-5)				5,6	6,0	6,0	6,6	6,9
Bachelor's or equivalent level (ISCED 6)				15,1	15,0	15,9	16,0	16,4
Up to PhD or their equivalent level (ISCED 7-8)				0,7	0,8	0,8	0,8	0,9
<i>CITIZENSHIP (by area)</i>								
Italians	89,5	89,7	89,6	89,5	89,3	89,0	89,1	89,0
EU	3,4	3,4	3,3	3,3	3,2	3,3	3,1	2,9
Extra-EU	2,5	2,4	2,3	2,3	2,3	2,3	2,2	2,2
Africa	1,6	1,6	1,7	1,8	2,0	2,1	2,2	2,3
Asia	2,2	2,2	2,3	2,3	2,4	2,6	2,5	2,6
Other	0,8	0,8	0,8	0,8	0,8	0,9	0,9	0,9
Total	100	100	100	100	100	100	100	100
Source: Istat, Income Register 2015-2022, Population Register 2015-2022								
Notes: (a) Only individuals with annual gross earnings over 1.000 Euros at constant 2015 prices; (b) residual sectors dropped. The sum does not add up to 100; (c) Only age classes with a share > 0.5%. The sum does not add up to 100								

Table 1.3

Employees and gross earnings (a) by year, economic sector and main demographic characters. Years 2015-2022 (Average annual rate of change)					
Economic sector, Demographic characters	2015-2019			2019-2022	
	N. employees	Per capita earnings		N. employees	Per capita earnings
<i>ECONOMIC SECTOR</i>					
Public sector	0,3	-0,2		1,9	-2,8
Private Industry and services	2,5	0,0		1,9	-2,0
Agriculture	1,4	2,0		0,0	0,9
Domestic employees	-0,4	1,1		1,0	-0,7
<i>AGE CLASS (b)</i>					
15-24	6,7	0,2		5,0	-1,1
25-34	0,9	0,7		2,3	-0,3
35-44	-1,7	-0,1		-1,2	-1,6
45-54	1,3	-0,1		0,4	-2,0
55-64	5,7	-0,6		4,0	-2,9
<i>GENDER</i>					
Females	1,8	0,2		1,7	-1,8
Males	1,9	-0,2		1,5	-2,2
<i>EDUCATION LEVEL (c)</i>					
Up to Lower secondary education (ISCED 0-2)	...	...		-1,4	-2,2
Upper secondary education (ISCED 3)	...	...		1,8	-2,7
Up to short-cycle tertiary education (ISCED 4-5)	...	...		6,8	-0,8
Bachelor's or equivalent level (ISCED 6)	...	...		4,6	-2,9
Up to PhD or their equivalent level (ISCED 7-8)	...	...		6,8	-0,2
<i>CITIZENSHIP (by area)</i>					
Italian	1,8	-0,1		1,5	-2,1
EU	0,1	3,4		-0,9	0,7
Europa extra-EU	-0,3	2,1		0,3	0,1
Africa	6,9	-0,6		6,9	0,4
Asia	4,5	1,8		4,7	-0,7
Other	1,9	1,6		4,8	-0,4
Total	1,9	0,0		1,6	-2,0
Sources: Istat, Income Register 2015-2022, Population Register 2015-2022					
Notes: (a) Only individuals with annual gross earnings >1000 Euros; (b) Only age classes with share > 0.5%; (c) ISCED classification groupings: respectively 0-1-2, 3, 4-5, 6, 7-8					

1.2. Distributions by sector and main socio-demographic characteristics.

The distribution of employees' incomes in the period under scrutiny reflects their structural weakness and has also been strongly marked by the pandemic and inflation. Nevertheless, one of the most important aspects to be underlined has to do with the sector heterogeneity of incomes. This heterogeneity clearly places in the private sectors most of low income earners while the public sector provide a sort of benchmark with relatively stable and decent income levels, although at a standstill in nominal terms from the very initial years of the period.

Chart 1.1 illustrates the distribution of employees by level of gross earnings¹⁹. Two elements are clearly noticeable: compared to 2015, in the pandemic year the bulk of employees earning between 19,000 and 35,000 euro per year shrank drastically. At the same time the number of individuals with gross earnings below 8,000 euro increased by one percentage point (around 1.9 million employees) and the number of those earning between 11,000 and 19,000 euro by half a percentage point (around 900 thousand individuals). The effects of job retention measures put in place by Government to offset the effects of the lockdown are evident. The partial recovery in 2021 returned the curve to roughly the initial shape in 2015, but a net shift towards lower income classes occurred in 2022, quite generalized although with some distinguishes. The number of income earners below 7,000 euro was stable, those between 7,000 and 25,000 euro increased sharply and those over this threshold decreased a little, catching up the levels of 2020 again.

More interestingly, when examined by economic sector, gross income distribution reveals a large heterogeneity (Chart 1.2). The public sector has a relatively concentrated distribution while in industry and services there is a large portion of low and very low income owners. In agriculture and domestic services incomes are indeed very low as compared to the other sectors, with very few employees above 10 thousands euro on an annual basis.

The distribution by income class in the public sector appears strongly concentrated between 17,000 euro and 40,000 euro. The quasi-bell shape is multi-modal in the central part, each peak probably representing a subset of employees with the same contractual conditions (and therefore very similar annual gross earnings): the public sector, in fact, is characterised by stronger and more homogeneous rules in labour contracts that discipline the different working profiles in different administration bodies. The curve shows a rather small backward shift towards the lower classes in the year of the lockdown and a further, but sharper, shift of the same negative sign in 2022 following the blow of inflation. In this case, the increase of individuals sliding towards lower income classes is progressively more pronounced for those who earned more than 27,000 euro in the previous year.

With regard to industry and services, in 2020 the increase in the number of workers who moved into lower income classes is spread over almost all classes; this was due (as mentioned before) to job retention schemes and to the interruption of lower quality jobs (especially short-term). The most evident increase regarded two subgroups: those who fell down into the classes up to 10,000 euro and those between 13,000 and 20,000 euro. In 2021, the distribution partly recovered the 2015 shape, except for the slight increase in the number of workers with less than 10,000 euro, who continued to benefit from the social measures started the year before. In 2022, on the other hand, the curve shows a polarisation between those (over 27,000 euro and under 7,000 euro) who maintained their status (albeit for different reasons) and those within this range who clearly worsened their income conditions.

By restricting the view to the extreme years of the period, if one looks at cumulate distributions, several facts are worth noticing (Chart 1.3). Firstly, the difference between the performance of the public and the private sector in 2022: the cumulate curve for civil servants shows a drift to the left and, as mentioned above, the worst performance is associated with income classes with more than 27,000 euro. The lowest quintile in 2015 was

¹⁹ Income classes of 1,000 EUR (at constant prices 2015). Years from 2016 to 2019 have been omitted due to the substantial similarity of their distributions to 2015.

about 21,000 euro and decreased to 17,000 euro in 2022. Similarly, the third decile decreased from 24,000 to 21,000 euro and then the gap narrows as income increases. In industry and services, on the other hand, we see a greater resilience among the income classes below 10,000 euro (possibly due to job retention schemes in act until 2022) and a smoother effect on the rest of the income classes. The deterioration of the situation is evident mostly between the median and the third quartile of the curve. In 2015, for instance, the sixth decile was at 22,000 euro whilst in 2022 it went down to 20,000 euro.

The situation is different in agriculture where a partial improvement is detected in 2022 as the number of those earning between 7,000 and 17,000 euro increases. This phenomenon should be better investigated but could be linked to the partial emersion of undeclared or 'grey' jobs. A slight inversion of the trend can also be observed in 2022 among domestic workers, although in this case it is much more contained: the rigidity of the curve also indicates a very pronounced income compression, which could also in this case be linked to phenomena of irregular work not captured by the data.

Chart 1.1. Distributions of Italian employees by gross earnings class and years (% , values in .000 euro at constant prices 2015)

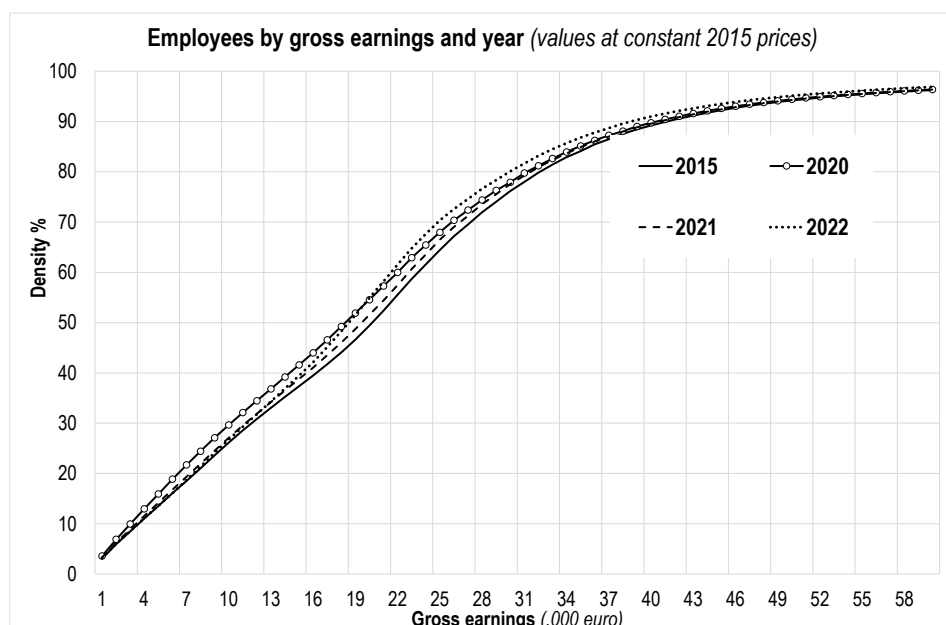
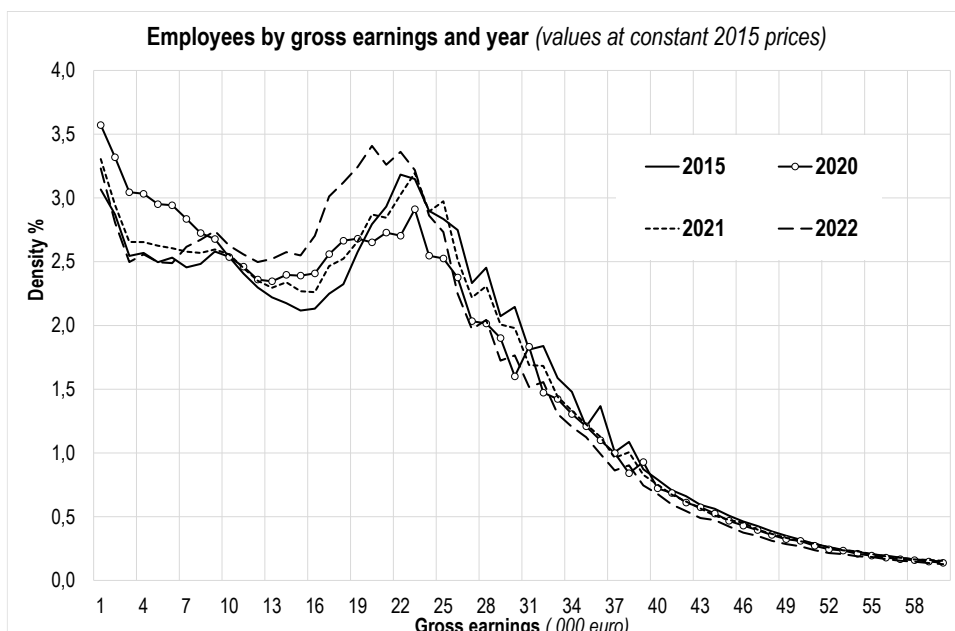


Chart 1.2. Distribution of Italian employees by sector, gross earnings class and years (% , values in .000 euro at constant prices 2015)

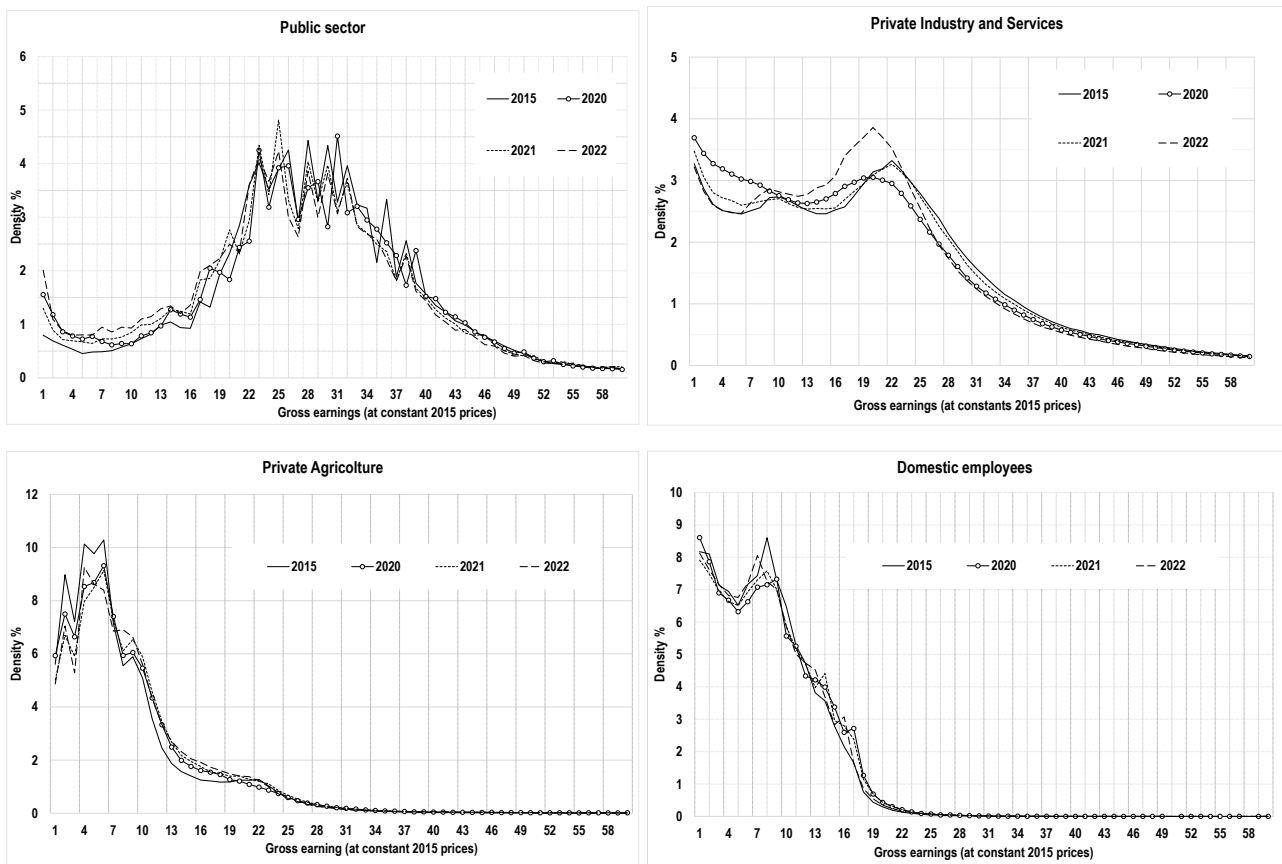
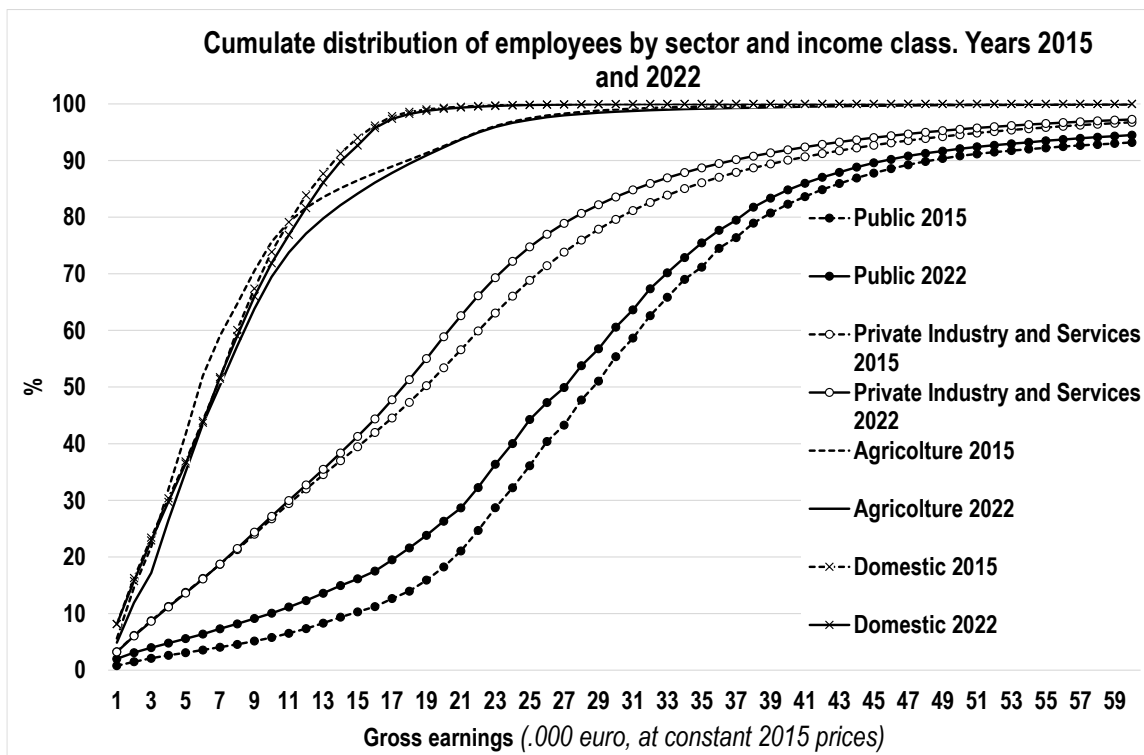


Chart 1.3



1.3 Per capita earnings

The public and the private side of dependent employment tell different stories and seem to represent opposite realities, with structural differences which do emerge clearly also if we consider how labour incomes are distributed. The weakness of private employees are actually quite structural, and this fact is revealed quite clearly if we consider age and gender gaps. Incomes from employment often do not imply acceptable household incomes, especially if agriculture and domestic workers are considered.

In 2022 the average gross earnings of an employee with 25 years was about 18 thousands euro if working in the public sector and about 14 thousands euro in the private sector. For those who were 50 years old their respective YGE was respectively about 32 thousands and 26 thousands euro. The age gap is thus very high, especially in industry and services while it is very low in agriculture (9.200 vs. 10.300 euro) and among domestic workers (7.700 vs 8.300 euro), where earnings are very low and there is no room for meaningful age gaps.

The analysis so far has shown that between 2015 and 2022, given the almost stable employment structure, the main cause of the deterioration in the income conditions of Italian employees has depended more on inflation than on pandemics. The trend in per capita gross earnings confirms a net reduction between 2015 and 2022 for employees in all age classes, especially in the public sector (Chart 1.4). In 2020 the deterioration of per capita levels for public employees was particularly sharp for those over 45 years, but further deterioration happened in 2022, this time affecting all ages. In industry and services the reduction in per capita income in 2022 resembles the trend shown in 2020 although people with 25-34 years appear to be better off in 2022.

In agriculture, on the contrary, per capita levels increase both in 2020 and in 2022 regardless of pandemic or of the inflation boost: in particular, in 2022 they increase more than in 2020 for those below 45 years. Among domestic workers per capita gross earnings increased in 2022 only up to the age of 38, is stable up to 52 and decreased steadily after that age.

As the estimates by gender and age indicate (Chart 1.5), it's no surprise that women show generally lower pay levels than their male colleagues: but the gap is definitely greater in the private sector and in agriculture than in the public sector. Among domestic workers, where male are a minority, the gap between genders is smaller and decreases with age.

In the public sector a 40 years old woman earned on average less than 24.000 euros per year, and the gap with men is about 6.000 euros; it remains constant at least until the age of 60, and then narrows slightly. Among the private employees, a woman in her 40s earns about 16.000 euro, that is 8.000 euro less than a man of the same age: but the gap widens as age increases. A similar trend can be seen in agriculture, although a woman in her 40s earns 8.000 euro and the gap with her male colleagues is about 3.000 euro. Among domestic workers the gap remains constant at around 3.000 euro independently from ages, at least up to 58 years and then narrows considerably.

Differences in per capita income by sex are quite remarkable also according to educational achievements. Females with at most upper secondary education suffer the worst difference with the corresponding males (more than 7.000 euro) and this difference remains constant over the years (Table 1.4). Things improve for more educated females: although in 2018 a female bachelor earns around 28.000 euro against 44.000 euro of an analogous male, the difference seems to start dropping in 2020 and more sharply in 2022. The same happens for females with a master or a PhD. Those females with lower levels of education, instead, are constantly worse off in all years and no improvements have really occurred over time.

Since agriculture and domestic workers are traditionally the least educated, we limit the comparison by gender and education level to the employees of the two main economic sectors (Table 1.5). Here the difference in the levels of gross earnings between stands out. In 2018, in the public sector, a woman with primary education (or a diploma) earned 28 per cent (24 per cent) less than a man, while in the private sector a woman with the same educational achievements earned 47 per cent less than her male colleague (46 per cent for graduates). These gaps increased in the following years only in the public sector, as in the private sector the situation only altered

in the year of the pandemic and then returned to almost the initial level in 2022. Among those with an educational qualification higher than ISCED 3, despite the fact that the gap between genders and sectors is anyway still quite considerable, a slight narrowing of the gender gaps is observed in 2022 compared to 2018 in both sectors.

Things are very different among those who have at least a university degree. The gap between women and men with a degree in the public sector is 40 per cent in 2018 and 2020 but drops to 34 per cent in 2022. In the private sector, on the other hand, it reaches 70 per cent in 2015 and narrows to 61 per cent in 2022. In the public sector the gender gap in gross earnings narrows among those above ISCED 6 (around 31 per cent in 2018 and 26 per cent in 2022). In industry and services, instead, having a doctorate or a master's degree means for women earning 44 per cent less than men in 2022, a figure lower than that in 2018 but still quite impressive.

A final look at household disposable equivalent incomes reveals that the households with only public employees or with at least one civil servant plus at least one private employee are best off since they have a higher probability to belong to the upper quintiles. On the contrary, households whose members are private employees lay more probably in the third quintile, while when members are employed in agriculture or as domestic workers their households finish more probably in the lower quintiles: this happens either if there are no members in the household working in other sectors and if there is at least one private employee.

Households with two members are more frequently placed in the highest quintile, presumably because there are two incomes (e.g. both are labour incomes or one is labour income and the other one comes from a pension). Households with three or more members, instead, are definitely in the lowest quintiles, probably because some of the members are too young to work or because there are unemployed components.

Chart 1.4. Per capita gross earnings by sector and age. Years 2015, 2020 and 2022 (Values at constant prices 2015)

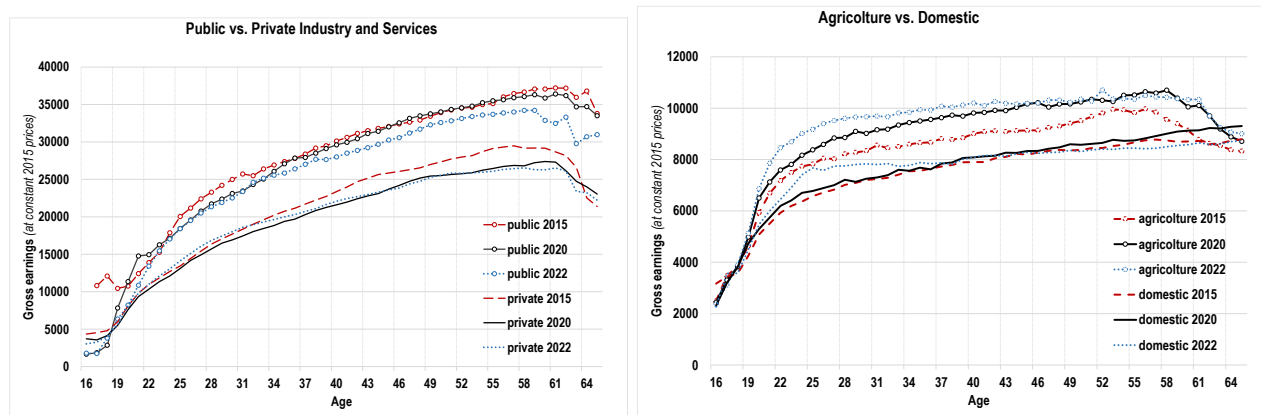


Chart 1.5. Per capita annual gross earnings by sector and gender. Year 2022 (Values at constant prices 2015)

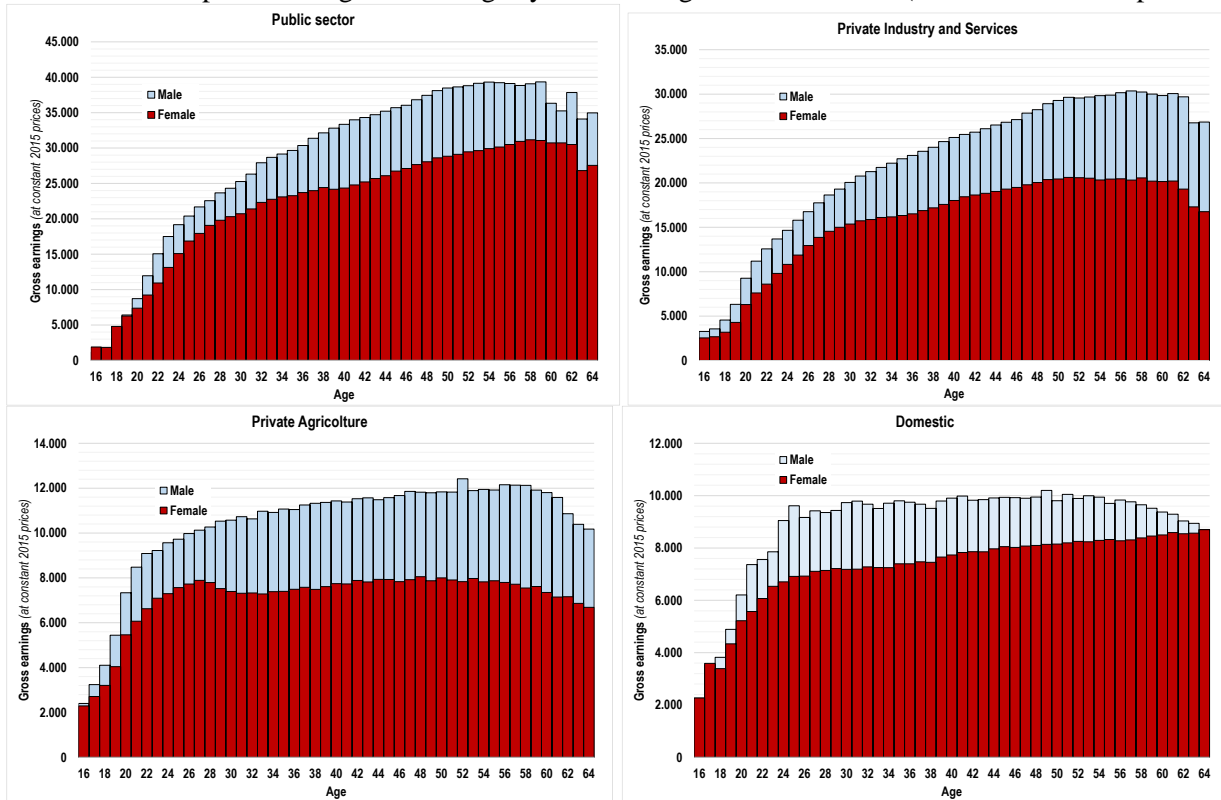


Table 1.4

Per capita gross earnings (a), by year, gender and education(b). Years 2018,2020,2022 (values at constant 2015 prices)						
Education level	2018		2020		2022	
	Females	Males	Females	Males	Females	Males
Up to Lower secondary education (ISCED 0-2)	13.990	20.664	12.950	19.350	12.913	19.294
Upper secondary education (ISCED 3)	18.809	26.260	17.544	24.697	17.144	24.075
Up to short-cycle tertiary education (ISCED 4-5)	20.169	27.606	19.810	27.268	19.832	26.458
Bachelor's or equivalent level (ISCED 6)	28.652	44.308	28.381	43.517	27.150	40.492
Up to PhD or their equivalent level (ISCED 7-8)	32.545	45.143	34.724	47.100	34.263	45.280
Total	19.674	26.583	18.960	25.493	18.704	24.911

Sources: Istat, Income Register 2015-2022, Population Register 2015-2022
 Notes: (a) Only individuals with annual gross earnings (at constant prices) >1000 Euros; (b) ISCED classification groupings: respectively 0-1-2, 3, 4-5, 6, 7-8

Table 1.5

Gender-gap in per capita gross earnings (a), by education level (b) and economic sector. Years 2018, 2020, 2022 (Index. Base: Females=100)						
Education level	Public sector			Private (industry and services)		
	2018	2020	2022	2018	2020	2022
Up to Lower secondary education (ISCED 0-2)	128	130	131	147	151	148
Upper secondary education (ISCED 3)	124	128	128	146	148	145
Up to short-cycle tertiary education (ISCED 4-5)	128	129	126	145	149	143
Bachelor's or equivalent level (ISCED 6)	140	140	134	170	169	161
Up to PhD or their equivalent level (ISCED 7-8)	131	130	126	152	147	144
Total	126	128	126	143	144	141

Sources: Istat, Income Register 2015-2022, Population Register 2015-2022
 Notes: (a) Only individuals with annual gross earnings (at constant prices) >1000 Euros; (b) ISCED classification groupings: respectively 0-1-2, 3, 4-5, 6, 7-8

Table 1.6

Households with at least one employee, by quintile of disposable equivalent income. Year 2021 (Specialization rates)					
Households	I quintile	II quintile	III quintile	IV quintile	V quintile
<i>Sector of employment of households components</i>					
Only private (I&S) sector	106	105	103	96	90
Only public sector	35	75	97	133	161
Only agriculture	271	128	61	28	11
Only domestic workers	287	141	50	14	8
Public and private (I&S) sectors	20	56	109	148	168
Private (I&S) and agriculture sectors	151	149	104	67	30
Private (I&S) and domestic sectors	167	170	101	48	14
Other combinations	124	127	109	85	55
<i>N. of components</i>					
One	97	85	111	114	93
Two	77	91	91	104	136
Three	89	100	98	105	108
More than three	130	119	100	80	71
<i>Citizenship of components</i>					
Only Italian	83	93	103	109	112
Mixed	164	140	92	59	44
Only foreign	238	152	72	27	10
<i>N. of components below 14 yrs.</i>					
None	88	91	101	107	112
One	125	121	98	85	71
More than one	144	134	94	72	57

Sources: Istat, Income Register 2015-2022, Population Register 2015-2022

Part 2. Employees with low earnings in industry and services between 2015 and 2022

2.1 Gross earnings and their components

The characterizing elements of per capita yearly gross earnings (we will use the acronym YGE in the rest of the paper) have recently been analysed by separating three elementary components: hourly wages, monthly intensities and duration of employment (Istat, 2022). The general conclusion was that wage inequalities derive from the interaction of hourly wages and working time, and that referring solely to the level of hourly wages – as it often happens in the national public and policy debate - is largely insufficient and cannot ensure comprehensive explanations neither of wage variability nor of the large extent of low wage areas. In this section we extend the analysis to the eight-year period 2015-2022 by adopting a similar theoretical approach.

In particular, we focus on gross earnings as defined in labour contracts, where they are intended as theoretical gross earnings, in the sense that they represent the gross earnings the employee would have “theoretically” received in the absence of events that may give rise to notional crediting or to occasional increase or decrease of monthly pay. Production bonuses are thus excluded, as also the amounts due for untaken vacations or vacations themselves, arrears due by law or by contracts related to previous years, and pay items related to actual work performance (e.g., overtime). Instead, all recurring competencies normally found in monthly pay (shift allowances, contracted overtime, and values subject to ordinary contributions referring to recurring fringe benefits) are included. In this sense, earnings are gross of both income taxation and employee social contributions. If actual gross earnings had been chosen for the analysis, they would have been affected by the occurrence of such events especially in annual or monthly totals. Our objective here is focusing on a more stable concept of earnings and that’s why: in the rest of the paper we shall use the term gross earnings while referring to theoretical earnings.

The case of job retention schemes is paradigmatic. During pandemics, the use of job retention schemes was extended to about one half of Italian employees in industry and services²⁰. Employers were allowed to stop paying for their employees, while the State subsidized, through social transfers, the income of those individuals and above all their employers. In the analyses made in Part 1 of this work this effect was intended to emerge clearly since the object of the analyses were the actual monetary flows from employers to employees. In the analyses of Part 2 and 3, instead, the effect will not be visible, since low earnings dynamics are studied independently from this kind of events: during labour retention schemes, formal labour contracts remained unchanged. The use of theoretical gross earnings, as we adopted in this contexts, is thus intended to target the structural components of remunerations.

At the individual level, YGE are split with simple algebra as the product of three components. Hourly gross earnings (HGE) are derived as the ratio between annual amount of contractual gross earnings and total workable hours (WH):

$$HGE = \frac{\sum YGE}{\sum WH}$$

Monthly intensity (MOI) is computed as the ratio between workable hours and the number of months in the year in which the employee had a labour contract (NM) of whatever length:

$$MOI = \frac{\sum WH}{\sum NM}$$

The duration (DUR) is the average number of months covered in the year, at least partially, by a labour contract and the average is calculated with respect to the N employees belonging to the domain under scrutiny:

$$DUR = \frac{\sum NM}{N}$$

Using this little formalization, YGE is given by the product of these three components:

$$YGE = HGE * MOI * DUR$$

The analysis of YGE and of its components is here extended to the period 2015-2022 by taking advantage of the progressive availability of Istat statistical register, and of the opportunities opened up by their integrated use, such as analyzing yearly data on earnings longitudinally and comparing trends in the observed period in order to study the evolution of their wages and the transitions to and from low-wage areas.

To summarize some results, we found that over the period examined, YGE declined in real terms: while in 2022 this can be explained by the growth in the inflation rate, more generally YGE were hit by the increased adoption of labour contracts of lower quality, namely short-term and part-time jobs. A substantial, and rather stable over time, share of employees dropped in the low-wage areas, especially low YGE areas, essentially due to the low-intensity of employment relationships which has affected their income conditions with important consequences even at the household level. Over the entire period, about 60 per cent of the employees experienced at least one year under the thresholds of low pay. In particular, only a minor portion of these employees succeeded to bring their pay back to the above thresholds²¹ (usually through better quality contractual conditions), while a large portion of the other workers either exited the status of employment (probably not voluntarily) or never managed to permanently get rid of the “low pay trap”.

²⁰ De Gregorio et al. 2021.

²¹ As it will be cleared with larger detail further on, two thresholds have been estimate, one on YGE and one on HGE. The first one is fixed at 60% of the corresponding overall median, the second at 66% of the median calculated on standard jobs.

2.1. The evolution of annual gross earnings

Between 2015 and 2022, the number of employees in business and services rose by about two million (Table 2.1)²². This significant growth (+16%) has affected not so much the average age of employees (shallowly increased from 39,5 to 40,3 years) as their whole age structure. In particular, we notice a sort of polarization. On the one side, the increase in the weight of the younger age groups due to the flows of new entrants (despite the stop in the year of the pandemic) and, on the other side, the increase in the older groups (due to the annual drift of age cohorts) resulting in a partial retreat in the relative weight of the middle age classes. The weight of foreign citizens grew by about one percentage point - albeit limited to the contribution of African and Asian individuals – as well as the educational level of employees due to the slow extinction of people with lower ISCED scores.

Over the same period, YGE lost 10.1 percent of their value in real terms, ranking below the level attained in 2015. This result was largely determined by the dynamics of consumer prices, particularly in 2022, but it can be also linked to the decline in YGE already manifested in the previous years when inflation was decidedly modest (Table 2.2). A significant exception is 2020. The extensive use of job retention schemes - with almost half of the employees involved - supported employment relationships mainly among holders of standard jobs (i.e. full-time open-ended contracts). Consequently, the growth in per capita YGE (+3.6 percent compared to 2019) derives from the decrease of employees with non-standard contracts (whose earnings are generally lower).

Net of the pandemic year, the negative dynamics of YGE derives from the combination of the reduction in real HGE and the decline in the intensity and duration of jobs that took place until 2018 and after 2020. Considered by gender, this dynamic does not reveal any specific trend: the structural evidence that shows a YGE 30% higher for men remains constant in the period, and depends only for a minor part by differences in HGE, while much more important is the role played by the monthly intensity of labor relations. The latter evidence can be explained, in turn, by the extensive use of female workforce with part-time contracts.

Changes in the composition of employees by type of contract also seem to have played a decisive role in determining the decline in per capita wages (Table 2.3). While open-ended contracts (full-time or part-time) reveal a substantial stability in YGE, since 2017 their weight has gradually and significantly decreased, albeit net of the rebound observed in 2020. In 2022 the incidence of standard jobs as compared to 2015 lost about 4 percentage points in terms of employees, while the incidence of part-time positions, also on an open-ended basis, decreased by about 2.5 percentage points. The increase in the number and relative weight of fixed-term employees has proceeded hand in hand with the simultaneous reduction in hourly wages since the early years of the observed period, and in the intensity and duration of employment relationships.

²² As in the rest of Part 2 and 3 of this paper, the figure refers to employees between the ages of 15 and 64 who are part of the resident household population as of December 31 of the reference year, net of entrepreneurs and old-age pension holders: entrepreneurs often result as employees of the same enterprise that they own, so we excluded them from the analysis. Specifically we included all individuals with at least one earnings event from employment relationships with non-agricultural private sector enterprises.

Table 2.1

Employees, by year and main demographic characters. Years 2015-2022 (Number in thousands. % distributions)								
Demographic characters	2015	2016	2017	2018	2019	2020	2021	2022
Total	13.026	13.279	13.814	14.144	14.339	14.107	14.530	15.059
GENDER								
Females	41,1	41,2	41,6	41,7	41,8	41,2	41,3	41,6
Males	58,9	58,8	58,4	58,3	58,2	58,8	58,7	58,4
AGE CLASS								
15-24	8,1	8,3	9,3	9,6	9,9	9,1	10,0	10,6
25-34	23,9	23,5	23,3	23,1	22,8	22,6	22,5	22,3
35-44	29,9	28,9	27,7	26,7	25,8	25,3	24,3	23,4
45-54	26,9	27,2	27,2	27,3	27,4	28,0	27,6	27,0
55-64	11,2	12,1	12,6	13,3	14,1	15,0	15,5	16,7
CITIZENSHIP (by area)								
Italian	90,3	90,4	90,3	90,0	89,8	89,4	89,5	89,4
EU	3,0	3,0	3,0	3,0	2,9	3,0	2,9	2,8
Europe non EU	2,1	2,1	2,1	2,1	2,1	2,0	2,0	2,0
Africa	1,8	1,8	1,8	1,9	2,0	2,2	2,3	2,4
Asia	2,1	2,1	2,2	2,3	2,4	2,6	2,5	2,5
Other areas	0,7	0,7	0,7	0,8	0,8	0,8	0,8	0,9
EDUCATION LEVEL								
ISCED 0-2				31,2	32,8	32,1	30,5	29,6
ISCED 3				51,0	50,3	50,8	51,1	51,4
ISCED 4-5				5,6	5,3	5,7	6,0	6,4
ISCED 6				11,9	11,2	11,1	12,0	12,2
ISCED 7-8				0,4	0,4	0,4	0,4	0,4

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Notes: Individuals with at least an earning event with private non-agriculture enterprises, belonging to the resident population, living in households, excluding entrepreneurs and those who are in retirement. Data on education level are available from the population register only from 2018.

Table 2.2

YGE of employees, by year, gender and YGE component. Years 2015-2022 (Values at constant 2015 prices)															
Years	Employees (a)	YGE (b)				Women % on total (a)	YGE (b)				YGE (b)				
		YGE (b)	Components				YGE (b)	Components			YGE (b)	Components			
			HGE (c)	Monthly intensity (d)	Duration (e)			HGE (c)	Monthly intensity (d)	Duration (e)		HGE (c)	Monthly intensity (d)	Duration (e)	
		TOTALE					WOMEN				MEN				
2015	13.026	20.908	13,4	154	10,1	41,1	17.258	12,3	140	10,0	23.458	14,0	164	10,2	
2016	13.279	20.840	13,4	150	10,3	41,2	17.159	12,4	136	10,2	23.423	14,0	160	10,4	
2017	13.814	20.188	13,2	149	10,2	41,6	16.548	12,3	134	10,1	22.778	13,8	159	10,4	
2018	14.144	19.983	13,1	149	10,3	41,7	16.420	12,2	134	10,1	22.527	13,6	159	10,4	
2019	14.339	20.044	13,1	149	10,3	41,8	16.472	12,2	134	10,1	22.605	13,6	159	10,4	
2020	14.107	20.771	13,2	152	10,3	41,2	17.637	12,4	141	10,1	22.971	13,7	160	10,5	
2021	14.530	20.201	13,1	150	10,3	41,3	16.699	12,2	136	10,0	22.662	13,5	160	10,4	
2022	15.059	18.797	12,2	150	10,3	41,6	15.495	11,4	136	10,0	21.147	12,6	160	10,4	
		Rates of change (f)													
2016		-0,3	0,5	-2,6	1,8		-0,6	0,9	-3,1	1,7		-0,1	0,3	-2,3	1,9
2017		-3,1	-1,4	-1,0	-0,8		-3,6	-1,1	-1,5	-1,1		-2,8	-1,6	-0,6	-0,6
2018		-1,0	-1,1	0,0	0,0		-0,8	-0,6	0,0	-0,1		-1,1	-1,3	0,1	0,2
2019		0,3	0,2	0,0	0,1		0,3	0,3	0,1	-0,1		0,3	0,1	0,0	0,2
2020		3,6	0,7	2,3	0,5		7,1	1,2	5,1	0,6		1,6	0,5	0,6	0,5
2021		-2,7	-1,2	-1,3	-0,3		-5,3	-1,1	-3,6	-0,7		-1,3	-1,4	0,1	-0,1
2022		-6,9	-6,8	0,0	-0,2		-7,2	-6,9	0,1	-0,3		-6,7	-6,6	0,0	-0,1

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Note: (a) Individuals with at least an earning event with private non-agriculture enterprises, belonging to the resident population, living in households, excluding entrepreneurs and those who are in retirement. (b) Average YGE. (c) YGE by workable hour. (d) Workable hours in each month under contract. (e) Number of months with a contract. (f) With respect to the preceding year.

Table 2.3

YGE, by year, type of job and component. Years 2015-2022 (Distribution and average annual rate of change. Values at constant 2015 prices)										
Type of job (p)	Employees % (a)		Per capita yearly gross earnings YGE (b)							
			2022				Average rate of change 2015-2022			
	2015	2022	Components				Components			
			YGE	HGE (c)	Monthly intensity (d)	Duration (e)	YGE	HGE (c)	Monthly intensity (d)	Duration (e)
Only standard (g)	55,4	51,5	26.599	13,5	172	11,5	-0,9	-1,1	-0,2	0,3
Only full-time short-term (h)	8,1	9,9	9.561	9,9	151	6,4	-1,3	-1,6	-0,4	0,6
Only part-time open-ended (i)	19,4	16,9	11.591	9,9	107	11,0	-0,4	-1,2	-0,2	1,0
Only part-time short-term (l)	5,1	7,6	3.959	8,4	83	5,6	-1,2	-1,5	-0,5	0,9
Mixed types, also standard (m)	7,7	7,9	17.054	9,8	159	10,9	-0,8	-1,4	-0,1	0,7
Other mixed types (n)	4,2	6,2	8.683	8,5	110	9,3	-0,7	-1,4	0,2	0,5
Total	100	100	18.797	12,2	150	10,3	-1,5	-1,3	-0,4	0,2

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Notes: (a) Individuals with at least an earning event with private non-agriculture enterprises, belonging to the resident population, living in households, excluding entrepreneurs and those who are in retirement. (b) Average YGE. (c) YGE by workable hour. (d) Workable hours in each month under contract. (e) Number of months with a contract. (f) with respect to the preceding year. (g) Employees with only standard jobs in the year. (h) Employees with only full-time short-term jobs in the year. (i) Employees with only part-time open-ended jobs in the year. (l) Employees with only part-time short-term jobs in the year. (m) Employees with more than one type of job in the year, among which also standard jobs. (n) Employees with more than one type of job in the year, among which never standard jobs. (p) Employees are classified on the basis of the type of jobs they experience during the year, independently of the number of employers.

2.3. The employees with low earnings

Following an analysis tool currently used in the literature, two thresholds are introduced to identify employees with low earnings: one on YGE and the other on HGE (Table 2.4). The first threshold is fixed at 60 percent of median YGE, where the median is calculated on all employees belonging to the resident population. The second threshold identifies employees whose hourly wage is less than two-thirds of HGE median, calculated only on standard labor relations, excluding apprentices. At constant prices, the value of the two thresholds decreases from 2020, while at current prices they maintain a slightly increasing trend: in 2022 the threshold for YGE is at current prices slightly above 12 thousand euros, while HGE threshold is about 8.5 euros per hour²³.

By 2022, the share of employees were the YGE threshold²⁴ is just under 30 percent. Such proportion is quite constant over the years but shows a slight decline from 2019 onwards. The number of individuals below the threshold (which at the end of the period numbered 4.4 million, i.e. over 400,000 more than in 2015) follows the increase in the total number of employees (Table 2.5). People with non-standard contracts, as expected, are found more frequently in the low YGE area. It's the case of about a half of part-time open-ended employees whose incidence in the below-the-threshold group has fallen steadily since 2015. However, the most critical situations are among employees with fixed-term jobs, especially those with part-time contracts. For these categories, the duration and intensity of labour contract affect heavily the overall compensation.

Employees with low HGE are 1.4 million in 2022 (9.3 percent of the total), down from about 1.7 million recorded in 2018. Again, short-term jobs are undoubtedly the most vulnerable, especially if they are also part-time contracts.

Employees with standard jobs, although relatively less affected by low pay, significantly fuel the area of critical pay: in 2022 about 400,000 low-YGE and 300,000 low-HGE employees came from standard job holders. At the opposite end, about 3 million low-YGE workers held part-time jobs (Table 2.6). Young people, women and foreign citizens were the most frequent figures in non-standard jobs and also those most associated with

²³ The two thresholds are calculated on the same reference population used in the analysis, excluding entrepreneurs and retired people.

²⁴ From now on we shall refer to low YGE or low HGE to intend employees below the corresponding threshold.

low earnings. In particular, two out of three young people are below YGE threshold, and those with low HGE account for between one-quarter and one-third of the target subpopulation. Among the population with at least a bachelor's degree, the incidence of low-YGE appears to be about half of the total figure.

When family ties are taken into account, households with low-YGE employees verge on 4 million at the end of the observed period: they steadily account for about 35 percent of total households with employees and have slightly more members (3 individuals per household versus 2,6), a figure that is also quite stable over time (Table 2.7). The presence of low-YGE employees significantly affects household incomes: any other labour income of their own or other household members' is unlikely to provide adequate support to the family's economic wellbeing. In fact, if we consider the equivalent disposable incomes²⁵, the presence of employees with low YGE is associated with a higher probability of ending up in the poorest fifth, nearly twice as high as for the rest of households with employees, with a significant presence even in the second fifth.

Table 2.4

Thresholds (a) adopted to identify the employees with low earnings, by year and type of threshold (values at current and constant 2015 prices)				
Year	YGE		HGE	
	Current prices	Constant 2015 prices (b)	Current prices	Constant 2015 prices (b)
2015	11.564	11.564	8,0	8,0
2016	11.738	11.750	8,0	8,1
2017	11.477	11.330	8,1	8,0
2018	11.497	11.217	8,2	8,0
2019	11.621	11.261	8,3	8,0
2020	11.964	11.616	8,3	8,0
2021	11.975	11.405	8,3	7,9
2022	12.056	10.557	8,5	7,4

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Notes: (a) YGE threshold is 60% of the median value, excluding entrepreneurs and old-age pension holders. HGE threshold is equal to 66 percent of the median value calculated on standard jobs only, excluding apprentices, entrepreneurs and old-age pension holders. (b) Values at constant prices refer to 2015 and are calculated by applying changes in the general HICP index.

²⁵ For each household, the sum of the individual incomes has been divided by a family coefficient based on OECD-modified equivalence scale in order to take into account the different compositions.

Table 2.5

Employees with low earnings, by year, type of threshold and type of job. Years 2015-2022 (Number in thousands. % Incidence)								
Year	Employees below thresh. (b)	Incidence % by type of job (a)						
		Total	Only standard (c)	Only full-time short-term (d)	Only part-time open-ended (e)	Only part-time short-term (f)	Mixed types, also standard (g)	Other mixed types (h)
LOW YGE								
2015	3.947	30,3	8,1	65,5	56,2	93,9	22,9	72,8
2016	3.912	29,5	5,8	63,9	54,0	93,9	23,4	73,3
2017	4.170	30,2	5,2	60,4	49,7	92,5	22,1	71,4
2018	4.260	30,1	5,0	58,2	48,0	91,7	18,9	69,5
2019	4.315	30,1	4,8	63,7	47,7	93,8	17,5	69,7
2020	4.213	29,9	4,0	68,9	49,4	94,5	18,5	73,2
2021	4.317	29,7	4,3	66,8	47,6	94,2	17,2	70,7
2022	4.413	29,3	5,1	63,4	47,0	93,8	15,2	66,9
LOW HGE								
2015	1.222	9,4	4,6	17,9	12,8	22,5	11,5	20,6
2016	1.273	9,6	4,5	17,8	13,0	23,2	12,3	21,3
2017	1.564	11,3	4,8	20,3	14,3	26,2	14,1	24,5
2018	1.688	11,9	4,8	20,7	14,8	27,0	14,1	25,3
2019	1.650	11,5	4,6	21,7	14,2	25,9	13,2	24,4
2020	1.539	10,9	4,5	20,8	14,3	25,1	13,0	23,2
2021	1.531	10,5	4,2	19,8	13,2	25,0	12,0	22,5
2022	1.400	9,3	3,7	18,0	11,4	21,9	10,0	19,8

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022, Inps, Uniemens 2015-2022.

Note: (a) Employees are classified on the basis of the type of jobs they experience during the year, independently of the number of employers. (b) Individuals with at least an earning event with private non-agriculture enterprises, belonging to the resident population, living in households, excluding entrepreneurs and those who are in retirement. (c) Employees with only standard jobs in the year. (d) Employees with only full-time short-term jobs in the year. (e) Employees with only part-time open-ended jobs in the year. (f) Employees with only part-time short-term jobs in the year. (g) Employees with more than one type of job in the year, among which also standard jobs. (h) Employees with more than one type of job in the year, among which never standard jobs.

Table 2.6

Employees with low earnings, by year, type of threshold and main demographic characters. Years 2015-2022 (Number in thousands. % Incidence)								
Years	Employees below the thresh. (a)	Incidence %						
		Total	15-24 yrs	25-34 yrs	Female	Foreign.	ISCED 0-2	ISCED 7-8
LOW YGE								
2015	3.947	30,3	67,4	37,3	39,0	47,0		
2016	3.912	29,5	67,0	36,2	38,4	46,2		
2017	4.170	30,2	69,0	36,6	39,0	46,1		
2018	4.260	30,1	68,2	36,2	38,9	45,2	34,0	19,5
2019	4.315	30,1	68,1	35,8	39,1	44,6	34,2	18,1
2020	4.213	29,9	66,6	35,9	38,9	45,0	33,6	18,3
2021	4.317	29,7	68,5	34,8	39,0	43,4	33,4	18,3
2022	4.413	29,3	66,6	32,7	38,9	42,1	33,4	18,0
LOW HGE								
2015	1.222	9,4	28,2	11,9	11,7	18,4		
2016	1.273	9,6	28,6	12,2	11,8	18,8		
2017	1.564	11,3	31,8	14,1	13,8	21,2		
2018	1.688	11,9	32,3	14,8	14,6	21,8	14,4	5,5
2019	1.650	11,5	31,6	14,1	14,2	20,4	13,9	4,9
2020	1.539	10,9	29,9	13,6	13,4	19,8	13,3	4,6
2021	1.531	10,5	28,5	12,8	13,1	18,3	12,8	4,4
2022	1.400	9,3	25,6	10,9	11,9	15,5	11,2	3,9

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022, Inps, Uniemens 2015-2022.

Notes: (a) Individuals with at least an earning event with private non-agriculture enterprises, belonging to the resident population, living in households, excluding entrepreneurs and those who are in retirement.

Table 2.7

Households with at least one component with low YGE, by quintile of disposable equivalent household income and year. Years 2015-2022 (Specialization rates with respect to the households of employees (a))									
Years	Households				Quintile of disposable equivalent household income				
	Number		Number of components (d)		First	Second	Third	Fourth	Fifth
	N (.000)	Incidence % (c)	Avg.	Incidence % (e)					
2015	3.523	35,1	3,1	37,8	207	116	89	53	35
2016	3.491	34,2	3,1	37,0	207	118	88	53	34
2017	3.687	35,2	3,1	38,2	205	119	88	53	34
2018	3.766	35,2	3,1	38,3	205	119	87	54	35
2019	3.815	35,3	3,1	38,5	204	120	86	54	36
2020	3.748	34,9	3,0	37,7	199	122	87	56	35
2021	3.827	35,0	3,1	38,1	198	121	87	57	38
2022 (b)	3.939	35,0	3,0	38,2	188	122	88	58	40

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Notes: (a) The specialization rate is obtained by the ratio between the share of households with at least an employee below YGE threshold and the share of households in the quintile. A value over 100 marks an over the average frequency. (b) For the year 2022 calculations are made based on 2021 personal incomes. (c) % of households with at least one component with low YGE. (d) Average number of components in the households with at least one employee with low YGE. (e) % of components in households with at least an employee with low YGE.

2.4. Employees with low earnings on a longitudinal perspective

In order to highlight some aspects of wage trends, the set of employees of private non-agricultural enterprises between 2015 and 2022 was projected onto the resident population of 2022, restricting the analysis to individuals who were between the ages of 25 and 60 in 2022 (and therefore 18-53 in 2015). This made it possible, on the one hand, to look backward at the events and employment continuity of this sub-population and, on the other hand, to examine the trajectories of entries and exits of the individuals from low-wage areas.

In 2022, those who had experience as employees between 2015 and 2022 totaled 16.5 million, or 58.5 percent of the entire 25-60 population (Table 2.8)²⁶. A large proportion of them (about 12.9 million) are still employed in 2022, while the remaining 3.6 million who were without a contract in that year, were nonetheless among employees in at least one of the previous years.

Among those who are in employment in 2022 there is a neat predominance of individuals with continuous traces of employment in all years of the observed period (about 7.7 million²⁷), while others – generally younger people - show continuous traces of employment only from 2019 onward. These two cohorts together account for 10 million individuals. A further set of about 1.4 million of individuals are new employees hired from 2020²⁸. The remaining lot consists of more than 1.2 million individuals with non-continuous job experience, albeit in many cases repeated over several years. The last lot is composed by individuals no more in employment in 2022: part of them since longer time (1.6 million had no signs since 2019), while an additional 2 million individuals gradually exited private employment between 2019 and 2022.

The cohort of persistent workers, in addition to being the largest, is also the cohort with the highest HGE and YGE: their real YGE growth was slow but appreciable until the abrupt slowdown brought about by the surge in inflation in 2022 (Table 2.9). Of course, this is a very heterogeneous cohort, as will be seen below. Employees with more recent continuous job signals, although starting from very modest wage levels, show a remarkable dynamics in YGE in the face of somewhat static HGE: these are individuals whose conditions have improved through a greater intensity of labor relations and who have gone through the pandemic period

²⁶ This subpopulation of employees accounts for about two-thirds of the male population and just over half of the female population, more than 70 percent of the under-35s and just over 50 percent of the over-50s (the latter likely to be more absorbed in public employment). Looking only at those employed in 2022, the incidence of younger people drops by about 20 percentage points, confirming the greater intermittency of employment relationships during the observed period.

²⁷ In the following, we will refer to these employees with pay signals in all years of the period by referring to them as "persistent."

²⁸ "New" in this case stands for "with no employment relationship from 2015 to 2019."

practically unscathed, achieving greater stability precisely in those years. The rest of the cohorts show more irregular wage dynamics, as they are essentially characterized by modest earnings, especially in YGE.

In contrast, about 10 million employees ended up, even episodically, below one of the two thresholds. This is more than one-third of the entire 2022 population and more than 60 percent of the subpopulation of employees (Table 2.10). Individual experiences of low HGE are usually associated with low YGE, although the reverse is valid more rarely. Of the 9.8 million individuals with low YGE events (including 6.7 million below the threshold for more than two years), only 3.7 million also experienced low HGE. For the others, the annual wage shortfalls enlighten a problem of employment intensity and contract breaks. Symmetrically, however, among the 4 million employees who experienced low HGE during the period, fewer than 10 percent exceeded the low YGE threshold each year: in short, then, when hourly wages are very low, it is unlikely that annual wages are not also low.

Employees with persistent signals between 2015 and 2022 are less frequently in the low-pay areas, although nearly a third of them spent at least one year in the low YGE class. Far greater is the incidence of low-pay episodes in the other cohorts of employees: more than 80 percent of employees have experienced periods of low annual pay, even among those no longer employed in 2022, with peaks of more than 90 percent among employees with the most discontinuous work trajectories. A large portion of them experienced low contract duration and extremely limited work intensity. Furthermore, if only the threshold on HGE is considered, trends by cohort reveal a further sign of weakness among employees with more discontinuous labour contracts.

In the cohorts characterized by persistent labour relations, on the other hand, the annual incidence of the employees with low earnings halved over the period. This is because a substantial group of workers (about 1.8 million) raised permanently their YGE as of 2019, and just under 1.2 million individuals raised their HGE above the threshold (Table 2.11). At the opposite end of the spectrum, the portion of employees who have never left permanently their wage insecurity is certainly very large. A group of 4.1 million individuals, in fact, has never risen above the YGE threshold: of these almost 900,000 come from the persistent cohorts and more than three million from those who in 2022 were without a contract (even for a long time), denoting clear signs of pay weakness even when they were previously active. Employees who did not succeed in the observed period to get out of low HGE are proportionately a smaller group (but still 900,000): for them it seems that improving HGE over the threshold is relatively easier than resolving with the YGE threshold. Finally, if we consider all employees who are unable to permanently break out of poor pay levels or those who see their situation worsening, we observe that even in the most persistent cohorts of workers, there is less than 40 percent of individuals who manage to cross the threshold of low pay, whether hourly or annual.

The cohort of the most persistent employees is definitely the largest and most heterogeneous in both composition and evolution of their earnings. It is overwhelmingly composed of adults, males, with fewer foreigners (and also fewer university graduates, due to a predictably age-related effect). On the opposite side, if we look at the portion of those who experienced periods of low pay between 2015 and 2022, the share of women, young people, and foreigners is markedly higher, and the share of university graduates appears conspicuously lower (Table 2.12).

After all, women, young people and foreigners are generally the most associated with low earnings, which regarded nearly 70 percent of women and more than 80 percent of young people and foreigners with employment signals during the period. The cohorts of employees without a contract in 2022, especially in the segments with low earnings, result to be characterized by a high female composition signaling a specific tendency to undergo even long-term contract interruptions. Employees with persistent relationships as of 2019 are on average younger, as well as the cohort with more recent access to employment positions; the latter in particular also show a significant presence of foreigners and university graduates. Finally, the cohorts of employees with intermittent jobs also have a strong youth component.

Table 2.8

Employees by cohort of persistence and year in which they were employed. Years 2015-2022 (thousands)									
Cohorts (a)	Employees (i)	2015	2016	2017	2018	2019	2020	2021	2022
Employed in 2022	12.885	8.859	10.447	10.584	10.807	10.813	11.917	12.116	12.885
Persistent since 2015 (b)	7.715	7.715	7.715	7.715	7.715	7.715	7.715	7.715	7.715
Other persistent since 2019 (c)	2.558	458	1.717	1.849	2.067	2.558	2.558	2.558	2.558
Entry in 2020 (d)	1.367						786	838	1.367
Discontinuous with some seniority (e)	932	602	837	851	832	434	728	817	932
Other discontinuous (f)	314	84	178	169	193	106	130	188	314
Employees only before 2022	3.644	2.056	2.838	2.851	2.876	1.636	1.782	1.590	...
Only before 2019 (g)	1.612	1.080	1.287	1.257	1.222				
Other exited between 2019 and 2022 (h)	2.032	977	1.551	1.595	1.654	1.636	1.782	1.590	...
Total	16.530	10.916	13.285	13.435	13.682	12.449	13.699	13.706	12.885

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Notes: (a) Individuals with at least an earning event with private non-agriculture enterprises between 2015 and 2022, belonging to the resident population in 2022, living in households, excluding entrepreneurs and those who are in retirement and aged 25-60. Here they are classified on the basis of their presence among employees; (b) Employees in every year of the period; (c) Others employees in every year from 2019; (d) Other employees for the first time from 2020 on; (e) Employees present discontinuously in the period but at least for four years. (f) Other discontinuous employees (g) Employees only until 2018, eventually discontinuously; (h) Other employees in 2019-2021, eventually discontinuous; (i) Number of employees with earnings in at

Table 2.9

Gross earnings, by cohort and year. Years 2015-2022 (values at constant 2015 prices)									
Cohorts (a)	2015	2016	2017	2018	2019	2020	2021	2022	
				YGE					
Employed in 2022	21.482	21.492	21.218	21.319	21.613	22.399	21.937	19.925	
Persistent since 2015 (b)	22.895	23.828	24.221	24.622	25.110	25.622	25.825	24.142	
Other persistent since 2019 (c)	11.130	8.892	10.580	12.642	13.882	15.955	17.057	16.484	
Entry in 2020 (d)						8.924	11.228	11.203	
Discontinuous with some seniority (e)	13.057	12.494	11.383	10.169	9.337	16.098	10.739	11.201	
Other discontinuous (f)	8.672	5.365	3.327	3.502	3.872	4.706	7.152	8.196	
Employees only before 2022	14.014	13.761	12.857	12.087	11.554	10.961	7.801		
Only before 2019 (g)	12.628	11.873	10.039	6.724					
Other exited between 2019 and 2022 (h)	15.547	15.432	14.765	14.124	11.554	10.961	7.801		
Total	20.076	20.128	19.811	19.912	20.291	21.272	21.062	19.925	
				HGE					
Employed in 2022	13,1	13,2	13,1	13,0	13,1	13,2	13,2	12,3	
Persistent since 2015 (b)	13,3	13,4	13,5	13,6	13,8	14,0	14,0	13,3	
Other persistent since 2019 (c)	11,0	10,7	10,3	10,4	10,6	10,9	11,0	10,6	
Entry in 2020 (d)						11,0	11,0	10,4	
Discontinuous with some seniority (e)	11,1	11,0	10,8	10,6	10,6	11,6	10,7	10,0	
Other discontinuous (f)	11,4	10,8	9,6	9,4	9,5	9,7	10,7	9,7	
Employees only before 2022	11,9	11,9	11,7	11,5	11,6	11,7	11,2		
Only before 2019 (g)	11,9	11,9	11,6	11,1					
Other exited between 2019 and 2022 (h)	11,8	11,9	11,7	11,6	11,6	11,7	11,2		
Total	12,9	13,0	12,9	12,8	13,0	13,2	13,1	12,3	

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Notes: (a) Individuals with at least an earning event with private non-agriculture enterprises between 2015 and 2022, belonging to the resident population in 2022, living in households, excluding entrepreneurs and those who are in retirement and aged 25-60. Here they are classified on the basis of their presence among employees; (b) Employees in every year of the period; (c) Others employees in every year from 2019; (d) Other employees for the first time from 2020 on; (e) Employees present discontinuously in the period but at least for four years. (f) Other discontinuous employees (g) Employees only until 2018, eventually discontinuously; (h) Other employees in 2019-2021, eventually discontinuous; (i) Number of employees with earnings in at least one month between 2015-2022.

Table 2.10

Employees with low earnings, by cohort and type of threshold. Years 2015-2022 (Numbers in thousands)									
Cohorts (a)	Employees (i)	of whom: with low earnings							
		YGE or HGE		YGE		HGE		YGE and HGE	
		N	Incid. %	N	Incid. %	N	Incid. %	N	Incid. %
Employed in 2022	12.885	6.935	53,8	6.656	51,7	2.953	22,9	2.674	20,7
Persistent since 2015 (b)	7.715	2.501	32,4	2.283	29,6	1.049	13,6	830	10,8
Other persistent since 2019 (c)	2.558	2.160	84,4	2.121	82,9	998	39,0	959	37,5
Entry in 2020 (d)	1.367	1.086	79,5	1.069	78,2	327	24,0	310	22,7
Discontinuous with some seniority	932	882	94,6	878	94,2	437	46,9	433	46,5
Other discontinuous (f)	314	306	97,5	306	97,3	141	45,0	141	44,8
Employees only before 2022	3.644	3.124	85,7	3.099	85,0	1.099	30,2	1.074	29,5
Only before 2019 (g)	1.612	1.367	84,8	1.356	84,1	409	25,3	397	24,6
Other exited between 2019 and 2022	2.032	1.756	86,4	1.743	85,8	690	34,0	677	33,3
Total	16.530	10.059	60,9	9.755	59,0	4.052	24,5	3.747	22,7

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Notes: (a) Individuals with at least an earning event with private non-agriculture enterprises between 2015 and 2022, belonging to the resident population in 2022, living in households, excluding entrepreneurs and those who are in retirement and aged 25-60. Here they are classified on the basis of their presence among employees; (b) Employees in every year of the period; (c) Others employees in every year from 2019; (d) Other employees for the first time from 2020 on; (e) Employees present discontinuously in the period but at least for four years. (f) Other discontinuous employees (g) Employees only until 2018, eventually discontinuously; (h) Other employees in 2019-2021, eventually discontinuously; (i) Number of employees with earnings in at least one month between 2015-2022.

Table 2.11

Employees with low earnings, by cohort and type of threshold. Years 2015-2022 (thousands)										
Cohorts (a)	Employees (i)	YGE				HGE				
		When below the threshold				When below the threshold				
		Always	No more since 2019	From 2019	Other intermittents	Always	No more since 2019	From 2019	Other intermittents	
Employed in 2022	6.656	2.088	1.663	1.106	1.799	2.953	423	968	822	739
Persistent since 2015 (b)	2.283	389	878	336	681	1.049	90	469	177	312
Other persistent since 2019 (c)	2.121	472	670	293	685	998	97	300	305	296
Entry in 2020 (d)	1.069	751		318		327	195		133	
Discontinuous with some seniority (e)	878	277	83	121	397	437	22	153	142	120
Other discontinuous (f)	306	200	31	39	36	141	19	46	66	11
Employees only before 2022	3.099	2.058	118	253	670	1.099	470	201	155	274
Only before 2019 (g)	1.356	1.033			323	409	255			153
Other exited between 2019 and 2022	1.743	1.025	118	253	347	690	214	201	155	121
Total	9.755	4.146	1.781	1.359	2.468	4.052	893	1.169	977	1.013

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Notes: (a) Individuals with at least an earning event with private non-agriculture enterprises between 2015 and 2022, belonging to the resident population in 2022, living in households, excluding entrepreneurs and those who are in retirement and aged 25-60. Here they are classified on the basis of their presence among employees; (b) Employees in every year of the period; (c) Others employees in every year from 2019; (d) Other employees for the first time from 2020 on; (e) Employees present discontinuously in the period but at least for four years. (f) Other discontinuous employees (g) Employees only until 2018, eventually discontinuously; (h) Other employees in 2019-2021, eventually discontinuously; (i) Number of employees with earnings in at least one month

Table 2.12

Employees, by cohort, demographic characters and low earnings conditions. Years 2015-2022 (Numbers in thousand; %)															
Cohorts (a)	Total (i)	Employees					of whom: at least one year with low YGE or HGE								
		Composizione %					Composition %					Incidence % on the respective total			
		25-34 yrs.	Female	Foreign.	ISCED 6-7-8	Total	25-34 yrs.	Female	Foreign.	ISCED 6-7-8	Total	25-34 yrs.	Female	Foreign.	ISCED 6-7-8
Employed in 2022	12.885	26,1	41,9	10,8	14,2	6.935	38,5	48,2	15,5	11,9	53,8	79,4	61,8	77,1	45,1
Persistent since 2015 (b)	7.715	13,5	39,5	6,1	12,8	2.501	26,3	49,0	11,1	8,6	32,4	63,2	40,2	59,3	21,8
Other persistent since 2019 (c)	2.558	47,1	43,1	15,4	15,9	2.160	48,4	45,3	15,8	13,3	84,4	86,9	88,6	86,8	70,2
Entry in 2020 (d)	1.367	46,4	48,6	25,7	20,5	1.086	45,2	52,4	25,9	17,2	79,5	77,4	85,7	79,9	66,7
Discontinuous with some seniority	932	36,3	46,2	13,8	11,0	882	37,7	47,2	14,0	10,4	94,6	98,2	96,6	96,3	89,9
Other discontinuous (f)	314	45,3	49,0	16,0	14,5	306	45,9	49,5	16,1	14,2	97,5	98,8	98,6	98,0	95,2
Employees only before 2022	3.644	29,4	53,8	12,4	15,9	3.124	32,3	56,2	13,4	15,2	85,7	94,1	89,4	92,6	82,2
Only before 2019 (g)	1.612	25,2	55,0	10,8	16,9	1.367	27,7	57,5	11,7	16,0	84,8	93,3	88,7	91,8	80,6
Other exited between 2019 and 2022	2.032	32,7	52,9	13,6	15,0	1.756	35,9	55,2	14,7	14,6	86,4	94,7	90,0	93,1	83,6
Total	16.530	26,8	44,5	11,2	14,5	10.059	36,6	50,6	14,8	12,9	60,9	83,0	69,2	80,9	54,1

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Notes: (a) Individuals with at least an earning event with private non-agriculture enterprises between 2015 and 2022, belonging to the resident population in 2022, living in households, excluding entrepreneurs and those who are in retirement and aged 25-60. Here they are classified on the basis of their presence among employees; (b) Employees in every year of the period; (c) Others employees in every year from 2019; (d) Other employees for the first time from 2020 on; (e) Employees present discontinuously in the period but at least for four years. (f) Other discontinuous employees (g) Employees only until 2018, eventually discontinuously; (h) Other employees in 2019-2021, eventually discontinuously; (i) Number of employees with earnings in at least one month between 2015-2022.

2.4. Employees who escaped the low-wage trap

It is interesting to observe the trajectories of the employees who succeeded to exit from low-earnings or, conversely, who never managed to fully exit the low-earnings trap: in order to do that, we focus on the largest cohort of 7 million persistent employees, with signs of dependent employment in every year of the period 2015-2022.

A significant portion of these workers (about 878 thousands) experienced low YGE in the first part of the period but succeeded to emancipate permanently in the second time span. It is interesting to shed some light on the main reasons why this happened, whether it was because of an increase in HGE or in working time, if there was any improvement in job quality, what happened during the pandemic and whether gross earnings resisted or not to inflationary pressures.

For these individuals, the development of YGE was intense until 2020 but slowed down in the following years, especially in 2022 when inflation pressures hit severely (Table 2.13). Ultimately, the exit from low YGE was supported not so much by the dynamics of HGE (which increased appreciably in real terms up to 2021) but rather by the increase in working time. In particular, up to 2019 the growth in YGE stemmed mostly from the increase in the duration of contracts due to the transitions to open-ended jobs, but also from the growth in monthly intensity due to transitions to full-time jobs. After 2020, however, margins for intensity growth saturated and the dynamics of HGE were not sufficient to support YGE, especially in 2022.

The employees who gradually left behind a low-HGE status (about 470 thousands) showed similar growth in YGE (until 2020) but at significantly lower absolute levels. Their HGE, although it rose appreciably over the period, was never permanently above the average of 10 euros per hour. Up to 2017, moreover, its contribution to the change in YGE was lower than the contribution of the duration of contracts. The gradual weakening of these components led to a stagnation of wages that worsened in 2022 due to the inflation boost. The recovery due to the increase in HGE only partially offset the low YGE, which remained dependent on the intensity and duration of jobs.

Such dynamics are linked to important changes in the job quality: a significant proportion of employees who passed over the low-YGE line have gradually gained access to standard jobs, the incidence of which raised in the period from just over a quarter to almost two-thirds (Table 2.14). At the same time, short-term jobs (be them full-time or part-time) decreased whilst open-ended part-time decreased much less, confirming the presence of more stable relationships. The exit from low-he status came along with transitions to standard jobs and at the expense of fixed-term contracts, although to a lesser extent. More often improvements were achieved within the pre-existing contract.

As for the flows characterized by changes in the type of labour contract between 2015 and 2019, the exit from the low YGE observed for almost half of the workers went along with an improvement in the job quality because of the transit to standard or open-ended jobs (Table 2.15). The growth in YGE in this case exceeds double digits due to the decisive contribution of the intensity and duration of employment, especially for those who transited to full-time contracts. Part of the employees with standard jobs in 2015, gained the pay increase through the consolidation of duration and, to a lesser extent, through the increase in HGE. For those individuals (mostly women) who maintained open-ended part-time jobs during this period, YGE increased because of the increase in contractual workable hours which also resulted in an intensification of monthly working commitments. Finally, there is a share of employees (more than 10 percent) who came out of low pay even with worsening contractual conditions, and this was due to increases in contract length or work intensity although the quite modest, if not negative, contribution of HGE.

In the last three-year period, the improvements in the quality of labour contracts were less intense (Table 2.16). About 60 percent of employees retained the contractual condition of 2019, albeit with stagnant YGE in real terms. However, while full-time employees showed a relative growth in HGE, part-time workers could not keep the pace of inflation: despite the increase in monthly intensity, there was a decrease in YGE. For who gained access to standard jobs after 2019, coming largely from part-time contracts, the large increase in YGE

was determined by monthly intensity and resisted the inflationary blaze of 2022, whilst the contribution of HGE was insignificant

The scenario partly changes if we consider the exits from low HGE: here the transition is not so tied to the improvement in job quality that in many cases even worsened (Table 2.17). The YGE of these individuals (about 16 thousand euros in 2019) saw a double-digit growth rate. It was higher for those whose contractual conditions improved over the period and for those who remained with full-time and fixed-term jobs. In addition to the generalized increase in HE (similar for all categories regardless of contractual changes) - those who improved the quality of their jobs experienced a faster growth in the monthly intensity and those whose job quality remained unchanged saw an increase in the job duration

In the last four-year period 2019-2022, the exits from low HGE were associated with a stagnation in YGE (Table 2.18). Even so, only for the employees who could improve the quality of their jobs through access to open-ended jobs (standard or part-time) this growth is the result of increased monthly intensity and contract length. For other transitions to full-time, the increase is given by workable hours. Overall, YGE and HGE in 2022 are still quite modest, placing just above 16 thousand euros and on 9.6 euros, respectively.

Table 2.13

Employees (a) who definitively escaped from the trap of low earnings since 2019, by year, type of threshold and YGE components (Numbers in thousands, % change over the previous year. Values at constant 2015 prices)									
Years	Employees	YGE				% change over the previous year			
		YGE components				YGE components			
		YGE	HGE	Monthly intensity	Duration	YGE	HGE	Monthly intensity	Duration
YGE									
2015	878	8.980	9,8	125	7,4	...	...	...	...
2016	878	13.658	10,0	137	10,0	52,1	2,6	9,3	35,7
2017	878	15.391	10,1	144	10,6	12,7	0,7	5,3	6,2
2018	878	17.282	10,3	151	11,1	12,3	1,8	5,1	5,0
2019	878	19.713	10,6	158	11,8	14,1	3,1	4,5	6,0
2020	878	21.389	10,9	166	11,9	8,5	2,8	5,0	0,6
2021	878	21.392	11,0	163	11,9	0,0	1,4	-1,7	0,4
2022	878	20.179	10,5	162	11,9	-5,7	-4,6	-0,7	-0,4
HGE									
2015	469	9.730	7,9	143	8,6	...	...	...	...
2016	469	11.766	8,3	142	9,9	20,9	4,9	-0,4	15,7
2017	469	13.126	8,6	145	10,5	11,6	3,9	1,8	5,5
2018	469	14.696	9,1	149	10,8	12,0	4,9	3,3	3,2
2019	469	16.040	9,8	148	11,1	9,1	7,6	-1,0	2,5
2020	469	17.233	10,1	155	11,0	7,4	3,3	4,5	-0,5
2021	469	17.275	10,2	151	11,3	0,2	0,8	-2,5	1,9
2022	469	16.349	9,7	152	11,1	-5,4	-4,6	0,5	-1,4

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.
Note: (a) Only persistent employees

Table 2.14

Employees (a) who definitively escaped from the trap of low earnings since 2019, by year, type of threshold and type of job. Years 2015, 2019 e 2022 (Numbers in thousands; % compositions)												
Type of job	2015	2019	2022	2015	2019	2022	2015	2019	2022	2015	2019	2022
	YGE						HGE					
Standard	230	426	563	26,3	48,5	64,2	142	190	241	30,3	40,5	51,5
Full-time short-term	157	62	26	17,9	7,1	2,9	73	47	33	15,5	10,0	7,1
Part-time open-ended	220	186	178	25,0	21,1	20,3	100	101	103	21,3	21,4	22,0
Part-time short-term	80	7	2	9,1	0,8	0,2	44	19	12	9,3	4,1	2,7
Mixed types, also standard	100	151	92	11,4	17,2	10,5	61	68	51	13,0	14,5	11,0
Other mixed types	91	46	17	10,4	5,2	2,0	49	44	27	10,5	9,4	5,7
Total	878	878	878	100	100	100	469	469	469	100	100	100
Full-time	387	488	589	44,1	55,6	67,1	215	237	275	45,8	50,5	58,6
Part-time	299	193	180	34,1	22,0	20,5	144	120	116	30,6	25,6	24,7
Mixed types	191	197	109	21,8	22,4	12,4	110	112	78	23,6	23,9	16,7

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.
Note: (a) Only persistent employees

Table 2.15

Employees (a) who definitively escaped from the trap of low YGE since 2019, by type of change in job type and components of YGE. Years 2015-2019. (Numbers in thousands, incidence%, Annual average rates of growth. Values at constant 2015 prices)

Changes in job type between 2015 and 2019	Total	Dist. %	Incidence %				YGE		HGE		Monthly intensity		Duration	
			25-34 yrs.	Females	Foreign.	ISCED 6-7-8	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019
UNCHANGED														
Standard	158	18,0	32,6	26,6	7,5	16,7	24.004	8,9	11,7	2,6	173	1,2	11,9	4,9
Full-time fixed-term	22	2,5	28,0	21,8	10,3	6,9	19.191	16,6	10,7	1,9	168	3,9	10,6	10,1
Part-time open-ended	111	12,6	17,3	71,6	7,0	10,8	14.617	7,5	10,4	1,4	118	4,7	12,0	1,2
Part-time fixed-term	2	0,2	30,1	64,2	8,4	10,5	14.373	19,0	9,9	0,7	126	7,2	11,5	10,3
IMPROVED														
Passed to Standard	268	30,5	41,0	33,2	11,4	12,0	21.654	16,7	10,5	2,7	173	6,7	11,9	6,5
Others passed to Full-time	41	4,6	36,5	43,2	13,4	9,5	18.537	20,5	9,9	1,7	161	14,2	11,6	3,8
Others passed to open-ended	119	13,5	37,3	48,1	10,8	10,1	17.481	17,1	10,0	1,7	148	6,7	11,8	8,0
WORSENER														
Exited from Standard	72	8,3	25,9	30,1	10,4	8,5	18.873	7,4	10,3	-0,2	158	0,0	11,5	7,7
Other exited from Full-time	16	1,9	31,2	52,7	9,2	9,4	15.313	10,8	10,0	1,4	130	1,0	11,7	8,2
Others exited from open-ended	24	2,7	26,3	46,8	11,7	8,1	16.547	12,4	9,9	0,6	146	7,5	11,5	3,9
OTHER FLOWS	46	5,3	34,8	39,9	12,9	8,2	17.721	15,2	10,0	1,6	154	5,6	11,6	7,4
TOTAL	878	100	33,3	39,9	10,1	11,6	19.713	13,3	10,5	1,9	158	5,0	11,8	5,8

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.
 Note: (a) Only persistent employees

Table 2.16

Employees (a) who definitively escaped from the trap of low YGE since 2019, by type of change in job type and components of YGE. Years 2019-2022. (Numbers in thousands, incidence%, Annual average rates of growth. Values at constant 2015 prices)

Changes in job type between 2019 and 2022	Total	Dist. %	Incidence %				YGE		HGE		Monthly intensity		Duration	
			25-34 yrs.	Females	Foreign.	ISCED 6-7-8	2022	Avg. growth rate 2019-2022	2022	Avg. growth rate 2019-2022	2022	Avg. growth rate 2019-2022	2022	Avg. growth rate 2019-2022
UNCHANGED														
Standard	376	42,8	37,4	30,2	9,7	14,3	23.018	0,4	11,1	0,3	173	0,1	11,9	0,0
Full-time fixed-term	11	1,3	21,8	22,7	9,1	5,6	20.880	1,8	11,9	1,0	168	-0,1	10,5	0,9
Part-time open-ended	140	16,0	18,9	73,6	6,9	11,0	14.492	-0,4	9,8	-1,7	124	1,2	12,0	0,0
Part-time fixed-term	0	0,0	16,1	59,7	6,2	11,3	14.182	-0,8	9,7	-2,0	129	1,2	11,4	0,0
IMPROVED														
Passed to Standard	188	21,4	34,4	32,2	12,2	9,0	20.988	3,7	10,2	0,1	173	2,7	11,9	0,9
Others passed to Full-time	18	2,0	34,3	49,9	10,8	10,2	17.735	5,2	9,7	-1,2	155	6,9	11,7	-0,3
Others passed to open-ended	41	4,6	30,0	52,1	10,3	8,8	16.738	1,3	9,5	-1,2	148	1,5	11,8	1,0
WORSENER														
Exited from Standard	50	5,7	41,7	34,5	12,3	9,4	18.441	-4,1	9,9	-0,8	161	-2,6	11,6	-0,7
Other exited from Full-time	10	1,1	34,3	63,0	7,8	11,5	15.238	-4,8	9,8	-1,2	131	-4,0	11,9	0,4
Others exited from open-ended	13	1,5	31,0	45,1	12,3	7,3	16.095	-0,4	9,4	-1,6	149	2,1	11,5	-0,8
OTHER FLOWS	31	3,6	36,9	35,6	13,4	7,5	18.433	-0,2	9,7	-0,8	164	0,5	11,7	0,0
TOTAL	878	100	33,3	39,9	10,1	11,6	20.179	0,8	10,5	-0,3	162	0,9	11,9	0,2

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.
 Note: (a) Only persistent employees

Table 2.17

Employees (a) who definitively escaped from the trap of low HGE since 2019, by type of change in job type and components of YGE. Years 2015-2019. (Numbers in thousands, incidence%, Annual average rates of growth. Values at constant 2015 prices)

Changes in job type between 2015 and 2019	Total	Dist. %	Incidence %				YGE		HGE		Monthly intensity		Duration	
			25-34 yrs.	Females	Foreign.	ISCED 6-7-8	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019
UNCHANGED														
Standard	94	20,1	48,2	25,8	12,5	6,5	19.802	7,1	9,7	5,6	173	0,0	11,8	1,5
Full-time fixed-term	17	3,6	34,2	27,5	13,4	6,3	16.619	17,5	11,7	7,1	166	3,7	8,6	5,7
Part-time open-ended	56	12,0	21,7	69,9	13,0	7,1	11.251	4,6	9,3	5,3	102	-1,6	11,8	1,0
Part-time fixed-term	5	1,1	36,9	64,8	9,6	8,7	6.639	8,0	9,4	4,1	91	-0,6	7,8	4,5
IMPROVED														
Passed to Standard	96	20,4	47,5	30,4	15,9	7,5	20.167	16,6	9,9	5,6	173	4,4	11,8	5,7
Others passed to Full-time	19	4,0	45,3	41,1	17,6	7,0	15.597	18,4	9,8	5,5	157	9,9	10,2	2,2
Others passed to open-ended	56	11,9	41,5	48,8	13,9	7,7	14.717	18,7	9,7	5,2	133	4,0	11,5	8,5
WORSENER														
Exited from Standard	48	10,1	43,4	32,9	14,1	5,9	14.975	4,4	9,8	5,1	145	-3,3	10,6	2,7
Other exited from Full-time	17	3,7	41,4	50,2	13,0	6,8	10.740	7,2	9,5	4,7	113	-4,4	10,0	7,1
Others exited from open-ended	21	4,6	38,2	49,1	15,5	6,0	11.127	5,0	9,6	4,5	121	0,7	9,6	-0,2
OTHER FLOWS	39	8,4	42,1	45,4	15,2	6,5	13.204	12,0	9,7	5,1	134	1,3	10,2	5,2
TOTAL	469	100	41,6	40,2	14,2	6,9	16.040	11,0	9,7	5,4	147	1,4	11,1	3,9

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.
 Note: (a) Only persistent employees

Table 2.18

Employees (a) who definitively escaped from the trap of low HGE since 2019, by type of change in job type and components of YGE. Years 2019-2022. (Numbers in thousands, incidence%, Annual average rates of growth. Values at constant 2015 prices)														
Changes in job type between 2019 and 2022	Total	Dist. %	Incidence %				YGE		HGE		Monthly intensity		Duration	
			25-34 yrs.	Females	Foreign.	ISCED 6-7-8	Avg.growth rate 2019-2022	2022	Avg.growth rate 2019-2022	2022	2022	Avg.growth rate 2019-2022	2022	Avg.growth rate 2019-2022	2022
UNCHANGED														
Standard	160	34,2	47,2	27,2	13,8	7,2	19.920	-0,4	9,9	0,4	172	-0,2	11,7	-0,5
Full-time fixed-term	15	3,2	30,9	29,9	13,5	5,4	16.574	0,5	11,9	-0,6	167	-0,1	8,3	1,2
Part-time open-ended	74	15,9	22,6	71,3	12,2	7,4	10.734	-1,9	8,9	-1,6	105	0,7	11,4	-1,0
Part-time fixed-term	4	0,9	29,7	67,4	9,4	7,4	6.107	0,9	8,8	-2,2	92	2,2	7,5	0,9
IMPROVED														
Passed to Standard	81	17,3	46,1	29,8	15,7	7,2	19.713	5,7	9,9	0,3	172	3,3	11,6	2,0
Others passed to Full-time	14	2,9	43,9	43,4	16,1	6,4	13.853	6,3	9,2	-0,8	153	9,6	9,8	-2,2
Others passed to open-ended	35	7,5	41,3	51,8	13,7	6,6	13.916	7,2	9,3	-1,3	133	3,9	11,3	4,5
WORSENE														
Exited from Standard	30	6,3	51,6	33,3	16,4	5,9	15.384	-7,0	9,5	-0,4	154	-3,9	10,6	-2,8
Other exited from Full-time	10	2,1	41,4	53,7	13,3	6,6	10.827	-5,9	9,2	-1,4	118	-6,0	10,0	1,6
Others exited from open-ended	15	3,1	40,6	50,1	15,9	5,4	10.709	-4,9	9,1	-1,4	125	1,6	9,5	-5,1
OTHER FLOWS	31	6,5	44,1	44,8	14,7	6,0	13.031	1,1	9,3	-1,1	138	1,6	10,1	0,6
TOTAL	469	100	41,6	40,2	14,2	6,9	16.349	0,7	9,6	-0,4	151	1,0	11,1	0,7

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Note: (a) Only persistent employees

2.5. Employees who never succeeded to escape the low-earnings trap

A significant share of low-earnings (annual or hourly) employees never permanently exited their condition (Table 2.19). Those who showed a low YGE dynamics up to 2017, in the following years experienced significant reductions in the annual earnings due to lower duration and monthly intensity of labour contracts. The rebound in intensity and duration occurred in 2021 was insufficient to offset the compression occurred during the pandemic and to bring YGE back to early periods. In 2022, these individuals were also severely affected by the inflationary flare-up and their HGE returned below the level attained in 2015.

Those who never recovered steadily from low HGE showed similar features. However, they exhibited a greater overall resilience of YGE thanks mainly to monthly intensity and duration. The dynamics of their HGE though was very critical, and their level was never permanently above 8 euros: after all, the level of YGE itself only occasionally exceeded 12 thousand euros.

Among those who never succeeded in raising their earnings, there was the prevalence of part-time contracts, especially permanent contracts, even among those suffering low HGE (Table 2.20). Among employees with low YGE, there was a rather significant decrease in standard jobs especially between 2015 and 2019, and an increase in the intra-year mobility between types of contracts that denoted instability in labor relations.

More than half of these employees did not change the type of job, particularly in the case of part-time open-ended employees where women prevailed. Nearly stationary HGE were accompanied by weak dynamics of job intensity (Table 2.21). The wage dynamics of who experienced a worsening of job quality was decidedly more critical: the termination of standard jobs came along with a significant reduction in employment intensity and a decline in HGE.

Over 2019-2022, HGE declined significantly in real terms also for those whose job quality remained unchanged or even worsened, particularly for those who had a standard job in 2019 (Table 2.22). HGE worsened as well for part-time permanent jobs. The evolution of employees who never left low HGE appears critical. Up to 2019, the decline in HGE is quite conspicuous and widespread, regardless of changes in contractual conditions (Table 2.23). Duration and intensity of labor grew slightly, containing the regressive dynamics of total remuneration. The latter keeps growing only for employees who have been able to improve their job quality. On average in 2022 the annual pay of those who never exceeded YGE threshold remains very low (below 12 thousand euros), as does the hourly pay (below 8 euros) (Table 2.24). HGE deteriorated further after 2019 and this decline was finally offset by increases in intensity and duration only for individuals whose contractual conditions improved.

The YGE of persistent employees grew appreciably only for the youngest who started from very low levels in 2015 and that remained firmly below the levels of older employees (Table 2.25 and Table 2.26). About three-quarters of young people aged 25-29 in 2022 (who were therefore 18-22 in 2015) experienced a YGE below

the threshold. Among the employees who never experienced low earnings, YGE increased with age, passing from 23,000 euros of the youngest to 31,000 euros of the eldest. The same does not happen for individuals below the threshold: the 20,000 euros recorded in 2022 by the segment that succeeded to escape low YGE remained almost constant by age group, as did the 10,000 euros of the segment that never managed to permanently exit from low YGE. A similar dynamic has been recorded for HGE.

As expected, gender wage gaps have widened over the observed period: the wage dynamics were systematically weaker for women not only in terms of HGE but because of the lower intensity of labour contracts.

Table 2.19

Employees (a) who never definitively escaped from the trap of low earnings, by year, type of threshold and YGE components (Numbers in thousands, % change over the previous year. Values at constant 2015 prices)									
Years	Employees	YGE				% change over the previous year			
		YGE components				YGE components			
		YGE	HGE	Monthly intensity	Duration	YGE	HGE	Monthly intensity	Duration
YGE									
2015	1.405	11.492	9,9	123	9,5				
2016	1.405	12.230	9,9	120	10,3	6,4	0,4	-2,7	8,9
2017	1.405	12.515	10,0	120	10,5	2,3	0,3	0,3	1,8
2018	1.405	12.058	9,8	118	10,4	-3,6	-1,4	-2,0	-0,3
2019	1.405	11.459	9,8	114	10,2	-5,0	0,1	-3,0	-2,1
2020	1.405	11.007	9,8	113	9,9	-3,9	0,3	-0,7	-3,5
2021	1.405	11.794	9,8	118	10,3	7,2	-0,8	3,8	4,1
2022	1.405	10.199	9,0	118	9,6	-13,5	-7,7	0,4	-6,7
HGE									
2015	580	10.647	8,5	133	9,4				
2016	580	11.653	8,5	133	10,3	9,5	-0,2	-0,2	10,0
2017	580	11.634	8,4	132	10,5	-0,2	-1,7	-0,6	2,2
2018	580	11.541	8,1	134	10,6	-0,8	-3,0	1,6	0,6
2019	580	11.469	7,9	136	10,6	-0,6	-2,4	1,9	-0,1
2020	580	11.331	8,0	137	10,3	-1,2	1,2	0,2	-2,6
2021	580	12.015	8,1	139	10,7	6,0	0,7	1,9	3,4
2022	580	11.600	7,8	141	10,6	-3,5	-4,1	1,3	-0,6

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.
Note: (a) Only persistent employees

Table 2.20

Employees (a) who never definitively escaped from the trap of low earnings, by year, type of threshold and type of job. Years 2015, 2019 e 2022 (Numbers in thousands: % compositions)												
Condizioni contrattuali	2015	2019	2022	2015	2019	2022	2015	2019	2022	2015	2019	2022
	YGE			HGE								
Standard	309	228	246	22,0	16,3	17,5	153	156	180	26,4	26,8	31,0
Full-time short-term	164	180	185	11,7	12,8	13,1	67	62	60	11,6	10,7	10,3
Part-time open-ended	555	611	590	39,5	43,5	42,0	184	184	176	31,6	31,7	30,4
Part-time short-term	125	101	93	8,9	7,2	6,6	56	38	34	9,6	6,5	5,9
Mixed types, also standard	115	111	135	8,2	7,9	9,6	59	65	66	10,2	11,2	11,4
Other mixed types	137	174	157	9,7	12,4	11,2	61	75	63	10,6	13,0	10,9
Total	1.405	1.405	1.405	100	100	100	580	580	580	100	100	100

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.
Note: (a) Only persistent employees

Table 2.21

Employees (a) who never definitively escaped from the trap of low earnings, by type of change in job type and components of YGE. Years 2015-2019. (Numbers in thousands, incidence%, Annual average rates of growth. Values at constant 2015 prices)														
Changes in job type between 2015 and 2019	Total	Dist. %	Incidence %				YGE		HGE		Monthly intensity		Duration	
			25-34 yrs	Females	Foreign	ISCED 6-7-8	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019
UNCHANGED														
Standard	154	10,9	14,8	34,2	9,2	8,1	21.063	-2,9	11,5	0,9	169	-1,9	10,9	-1,9
Full-time fixed-term	81	5,8	21,1	35,6	11,3	6,3	10.811	0,5	10,0	-0,4	147	0,4	7,3	0,5
Part-time open-ended	438	31,2	12,2	76,6	10,2	7,3	9.604	-0,4	9,5	0,0	87	-0,6	11,7	0,1
Part-time fixed-term	30	2,2	27,1	68,2	9,6	8,2	6.158	1,2	9,2	-0,5	89	-0,1	7,5	1,7
IMPROVED														
Passed to Standard	75	5,3	34,4	37,5	15,5	8,4	17.216	5,2	9,9	0,3	169	4,4	10,3	0,4
Others passed to Full-time	47	3,3	32,6	47,5	15,5	6,8	11.148	3,1	9,4	-0,4	142	7,9	8,4	-4,2
Others passed to open-ended	138	9,8	30,4	62,2	12,7	8,3	10.299	4,9	9,1	0,0	102	0,8	11,1	4,1
WORSENER														
Exited from Standard	156	11,1	22,5	41,2	10,4	6,4	11.074	-13,5	9,7	-1,9	124	-8,4	9,2	-3,9
Other exited from Full-time	66	4,7	29,3	53,4	12,2	7,1	9.119	-3,3	9,3	-0,5	103	-6,3	9,5	3,7
Others exited from open-ended	98	7,0	26,4	57,5	13,3	6,4	8.538	-6,6	9,2	-1,2	104	-1,1	8,9	-4,3
OTHER FLOWS														
OTHER FLOWS	124	8,8	32,1	54,4	13,5	6,9	9.803	1,1	9,2	-0,5	116	-0,1	9,2	1,8
TOTAL	1.405	100	21,7	56,7	11,5	7,3	11.459	-1,6	9,7	-0,3	116	-1,1	10,2	-0,2

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022, Inps, Uniemens 2015-2022.

Note: (a) Only persistent employees

Table 2.22

Employees (a) who never definitively escaped from the trap of low earnings, by type of change in job type and components of YGE. Years 2019-2022. (Numbers in thousands, incidence%, Annual average rates of growth. Values at constant 2015 prices)														
Changes in job type between 2019 and 2022	Total	Dist. %	Incidence %				YGE		HGE		Monthly intensity		Duration	
			25-34 yrs	Females	Foreign	ISCED 6-7-8	2022	Avg. growth rate 2019-2022	2022	Avg. growth rate 2019-2022	2022	Avg. growth rate 2019-2022	2022	Avg. growth rate 2019-2022
UNCHANGED														
Standard	122	8,7	18,3	32,1	10,3	9,1	10.195	-20,6	10,0	-4,0	162	-1,3	6,3	-16,2
Full-time fixed-term	85	6,0	19,0	34,8	12,0	5,8	10.988	0,1	9,4	-1,7	151	0,5	7,7	1,3
Part-time open-ended	472	33,6	12,6	77,4	10,0	7,7	8.513	-3,8	8,8	-2,3	89	0,8	10,9	-2,4
Part-time fixed-term	28	2,0	20,1	69,6	8,6	7,8	5.924	0,0	8,6	-2,2	92	1,3	7,5	1,0
IMPROVED														
Passed to Standard	124	8,8	33,3	34,5	13,6	7,6	16.695	16,7	9,3	-0,8	170	10,8	10,5	6,2
Others passed to Full-time	65	4,6	30,5	48,3	14,0	6,6	11.832	6,1	8,8	-1,9	149	12,5	9,0	-3,9
Others passed to open-ended	134	9,5	29,9	55,5	12,5	7,0	12.133	11,2	8,9	-1,2	124	5,4	11,0	6,8
WORSENER														
Exited from Standard	106	7,6	24,7	39,0	12,4	7,2	9.824	-20,0	9,1	-4,6	132	-8,1	8,2	-8,7
Other exited from Full-time	50	3,6	26,9	54,5	11,4	6,9	8.831	-8,4	8,8	-2,7	110	-7,6	9,2	1,9
Others exited from open-ended	96	6,8	24,6	61,2	12,5	6,5	8.394	-9,4	8,7	-3,3	110	0,9	8,8	-7,1
OTHER FLOWS														
OTHER FLOWS	124	8,9	29,8	54,4	12,5	6,2	9.919	1,1	8,7	-2,0	122	2,0	9,4	1,1
TOTAL	1.405	100	21,7	56,7	11,5	7,3	10.199	-2,6	9,0	-2,4	121	1,6	9,6	-2,1

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022, Inps, Uniemens 2015-2022.

Note: (a) Only persistent employees

Table 2.23

Employees (a) who never definitively escaped from the trap of low earnings, by type of change in job type and components of HGE. Years 2015-2019. (Numbers in thousands, incidence%, Annual average rates of growth. Values at constant 2015 prices)														
Changes in job type between 2015 and 2019	Total	Dist. %	Incidence %				YGE		HGE		Monthly intensity		Duration	
			25-34 yrs	Females	Foreign	ISCED 6-7-8	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019	2019	Avg. growth rate 2015-2019
UNCHANGED														
Standard	91	15,7	24,1	37,2	11,1	4,9	16.359	-3,3	8,0	-1,2	178	-2,2	11,5	0,1
Full-time fixed-term	23	4,0	26,3	36,9	12,7	5,9	10.049	-0,4	8,3	-4,5	155	2,7	7,9	1,5
Part-time open-ended	122	21,0	15,6	73,0	14,4	5,0	9.276	-0,2	7,9	-1,4	101	1,1	11,7	0,2
Part-time fixed-term	11	1,8	29,4	66,7	11,5	6,7	5.530	0,0	8,0	-2,6	90	1,0	7,6	1,7
IMPROVED														
Passed to Standard	65	11,2	40,9	36,3	16,8	5,3	15.623	7,6	7,8	-1,7	177	6,0	11,3	3,3
Others passed to Full-time	23	4,0	37,1	46,7	17,9	5,5	11.306	5,5	7,9	-3,5	153	11,2	9,3	-1,7
Others passed to open-ended	61	10,6	33,1	55,8	16,4	5,7	10.751	7,3	7,9	-2,0	121	4,2	11,3	5,1
WORSENER														
Exited from Standard	62	10,7	28,0	38,7	12,6	4,6	11.213	-10,2	8,1	-4,5	142	-4,3	9,7	-1,8
Other exited from Full-time	24	4,1	33,8	51,0	15,3	5,9	8.506	-2,7	8,0	-2,7	112	-4,4	9,5	4,7
Others exited from open-ended	40	6,9	27,5	57,8	15,6	4,9	8.243	-5,2	8,1	-3,4	110	1,5	9,3	-3,4
OTHER FLOWS														
OTHER FLOWS	57	9,9	32,4	53,7	15,5	5,9	9.989	2,0	8,0	-2,6	130	2,3	9,7	2,4
TOTAL	580	100	27,7	51,3	14,4	5,3	11.469	-0,1	7,9	-2,3	136	1,3	10,6	1,0

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022, Inps, Uniemens 2015-2022.

Note: (a) Only persistent employees

Table 2.24

Employees (a) who never definitively escaped from the trap of low earnings, by type of change in job type and components of HGE. Years 2019-2022. (Numbers in thousands, incidence%, Annual average rates of growth. Values at constant 2015 prices)														
Changes in job type between 2019 and 2022	Total	Dist %	Incidence %				YGE		HGE		Monthly intensity		Duration	
			25-34 yrs.	Females	Foreign.	ISCED 6-7-8	Avg. growth rate 2019-2022	Avg. growth rate 2019-2022	Avg. growth rate 2019-2022	Avg. growth rate 2019-2022	Avg. growth rate 2019-2022	Avg. growth rate 2019-2022		
UNCHANGED														
Standard	111	19,1	29,5	35,8	13,1	5,1	15.668	-0,8	7,6	-0,4	181	0,3	11,4	-0,7
Full-time fixed-term	23	3,9	22,7	36,6	13,0	5,6	10.691	2,8	8,3	0,5	159	0,2	8,1	2,1
Part-time open-ended	131	22,5	15,5	73,9	14,3	5,2	8.669	-2,2	7,4	-1,2	103	0,2	11,3	-1,2
Part-time fixed-term	9	1,6	22,4	68,3	10,0	6,6	5.373	1,6	7,8	-1,1	91	1,3	7,6	1,4
IMPROVED														
Passed to Standard	69	11,9	36,8	34,6	16,1	5,3	15.777	8,6	8,0	0,0	175	5,2	11,3	3,2
Others passed to Full-time	26	4,5	33,6	48,4	16,7	5,4	11.358	6,3	7,9	-1,2	154	11,0	9,3	-3,1
Others passed to open-ended	54	9,3	30,7	54,3	15,3	5,5	11.575	10,1	7,9	-0,1	131	4,2	11,2	5,8
WORSENERD														
Exited from Standard	44	7,7	35,2	39,4	14,4	4,9	11.606	-10,2	7,9	-2,2	148	-5,0	9,9	-3,4
Other exited from Full-time	19	3,4	30,8	53,9	13,7	5,4	8.601	-5,2	7,8	-1,1	116	-7,6	9,5	3,7
Others exited from open-ended	35	6,0	27,8	60,6	15,6	4,9	8.266	-6,7	7,7	-2,3	116	1,1	9,2	-5,6
OTHER FLOWS														
58	10,1	31,8	54,1	14,3	5,4	9.954	1,5	7,9	-0,8	129	1,0	9,8	1,3	
TOTAL	580	100	27,7	51,3	14,4	5,3	11.600	0,5	7,8	-0,8	141	1,2	10,6	0,1

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Note: (a) Only persistent employees

Table 2.25

Gross earnings of employees (a), by age class, gender, and level of gross earnings (Numbers in thousands, % composition, Average annual rates of change. Values at constant 2015 prices)										
Level of gross earnings	Totale	Age class						Gender		
		25-29	30-34	35-39	40-44	45-49	50-54	55-60	Female	Male
Total employees	7.715	298	744	1.015	1.216	1.480	1.484	1.477	3.049	4.666
% Composition										
Never below any threshold	70,4	26,3	49,4	65,9	72,8	76,1	77,8	77,8	62,4	75,7
Above the thresholds from 2019	11,4	37,2	24,4	14,2	10,0	8,2	7,2	6,2	11,5	11,3
Never definitively above the threshold	18,2	36,6	26,2	20,0	17,2	15,6	15,0	15,9	26,1	13,0
YGE in 2022										
Total	24.142	17.701	19.862	22.124	23.687	24.859	26.163	26.613	20.535	26.499
Never below any threshold	28.390	23.388	24.085	26.036	27.359	28.422	29.861	30.762	25.582	29.903
Above the thresholds from 2019	20.179	19.998	20.985	20.398	19.680	19.876	20.058	19.669	18.644	21.200
Never definitively above the threshold	10.199	11.286	10.866	10.452	10.459	10.131	9.888	9.051	9.321	11.348
Average annual rate of growth 2015-2022										
Total	0,8	9,0	4,4	2,1	0,9	0,3	-0,1	-0,7	0,5	0,9
Never below any threshold	0,1	3,1	2,3	1,4	0,5	0,0	-0,3	-0,7	-0,1	0,3
Above the thresholds from 2019	12,3	18,3	15,1	12,4	10,5	10,1	9,9	9,4	11,3	12,8
Never definitively above the threshold	-1,7	7,9	1,3	-1,6	-2,1	-2,6	-2,8	-5,0	-1,7	-1,7
HGE in 2022										
Total	13,3	10,1	11,1	12,3	13,0	13,5	14,2	14,7	12,5	13,7
Never below any threshold	14,3	11,3	12,0	13,2	13,9	14,4	15,1	15,5	13,7	14,6
Above the thresholds from 2019	10,5	10,1	10,8	10,7	10,4	10,3	10,5	10,5	10,3	10,6
Never definitively above the threshold	9,0	8,8	8,9	9,0	9,1	9,0	9,0	9,1	8,8	9,2
Average annual rate of growth 2015-2022										
Total	0,1	1,9	1,6	1,2	0,5	-0,1	-0,4	-0,7	-0,1	0,0
Never below any threshold	0,3	2,8	2,1	1,6	0,8	0,2	-0,2	-0,5	0,2	0,3
Above the thresholds from 2019	1,2	2,7	2,5	1,5	0,6	0,0	0,1	-0,1	0,9	1,1
Never definitively above the threshold	-1,2	0,6	-0,2	-0,9	-1,3	-1,6	-1,7	-2,1	-1,2	-1,4

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2022.

Note: (a) Only persistent employees

Table 2.26

Gross earnings of employees (a), by level of education and level of gross earnings (Numbers in thousands, % composition, Average annual rates of change. Values at constant 2015 prices)						
Posizione rispetto alla soglia	Totale	Education level (ISCED)				
		0-2	3	4-5	6	7-8
Total employees	7.715	2.311	4.048	367	958	30
		% Composition				
Never below any threshold	70,4	66,3	70,9	66,5	79,3	80,8
Above the thresholds from 2019	11,4	11,1	11,4	16,4	10,2	11,0
Never definitively above the threshold	18,2	22,6	17,7	17,1	10,4	8,2
YGE in 2022						
Total	24.142	20.120	23.406	25.784	35.852	39.122
Never below any threshold	28.390	23.777	27.286	30.669	40.639	43.613
Above the thresholds from 2019	20.179	19.180	19.541	21.797	24.550	27.171
Never definitively above the threshold	10.199	9.858	10.359	10.645	10.530	10.934
		Average annual rate of growth 2015-2022				
Total	0,8	0,1	0,6	2,5	1,7	2,5
Never below any threshold	0,1	-0,5	-0,1	1,4	1,1	1,8
Above the thresholds from 2019	12,3	10,3	11,8	16,1	17,1	20,4
Never definitively above the threshold	-1,7	-2,0	-1,5	-0,1	-2,1	-1,5
HGE in 2022						
Total	13,2	11,2	12,9	14,2	19,2	20,6
Never below any threshold	14,3	11,9	13,8	15,6	20,7	22,1
Above the thresholds from 2019	10,5	9,8	10,3	11,4	12,9	14,2
Never definitively above the threshold	9,0	8,8	9,0	9,4	9,7	10,1
		Average annual rate of growth 2015-2022				
Total	0,0	-0,5	-0,2	1,0	1,0	1,6
Never below any threshold	0,3	-0,4	0,1	1,5	1,4	2,0
Above the thresholds from 2019	1,0	0,2	0,9	2,3	2,7	3,5
Never definitively above the threshold	-1,3	-1,3	-1,3	-0,8	-1,4	-1,1

Sources: Istat, Population register 2015-2022, Business register 2015-2021, Income register 2015-2022. Inps, Uniemens 2015-2021.
Note: (a) Only persistent employees

Part 3. Employers and low earnings

One of the side issue in the debate on low earning is which economic activities and what kind of enterprises generate them. Although poor pay conditions are spread across all types of businesses and economic activities, there are important differences that are worth of investigation. Based on the results and approaches described in Part 2 of the paper, in this paragraph we analyze, firstly, low earnings on a cross-section perspective. By exploiting the link between employees and their main employer on a yearly basis, we provide an insight of the general characteristics of the business structure (such as economic activity, size, and type of governance) associated to the level of gross earnings in years 2015-2022. Secondly, we investigate on a longitudinal perspective, which conditions and which characteristics of the employers were associated to the transitions of workers from below to above the thresholds, or to the employees that never had the opportunity to escape from the low-earnings trap.

3.1. Business structure, employment and employees

Istat business register (BR) counts about 4,5 mln enterprises: one out of three has at least one employee, so about 1,5 mln enterprises are involved in our analysis each year (Table 3.1). Most of them (1,25 mln) are micro-enterprises with less than 10 persons employed. More than 500 thousands are individual enterprises, although 75% of the employees in the register are concentrated in enterprises with more complex governance and a significant portion of employees work in larger enterprises. The business register estimates 12,7 mln

employees²⁹. The difference between the number of employees estimated in the register (a weekly average) and the headcount of the individuals enrolled during the whole year – at least for a few weeks – deserves some comment. In those domains where lower quality contracts are more frequently used, especially fixed-term contracts, the duration of labour relations is shorter. The difference between headcounts and the standard measure of employment, that would be null if jobs were ideally continuous along the year, is present in every economic sector and size class, and it is extremely interesting since it describes at a glance the degree of stability of jobs in each specific domain. In 2021, the 14,5 mln individuals that were enrolled in industry and services correspond to 12,7 mln employees in the average week. This 14% scrap is an average, and varies considerably across sectors, the difference being greater in some services, like for instance horeca, support services (mainly cleaning and temporary work agencies), recreation, education, and constructions. About 4,5 mln workers are involved in these sectors and they count for 3,4 mln employees. The same scrap is lower than 5% in Industry and Finance where more than 70% of individuals experienced only standard jobs during the year. In some sectors (horeca, recreation, support services) there is a widespread use of fixed term contracts while in others (trade and most services serving households) part-time contracts prevail³⁰.

Table 3.1

Employers and employees, by type of contract, Nace, business size and governance. Year 2021													
		Business Register (BR) data				Individuals (a) in the pay-roll of the enterprises during the year							
		No. enterprises (.000)	Employees (b)			Number (.000)	%	diff% vs. BR	by type of labour contract in the year (incidence, %)				
Nace			N (.000)	%	Avg.				always Standard	always Full-time fixed term	always Part-time open-ended	always Part-time fixed-term	other combinations
Total		1.468	12.746	100	8,7	14.530	100	14,0	52,0	9,8	18,0	7,7	12,5
<i>NACE</i>													
C	MANUFACTURING	212	3.261	25,6	15,4	3.373	23,2	103	76,0	5,2	9,3	1,7	7,8
B,D,E	REST OF INDUSTRY	10	304	2,4	30,6	312	2,1	2,5	79,2	4,5	7,4	2,3	6,6
F	CONSTRUCTION	183	929	7,3	5,1	1.100	7,6	18,4	58,7	15,7	6,9	2,7	16,0
G	TRADE	356	2.215	17,4	6,2	2.435	16,8	9,9	49,1	5,0	26,5	7,5	11,9
H	TRANSPORTATION	51	1.012	7,9	19,9	1.108	7,6	9,5	62,5	9,5	9,8	4,5	13,7
I	HORECA	215	999	7,8	4,6	1.503	10,3	50,4	15,6	20,3	25,0	19,0	20,2
J	INFORMATION	40	511	4,0	12,9	561	3,9	9,9	71,5	7,5	13,1	2,2	5,7
K	FINANCE	22	452	3,5	20,6	474	3,3	5,0	79,8	1,7	14,2	0,6	3,7
L,M	PROFESSIONAL	140	685	5,4	4,9	760	5,2	10,9	57,8	6,6	21,4	4,4	9,9
N	SUPPORT SERVICES	57	1.297	10,2	22,6	1.616	11,1	24,7	23,4	20,9	20,6	15,8	19,3
P	EDUCATION	11	83	0,7	7,3	104	0,7	24,3	26,1	5,9	29,2	26,9	11,9
Q	HUMAN HEALTH	69	653	5,1	9,5	723	5,0	10,7	32,2	4,2	37,4	13,4	12,8
R	RECREATION	21	103	0,8	5,0	172	1,2	66,3	20,2	23,4	17,4	23,9	15,1
S	OTHER SERVICES	81	242	1,9	3,0	290	2,0	19,5	31,5	6,2	36,9	10,9	14,5
<i>SIZE CLASS</i>													
Micro (<10 pers.employed)		1.257	3.119	24,5	2,5	3.972	27,3	27,3	35,3	10,1	28,3	11,7	14,7
Small (10-49 pers.employed)		182	3.182	25,0	17,5	3.552	24,4	11,6	54,7	10,4	14,6	6,6	13,7
Medium (50-249 pers.employed)		24	2.356	18,5	97,5	2.534	17,4	7,6	63,3	8,8	11,5	5,5	10,9
Large (>250 pers.employed)		4	4.089	32,1	955,5	4.472	30,8	9,4	58,4	9,7	15,2	6,2	10,5
<i>GOVERNANCE</i>													
Individual firms		522	1.062	8,4	2,0	3.972	9,4	134	27,2	9,0	35,6	13,4	14,8
Other partnerships		284	1.064	8,4	3,7	3.552	8,8	127	40,2	11,1	24,6	9,9	14,2
Joint-stock companies		616	9.361	73,4	14,9	2.534	72,2	118	58,5	10,2	13,5	6,0	11,8
Other companies		45	1.259	9,9	27,9	4.472	30,8	118	37,6	6,8	28,9	12,9	13,8

Sources: Istat, Business register 2015-2021, Income register (2015-2022), Population register (2015-2022)

Notes: (a) Individuals in the resident population (only residents in household). (b) Average weekly employees.

²⁹ According to international standards, the business register reports the annual average of the weekly number of employees by enterprise. An individual enrolled for 6 months, for example, is equivalent to 0,5 employees on an annual basis.

³⁰ It is important to make clear that in this context of our analysis the term employee is not intended as we are not using the definition of the register since we concentrate on the individuals traced in the pay roll of the enterprises, with a headcount approach, and the term employee will be used to address these individuals and not their equivalent measure in terms of employment. That definition is anyway adopted to determine for example the size class of enterprises.

3.2. Employers and gross earnings

The tie between standard jobs and the level of hourly wages previously highlighted inevitably implies that the firms providing better pay conditions are also those where full-time, permanent jobs prevail (Table 3.2). Recent studies remark that the number of these firms is relatively small but that they are large enough to recruit the bulk of non-agricultural workforce and the most performing activities where hourly wages are on average above 15 euros (Chart 3.1)³¹. As one moves away from them, hourly wages become poorer as firms seem acting mostly on job intensity offering part-time and fixed-term contracts. Our entire set of low-paid employees gradually experienced lower and lower intensities and durations of the employment relationships, showing hourly wages steadily below the average. In this respect the firm scale and the type of governance also matter. Employees of micro-enterprises and individual firms show very low annual earnings due to lower levels of all the wage components.

On the other hand, if we compare the distribution of employees by YGE and by HGE it is clear that the first distribution is less concentrated than the latter (Chart 3.2). Take for example the median value in YGE distribution: it was about 18 thousands euro in 2021 (at constant 2015 prices). This median ranges from 31,000 for an employees in finance and communications to 12,000 euro for an employees in personal services, passing through 23,000 euro for industry and to 19,000 in construction, 16,000 in business services and 13,000 in Horeca. One half of all employees has a YGE between 9 and 25,000 euro. Consider now HGE. The overall median is 10,4 euro, ranging from 9,3 in personal services to 11,5 in industry, peaking 16,3 in finance and communications. Interquartile range is between 9 and 13 euro. Only for a small part of workers the variability in YGE can be explained by HGE, while intensity and duration play a major role in explaining the differences among economic activities.

Between 2015 and 2022 the dynamics of real gross earnings showed a sharp decline (Table 3.3): the average annual rate of decrease was 1,5%, and more than 2% in some services while in the largest sectors was almost in the average. Up till 2018, the decline has been harder in Horeca and in some services serving household. The reduction in monthly intensity of jobs drove the decline, due a more intense use of part-time and short-term contracts. In the same time span, real HGE also lost ground continuing the decline also in the following years until 2021, although with some remarkable differences among sectors. In manufacturing, for instance, real hourly earnings were quite stable, in construction and trade they decreased, in Horeca they marginally recovered from the former decline. Between 2018 and 2021, duration and monthly intensity had the most important role in driving the increase in annual earnings. In 2022, the rise in inflation cut real earnings quite uniformly across sectors.

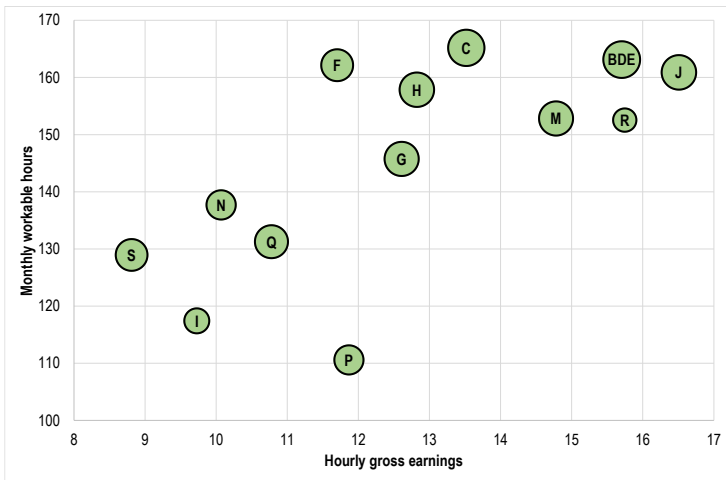
³¹ These aspects were studied in a cross section analysis in Istat (2022).

Table 3.2

Gross earnings of employees, by Nace, size class and governance. Year 2021 (values at constant 2015 prices)										
		Per capita gross earnings in 2021					Indices. Base: Total=100			
		Number (.000)	Annual gross earnings	Components			Annual gross earnings	Components		
Nace	Hourly gross earnings			Monthly intensity (b)	Duration (c)	Hourly gross earnings		Monthly intensity	Duration	
Total		14.530	20.201	13,1	150,4	10,3	100	100	100	100
<i>NACE</i>										
C	MANUFACTURING	3.373	25.175	13,5	165,2	11,3	125	104	110	110
B,D,E	REST OF INDUSTRY	312	29.215	15,7	163,1	11,4	145	120	108	111
F	CONSTRUCTION	1.100	18.916	11,7	162,1	10,0	94	90	108	97
G	TRADE	2.435	19.603	12,6	145,7	10,7	97	97	97	104
H	TRANSPORTATION	1.108	21.755	12,8	157,9	10,7	108	98	105	105
I	HORECA	1.503	9.046	9,7	117,4	7,9	45	74	78	77
J	INFORMATION	561	28.548	16,5	160,9	10,7	141	126	107	105
K	FINANCE	474	42.680	23,2	157,2	11,7	211	178	105	114
L,M	PROFESSIONAL	760	24.036	14,8	152,8	10,6	119	113	102	103
N	SUPPORT SERVICES	1.616	12.744	10,1	137,7	9,2	63	77	92	89
P	EDUCATION	104	12.029	11,9	110,6	9,2	60	91	74	89
Q	HUMAN HEALTH	723	14.610	10,8	131,3	10,3	72	83	87	100
R	RECREATION	172	17.836	15,7	152,6	7,4	88	121	101	72
S	OTHER SERVICES	290	11.270	8,8	129,0	9,9	56	67	86	96
<i>SIZE CLASS</i>										
	Micro (<10 pers.employed)	3.972	13.597	10,7	134,7	9,4	67	82	90	91
	Small (10-49 pers.employed)	3.552	19.091	11,9	154,9	10,4	95	91	103	101
	Medium (50-249 pers.employed)	2.534	23.678	13,8	159,4	10,8	117	105	106	105
	Large (>250 pers.employed)	4.472	24.978	15,1	154,1	10,7	124	116	102	104
<i>GOVERNANCE</i>										
	Individual firms	3.972	11.251	9,7	124,6	9,3	56	74	83	91
	Other partnerships	3.552	14.468	10,4	142,1	9,8	72	80	94	95
	Joint-stock companies	2.534	22.375	13,7	155,9	10,5	111	105	104	102
	Other companies	4.472	17.568	12,4	137,7	10,2	87	95	92	100
Sources: Istat, Business register 2015-2021, Income register (2015-2022), Population register (2015-2022)										
Notes: (a) Individuals in the resident population (only residents in household). (b) Number of workable hours per month. (c) Number of months as employees										

Chart 3.1. NACE sections and Manufacture divisions by average hourly gross earnings and monthly intensity of jobs. Bubbles are proportional to average duration of labour contracts. Year 2021

a) NACE sections



b) Manufacture divisions

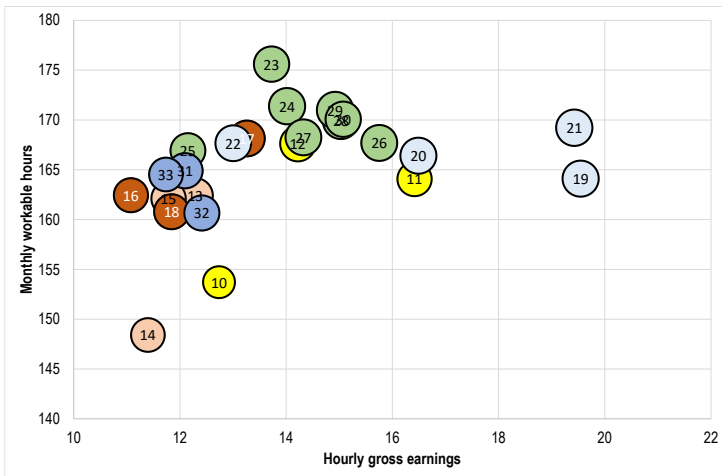


Chart 3.2

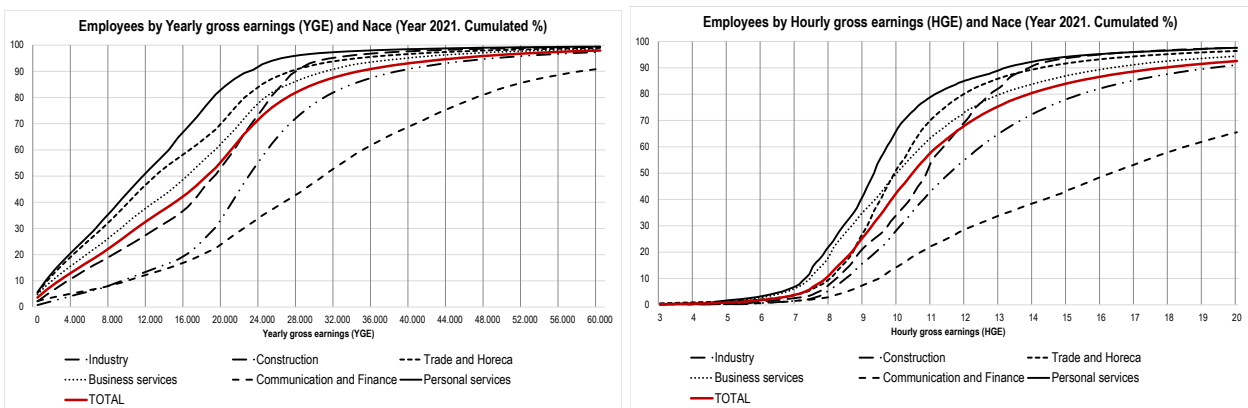


Table 3.3

Per capita gross earnings of employees, by Nace and component. Years 2015-2022 (average annual rates of growth at constant 2015 prices)													
Nace		Annual gross earnings			Hourly gross earnings			Monthly intensity (b)			Duration (c)		
		2015-2018	2018-2021	2015-2022 (d)	2015-2018	2018-2021	2015-2022 (d)	2015-2018	2018-2021	2015-2022 (d)	2015-2018	2018-2021	2015-2022 (d)
	Total	-1,5	0,4	-1,5	-0,7	-0,1	-1,3	-1,2	0,4	-0,4	0,3	0,1	0,2
C	MANUFACTURING	-0,7	0,4	-1,2	-0,6	0,0	-1,1	-0,4	0,1	-0,2	0,4	0,2	0,1
B,D,E	REST OF INDUSTRY	-0,5	0,0	-1,4	-0,9	-0,8	-1,8	0,2	0,6	0,4	0,1	0,2	0,1
F	CONSTRUCTION	-0,9	0,5	-0,8	-1,1	-0,4	-1,5	-1,0	-0,1	-0,5	1,3	1,0	1,2
G	TRADE	-0,7	0,0	-1,3	0,1	-0,5	-1,2	-1,4	0,2	-0,4	0,6	0,4	0,3
H	TRANSPORTATION	-0,5	0,0	-1,3	-0,3	-0,3	-1,2	-0,6	0,1	-0,2	0,4	0,1	0,2
I	HORECA	-3,3	-0,9	-2,2	-0,8	0,4	-1,3	-3,1	0,2	-1,1	0,5	-1,4	0,1
J	INFORMATION	-1,8	-0,6	-2,0	-1,1	-0,5	-1,6	-1,1	0,2	-0,4	0,4	-0,3	0,0
K	FINANCE	0,1	0,2	-1,1	-0,1	0,1	-1,1	-0,5	0,0	-0,2	0,8	0,0	0,2
L,M	PROFESSIONAL	0,7	0,3	-0,6	0,1	-0,2	-0,9	-0,5	0,3	-0,1	1,1	0,2	0,5
N	SUPPORT SERVICES	-1,0	1,3	-0,8	-0,9	0,0	-1,3	-0,3	1,2	0,3	0,2	0,1	0,2
P	EDUCATION	-2,0	-0,5	-1,8	0,0	-0,5	-1,3	-3,6	0,3	-1,3	1,7	-0,3	0,8
Q	HUMAN HEALTH	-2,5	0,2	-2,1	-0,6	0,7	-1,0	-2,2	0,0	-0,9	0,3	-0,5	-0,2
R	RECREATION	-0,3	5,0	0,0	0,5	2,3	-0,8	-1,4	3,3	0,7	0,6	-0,7	0,1
S	OTHER SERVICES	-2,4	0,4	-1,8	-0,6	-0,2	-1,3	-2,4	0,1	-0,9	0,6	0,5	0,3

Sources: Istat, Business register 2015-2021, Income register (2015-2022), Population register (2015-2022)

Notes: (a) Individuals in the resident population (only residents in household). (b) Number of workable hours per month. (c) Number of months as employees. (d) 2022 data are provisional, since Business register data are referred to 2021

3.3. Employers and employees with low earnings

The economic activities with a high propensity to pay low wages emerge quite clearly from Table 3.4 and most of them belong to services. In Horeca and recreation, the sectors most affected by undeclared employment, more than two employees out of three is below YGE threshold. In support services (where subcontracting is frequent), education and other household services more than 50% of employees have low YGE. In construction the incidence of employees below the annual threshold, which was more than 30% in 2015, declined due mainly to an increase in the duration of labour contracts: this sector benefited strongly from the specific fiscal incentives provided by the Government to refurbish private outlets.

The incidence of low HGE follows in part the same scheme: nevertheless, it should be noticed the higher share of individuals below the threshold in support services and in the other services where contractual hourly wages are generally very low and subcontracting very high.

Low earnings have a relatively minor impact in manufacturing; nonetheless. These activities still account for a remarkable share of low wage earners, given that they involve a large number of employees. If we consider the threshold on annual earnings, nearly 10% of employees below the threshold come from manufacturing and another 15% from trade activities. Horeca accounts almost for another 25%, and support services nearly 20%.

On the other side, if we consider hourly gross earnings we find that support services account for 30% of total individuals below the threshold. Manufacturing, trade and the other services serving households also provide larger shares. All these sectors together explain more than two thirds of individuals with low hourly earnings.

If we consider two-digit NACE, and in particular the first twenty divisions with higher incidence of employees below the threshold of YGE, we find out that they account for more than 50% of total employees in industry and services and nearly 80% of employees with low annual earnings (Table 3.5). At the top of the rank, we find services like recreation, Horeca, cleaning services, personal and education services, employment agencies. In all these cases, more than a half of employees are in the low-wage area. We find in this rank also manufacturing activities dealing with food products and wearing apparels. Also construction belong to this restricted set. The average incidence of individuals with low annual earnings of this top twenty activities is 45,1%, more than the triple than the rest of NACE divisions.

Most of the sectors rank similarly with reference to low hourly gross earnings. In this case, the top twenty divisions include textiles and leather in manufacturing and all the logistics. At the top of the rank we find the activities related to security and cleaning of offices and buildings, often tied to outsourcing by larger enterprises and public administration. These top twenty divisions account for more than 75% of the employees with low hourly wages.

Table 3.4

Employees (a) with low gross earnings, by Nace and type of threshold. Years 2015-2022																
	Incidence on total employees										Distribution					
	2015	2016	2017	2018	2019	2020	2021	2022 (b)	2015	2016	2017	2018	2019	2020	2021	2022 (b)
LOW ANNUAL EARNINGS																
TOTAL	30,3	29,5	30,2	30,1	30,1	29,9	29,7	29,3	100	100	100	100	100	100	100	100
C MANUFACTURING	13,7	13,0	13,0	12,7	12,4	12,4	12,2	12,4	11,4	10,9	10,3	10,0	9,7	9,9	9,5	9,5
B,D,E REST OF INDUSTRY	9,5	9,2	9,1	9,2	9,1	9,0	8,9	8,9	0,7	0,7	0,7	0,6	0,6	0,7	0,6	0,6
F CONSTRUCTION	30,3	28,3	28,0	27,6	26,6	25,3	24,9	22,8	7,7	7,0	6,4	6,2	6,0	6,0	6,4	6,4
G TRADE	27,7	26,3	26,1	26,0	26,3	26,4	26,2	26,8	15,4	15,1	14,6	14,5	14,7	14,9	14,8	14,8
H TRANSPORTATION	20,4	19,4	19,3	18,8	19,0	18,9	18,2	18,0	5,3	5,2	5,0	4,8	4,9	4,9	4,7	4,7
I HORECA	66,9	65,9	67,2	66,9	67,0	69,4	69,5	65,8	21,6	22,3	24,4	24,8	25,3	24,2	24,2	24,2
J INFORMATION	15,8	13,8	13,9	14,8	15,1	14,1	15,9	15,8	1,9	1,7	1,7	1,8	1,8	1,8	2,1	2,1
K FINANCE	6,5	4,9	4,7	4,9	4,7	4,9	5,2	5,9	0,8	0,6	0,5	0,5	0,5	0,5	0,6	0,6
L,M PROFESSIONAL	28,1	24,7	24,3	24,4	23,8	22,8	23,7	24,0	4,3	4,1	3,9	4,0	3,9	3,9	4,2	4,2
N SUPPORT SERVICES	53,8	53,2	52,9	51,8	51,5	53,0	51,0	49,4	17,7	18,4	18,9	18,9	18,5	19,1	19,1	19,1
P EDUCATION	58,6	55,6	54,7	54,0	53,6	54,1	54,2	52,8	1,3	1,3	1,2	1,2	1,2	1,3	1,3	1,3
Q HUMAN HEALTH	37,9	38,7	37,1	37,0	37,2	37,9	37,5	37,8	5,7	6,2	5,8	5,9	6,0	6,4	6,3	6,3
R RECREATION	64,7	62,8	64,7	65,4	66,4	64,7	65,5	65,6	2,5	2,5	2,7	2,8	2,8	2,5	2,6	2,6
S OTHER SERVICES	56,8	56,2	56,4	56,9	57,3	57,4	56,1	55,9	3,8	3,9	3,9	4,0	4,0	4,0	3,8	3,8
LOW HOURLY EARNINGS																
TOTAL	9,4	9,6	11,3	11,9	11,5	10,9	10,5	9,3	100	100	100	100	100	100	100	100
C MANUFACTURING	5,3	5,4	6,2	6,4	5,6	5,6	5,2	4,1	14,3	14,0	13,2	12,6	11,4	12,1	11,5	11,5
B,D,E REST OF INDUSTRY	2,3	2,5	3,2	3,6	3,3	3,1	2,9	2,4	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6
F CONSTRUCTION	5,6	6,3	7,6	8,2	7,8	8,1	7,1	5,1	4,6	4,8	4,6	4,7	4,6	5,3	5,1	5,1
G TRADE	4,0	4,0	4,6	4,9	4,8	4,9	4,9	4,5	7,2	7,0	6,9	6,8	7,1	7,5	7,8	7,8
H TRANSPORTATION	8,7	8,7	9,3	9,3	8,8	8,0	7,6	6,5	7,3	7,1	6,4	6,0	5,9	5,7	5,5	5,5
I HORECA	14,6	14,3	18,5	18,9	18,5	16,5	16,1	15,3	15,2	14,9	17,9	17,7	18,2	15,8	15,8	15,8
J INFORMATION	3,0	3,0	3,5	4,0	4,0	3,5	3,9	3,5	1,2	1,1	1,1	1,2	1,3	1,2	1,4	1,4
K FINANCE	1,3	1,3	1,4	1,5	1,5	1,5	1,6	1,5	0,5	0,5	0,4	0,4	0,4	0,4	0,5	0,5
L,M PROFESSIONAL	8,1	7,1	8,0	8,7	8,7	7,7	7,7	7,1	4,0	3,6	3,4	3,6	3,8	3,6	3,8	3,8
N SUPPORT SERVICES	25,1	25,9	28,6	30,5	30,0	30,3	28,4	24,8	26,7	27,6	27,3	28,1	28,2	29,9	30,0	30,0
P EDUCATION	11,8	12,4	14,0	14,5	14,3	14,6	15,9	12,7	0,8	0,9	0,8	0,8	0,8	0,9	1,1	1,1
Q HUMAN HEALTH	8,6	8,9	11,7	13,0	11,6	8,6	8,3	7,1	4,1	4,4	4,9	5,2	4,9	4,0	3,9	3,9
R RECREATION	16,7	17,0	20,5	21,6	22,2	21,4	22,5	22,1	2,1	2,1	2,3	2,3	2,5	2,3	2,5	2,5
S OTHER SERVICES	52,7	52,9	54,8	56,3	55,8	56,0	55,7	52,6	11,5	11,4	10,0	9,9	10,3	10,6	10,5	10,5

Sources: Istat, Business register 2015-2021, Income register (2015-2022), Population register (2015-2022)

Notes: (a) Individuals aged 15-64 yrs. in the resident population (only residents in household, excluding those in retirement and entrepreneurs), in the pay-roll of enterprises in each year. (b) 2022 data are provisional, since Business register data are referred to 2021

Table 3.5

Two-digit Nace with the highest incidence of employees with low gross earnings, by type of threshold. Year 2021									
LOW ANNUAL GROSS EARNINGS					LOW HOURLY GROSS EARNINGS				
Nace code and description (section and two-digit)	%	Employees below the threshold	Share on total employees (a)		Nace code and description (section and two-digit)	%	Employees below the threshold	Share on total employees (a)	
			Total	with low annual earnings				Total	with low hourly earnings
R 93 RECREATION		74,7	0,7	1,9	S 96 OTHER SERVICES		58,3	1,9	10,3
I 56 HORECA		69,5	8,1	19,0	N 80 SUPPORT SERVICES		56,4	0,6	3,4
I 55 HORECA		69,3	2,2	5,2	N 81 SUPPORT SERVICES		41,5	3,5	13,7
N 81 SUPPORT SERVICES		61,2	3,5	7,2	R 93 RECREATION		28,6	0,7	2,0
S 96 OTHER SERVICES		57,7	1,9	3,6	M 73 PROFESSIONAL		27,2	0,5	1,2
P 85 EDUCATION		54,2	0,7	1,3	N 82 SUPPORT SERVICES		22,2	2,0	4,1
N 78 SUPPORT SERVICES		53,1	4,5	8,0	C 14 MANUFACTURING		20,8	1,1	2,2
Q 88 HUMAN HEALTH		49,7	1,5	2,5	N 78 SUPPORT SERVICES		19,5	4,5	8,3
N 82 SUPPORT SERVICES		39,7	2,0	2,6	I 56 HORECA		16,9	8,1	13,0
L 68 REAL ESTATE		38,8	0,7	0,9	P 85 EDUCATION		15,9	0,7	1,1
Q 87 HUMAN HEALTH		38,3	1,4	1,8	C 15 MANUFACTURING		14,2	0,9	1,2
M 73 PROFESSIONAL		38,1	0,5	0,6	I 55 HORECA		13,0	2,2	2,8
N 80 SUPPORT SERVICES		33,3	0,6	0,7	Q 88 HUMAN HEALTH		12,5	1,5	1,8
G 47 TRADE		32,6	9,2	10,1	H 52 TRANSPORTATION		12,1	2,8	3,3
C 14 MANUFACTURING		30,5	1,1	1,1	Q 87 HUMAN HEALTH		9,8	1,4	1,3
C 10 MANUFACTURING		28,4	2,6	2,5	L 68 REAL ESTATE		9,7	0,7	0,6
Q 86 HUMAN HEALTH		28,2	2,1	2,0	G 45 TRADE		9,7	1,8	1,6
F 41 CONSTRUCTION		27,8	2,2	2,0	F 43 CONSTRUCTION		9,5	4,7	4,3
F 43 CONSTRUCTION		25,5	4,7	4,1	C 13 MANUFACTURING		9,0	0,7	0,6
M 69 PROFESSIONAL		24,1	1,3	1,0	M 74 PROFESSIONAL		8,4	0,6	0,5
Total 20 with highest incidence below the threshold (b)		45,1	51,4	78,0	Total 20 with highest incidence below the threshold (b)		29,3	40,9	77,3
Rest of Nace		13,4	48,6	22,0	Rest of Nace		-56,1	59,1	22,7
TOTAL		29,7	100	100	TOTAL		10,5	100	100

Sources: Istat, Business register 2015-2021, Income register (2015-2022), Population register (2015-2022)

Notes: (a) Individuals aged 15-64 yrs. in the resident population (only residents in household, excluding those in retirement and entrepreneurs), in the pay-roll of enterprises in each year. (b) Only Nace two-digit with at least 50 thousands employees

3.5. The enterprises and the employees who escape from the trap of low earnings

In Part 2 we described the behavior of the cohort of employees persistently in employment in the period 2015-2022; , in particular, we referred to the exit of some individuals from conditions of low earnings. The focus was on the group of 878 thousand employees who improved their earning conditions starting from 2019 after

experiencing low annual earnings in the years before. In this section we try to answer few questions: how did they get this result? Did they remain in the same enterprise? or did they change employer in the same sector? or more drastically did they change economic activity?

If we look at the distribution of these workers across NACE sections we observe that more than 70% of those employees improved its conditions by changing employer between 2015 and 2022 (Table 3.6)³². By considering the characteristics of the employer at the beginning and at the end of the period, we see that this sub-population of employees moved towards sectors (such as industry, finance, transportation, human health, information) generally characterized by higher annual gross earnings, and they moved from low earnings activities, like Horeca, support services and recreation where only less than 20% of 2015 employees succeeded to overcome the low earnings threshold. In Manufacturing, for instance, one third of employees remained with the same employer and more than 70% remained in the same NACE: something similar happened to those that in 2015 were employed in finance, or trade, transportation and human health. The case of construction is partly different: most employees tended to change employer remaining in the same sector.

Interesting details can also be observed considering the characteristics of the employer (Table 3.8). Here the change of employer regarded mostly employees that left micro-enterprises for larger businesses, in particular for medium enterprises. The change took place even for those who stayed with a same employer in all the previous years: changing employer was often associated with higher YGE or implied a shift towards more structured businesses (joint stock companies), away from individual firms and other partnerships.

The escape from low pay sectors is thus generally the only winning strategy from low earnings, since sectors where there are more opportunities to improve general pay conditions are few.

The origin-destination flows of who improved their conditions by changing NACE put in evidence frequent transitions to Manufacture from support services, construction, trade and Horeca (Table 3.7). Also frequent are the transitions towards the rest of business services especially from manufacture, and again construction, trade and horeca.

Table 3.6

Cohort of persistent 2015-2022 employees over the threshold of low earnings from 2019, by events of change of enterprise and Nace, and year												
Nace		Number of employees			Same Nace							
					Total		Same enterprise		Change enterprise		Change Nace	
		2015	2021	% change	N	incid.%	N	incid.%	N	incid.%	N	incid.%
C	MANUFACTURING	140.095	203.895	45,5	101.233	72,3	46.013	32,8	55.220	39,4	38.862	27,7
B,D,E	REST OF INDUSTRY	10.324	17.454	69,1	6.491	62,9	3.858	37,4	2.633	25,5	3.833	37,1
F	CONSTRUCTION	84.585	79.713	-5,8	55.700	65,9	16.956	20,0	38.744	45,8	28.885	34,1
G	TRADE	159.596	173.887	9,0	111.146	69,6	54.161	33,9	56.985	35,7	48.450	30,4
H	TRANSPORTATION	71.487	84.543	18,3	47.809	66,9	19.688	27,5	28.121	39,3	23.678	33,1
I	HORECA	105.043	62.424	-40,6	50.675	48,2	19.934	19,0	30.741	29,3	54.368	51,8
J	INFORMATION	27.939	31.211	11,7	17.529	62,7	8.720	31,2	8.809	31,5	10.410	37,3
K	FINANCE	13.561	18.178	34,0	11.156	82,3	8.172	60,3	2.984	22,0	2.405	17,7
L,M	PROFESSIONAL	43.776	45.577	4,1	23.298	53,2	14.287	32,6	9.011	20,6	20.478	46,8
N	SUPPORT SERVICES	145.610	87.391	-40,0	47.579	32,7	16.362	11,2	31.217	21,4	98.031	67,3
P	EDUCATION	5.669	5.847	3,1	3.784	66,7	2.959	52,2	825	14,6	1.885	33,3
Q	HUMAN HEALTH	38.682	44.944	16,2	32.524	84,1	18.267	47,2	14.257	36,9	6.158	15,9
R	RECREATION	11.240	6.103	-45,7	3.647	32,4	2.210	19,7	1.437	12,8	7.593	67,6
S	OTHER SERVICES	20.240	16.680	-17,6	11.444	56,5	6.370	31,5	5.074	25,1	8.796	43,5
	Total	877.847	877.847	0,0	524.015	59,7	237.957	27,1	286.058	32,6	353.832	40,3

Sources: Istat, Business register 2015-2021, Income register (2015-2022), Population register (2015-2022)

Notes: (a) Individuals aged 15-64 yrs. in the resident population (only residents in household, excluding those in retirement and entrepreneurs), in the pay-roll of enterprises persistently in the years 2015-2022.

³² The fact that more than 40% had more than two employers in the period witnesses the mobility of these individuals.

Table 3.7

Cohort of persistent 2015-2022 employees over the threshold of low earnings from 2019 who changed their Nace, by Nace 2015 and Nace 2021								
Nace 2015		Nace 2021						
		Total	Other industry (B,C,D,E)	Construction (F)	Trade & Horeca (G, I)	Communication & Finance (J,K)	Other business services (H,L,M,N)	Other personal services (P,S)
C	MANUFACTURING	38.862	3,6	14,4	32,0	4,0	41,3	4,6
B,D,E	REST OF INDUSTRY	3.833	22,6	17,0	13,6	2,6	40,7	3,4
F	CONSTRUCTION	28.885	44,4		15,2	2,7	34,6	3,0
G	TRADE	48.450	37,4	6,8	5,2	9,1	34,4	7,1
H	TRANSPORTATION	23.678	33,1	9,0	23,6	2,9	27,5	3,9
I	HORECA	54.368	27,8	5,3	27,0	3,9	27,8	8,1
J	INFORMATION	10.410	21,1	4,3	20,5	6,4	41,2	6,6
K	FINANCE	2.405	17,3	3,7	21,0	11,1	40,7	6,1
L,M	PROFESSIONAL	20.478	26,3	6,8	23,5	18,3	18,4	6,8
N	SUPPORT SERVICES	98.031	44,9	6,4	21,1	5,1	16,7	5,8
P	EDUCATION	1.885	15,3	2,7	17,8	10,7	30,1	23,4
Q	HUMAN HEALTH	6.158	20,2	3,8	22,5	4,7	36,3	12,5
R	RECREATION	7.593	22,3	6,6	30,6	6,3	26,6	7,7
S	OTHER SERVICES	8.796	25,1	5,5	24,0	5,1	30,3	10,0
Total		353.832	32,1	6,8	21,1	5,9	27,9	6,3

Sources: Istat, Business register 2015-2021, Income register (2015-2022), Population register (2015-2022)

Notes: (a) Individuals aged 15-64 yrs. in the resident population (only residents in household, excluding those in retirement and entrepreneurs), in the pay-roll of enterprises persistently in the years 2015-2022. Only employees above the threshold after 2019, and formerly below the threshold between 2015 and 2018.

Table 3.8

Cohort of persistent 2015-2022 employees who passed over the threshold of low gross annual earnings from 2019, by business size, type of governance and year. Years 2015 and 2021									
	Total employees			With the same employer			Who changed employer		
	2015	2021	% ch.	2015	2021	% ch.	2015	2021	% ch.
BUSINESS SIZE									
Micro (<10 pers.employed)	340.177	220.200	-35,3	97.175	82.320	-15,3	243.002	137.880	-43,3
Small (10-49 pers.employed)	210.222	246.616	17,3	55.180	62.615	13,5	155.042	184.001	18,7
Medium (50-249 pers.employed)	113.914	168.291	47,7	29.695	33.532	12,9	84.219	134.759	60,0
Large (>250 pers.employed)	213.534	242.740	13,7	55.907	59.490	6,4	157.627	183.250	16,3
Total	877.847	877.847	0,0	237.957	237.957	0,0	639.890	639.890	0,0
GOVERNANCE									
Individual firms	115.251	67.187	-41,7	28.578	28.578	0,0	86.673	38.609	-55,5
Other partnerships	100.543	78.689	-21,7	30.700	30.700	0,0	69.843	47.989	-31,3
Joint-stock companies	559.698	651.432	16,4	153.547	153.547	0,0	406.151	497.885	22,6
Other companies	102.355	80.539	-21,3	25.132	25.132	0,0	77.223	55.407	-28,3
Total	877.847	877.847	0,0	237.957	237.957	0,0	639.890	639.890	0,0

Sources: Istat, Business register 2015-2021, Income register (2015-2022), Population register (2015-2022)

Notes: (a) Individuals aged 15-64 yrs. in the resident population (only residents in household, excluding those in retirement and entrepreneurs), in the pay-roll of enterprises persistently in the years 2015-2022. Only employees above the threshold after 2019, and formerly below the threshold between 2015 and 2018.

3.6. The enterprises and the employees in trap of low earnings

Turning attention to the complementary cohort of persistent workers who could never escape the low earnings trap, we see that they amount to 1,4 million, and have a higher propensity to remain in the original sector and are more tied to the same employer over time (Table 3.9 vs. Table 3.6). When they moved to other sectors, they did it towards business and personal services sectors, included the weakest ones with respect to the level of YGE. Horeca and recreation were the activities progressively abandoned, in this case by more than 10% of those employees³³.

³³ Pandemics might have had a role in this unfavorable dynamics.

Compared to those who overcame low wages, these employees were generally more involved with micro-enterprises and with individual firms in 2015: in that year, a larger portion worked for Horeca enterprises. On average, they come from enterprises where earning levels were worse. Changes of employer, when they occurred, were prevalently addressed toward large-scale businesses and towards joint stock companies, while the flow towards medium sized businesses was quite shallow. These evidences suggest a certain difficulty to move across sectors and some difficulties in escaping low pay also when moving to large services enterprises, especially when (as we saw in Part 2) part-time and fixed term jobs tend to prevail.

Table 3.9

Cohort of persistent 2015-2022 employees never permanently above the threshold of low earnings, by events of change of enterprise and Nace, and year											
Nace	Number of employees			Same Nace						Change Nace	
				Total		Same enterprise		Change enterprise			
	2015	2021	% change	N	incid.%	N	incid.%	N	incid.%	N	incid.%
C MANUFACTURING	195.802	189.437	-3,3	134.894	68,9	71.037	36,3	63.857	32,6	60.908	31,1
B,D,EREST OF INDUSTRY	9.716	12.216	25,7	5.350	55,1	3.179	32,7	2.171	22,3	4.366	44,9
F CONSTRUCTION	76.837	82.517	7,4	52.892	68,8	16.166	21,0	36.726	47,8	23.945	31,2
G TRADE	236.838	233.713	-1,3	168.590	71,2	85.513	36,1	83.077	35,1	68.248	28,8
H TRANSPORTATION	76.643	83.668	9,2	47.132	61,5	16.304	21,3	30.828	40,2	29.511	38,5
I HORECA	312.660	272.798	-12,7	222.399	71,1	80.396	25,7	142.003	45,4	90.261	28,9
J INFORMATION	21.906	23.280	6,3	12.806	58,5	7.454	34,0	5.352	24,4	9.100	41,5
K FINANCE	11.233	12.221	8,8	9.003	80,1	5.991	53,3	3.012	26,8	2.230	19,9
L,M PROFESSIONAL	57.475	64.129	11,6	38.186	66,4	24.969	43,4	13.217	23,0	19.289	33,6
N SUPPORT SERVICES	227.672	247.015	8,5	150.236	66,0	46.833	20,6	103.403	45,4	77.436	34,0
P EDUCATION	8.927	10.320	15,6	6.677	74,8	5.066	56,7	1.611	18,0	2.250	25,2
Q HUMAN HEALTH	87.003	98.999	13,8	74.431	85,5	43.638	50,2	30.793	35,4	12.572	14,5
R RECREATION	25.782	21.718	-15,8	12.820	49,7	7.331	28,4	5.489	21,3	12.962	50,3
S OTHER SERVICES	56.843	53.306	-6,2	41.016	72,2	23.964	42,2	17.052	30,0	15.827	27,8
Total	1.405.337	1.405.337	0,0	976.432	69,5	437.841	31,2	538.591	38,3	428.905	30,5

Sources: Istat, Business register 2015-2021, Income register (2015-2022), Population register (2015-2022)
Notes: (a) Individuals aged 25-60 yrs. in 2022 resident population (only residents in household, ex cludind those in retirement and entrepreneurs), in the pay-roll of enterprises persistently in the years 2015-2022.

Table 3.10

Cohort of persistent 2015-2022 employees never permanently above the threshold of low earnings, by business size, type of governance and year. Years 2015 and 2021									
	Total employees			With the same employer			Who changed employer		
	2015	2021	% ch.	2015	2021	% ch.	2015	2021	% ch.
BUSINESS SIZE									
Micro (<10 pers.employed)	606.265	548.785	-9,5	220.452	213.245	-3,3	385.813	335.540	-13,0
Small (10-49 pers.employed)	331.511	331.714	0,1	89.364	92.522	3,5	242.147	239.192	-1,2
Medium (50-249 pers.employed)	178.013	180.462	1,4	45.924	45.679	-0,5	132.089	134.783	2,0
Large (>250 pers.employed)	289.548	344.376	18,9	82.101	86.395	5,2	207.447	257.981	24,4
T total	1.405.337	1.405.337	0,0	437.841	437.841	0,0	967.496	967.496	0,0
GOVERNANCE									
Individual firms	261.634	224.439	-14,2	99.818	99.818	0,0	161.816	124.621	-23,0
Other partnerships	206.237	177.851	-13,8	77.554	77.554	0,0	128.683	100.297	-22,1
Joint-stock companies	744.848	827.439	11,1	203.559	203.559	0,0	541.289	623.880	15,3
Other companies	192.618	175.608	-8,8	56.910	56.910	0,0	135.708	118.698	-12,5
Total	1.405.337	1.405.337	0,0	437.841	437.841	0,0	967.496	967.496	0,0

Sources: Istat, Business register 2015-2021, Income register (2015-2022), Population register (2015-2022)
Notes: (a) Individuals aged 25-60 yrs. in 2022 resident population (only residents in household, ex cludind those in retirement and entrepreneurs), in the pay-roll of enterprises persistently in the years 2015-2022. Only employees above the threshold after 2019, and formerly below the threshold between 2015 and 2018.

Concluding remarks

The analysis carried out in this paper uses for the first time a relatively large 2015-2022 longitudinal dataset deriving from the integration of ISTAT's statistical registers on population, incomes and businesses. It delivers a rather critical picture of the wage conditions of more than 20 million of Italian employees distributed in four economic sectors: public sector, private (industry and services), agriculture and domestic workers. The study concerns both the levels and the dynamics of labour incomes. The most critical issues regard domestic and

agricultural work: in these sectors more than 70 percent of employees have yearly labor incomes of less than 10,000 euros. These activities are notoriously characterized by a high incidence of non-regular or "grey" employment that emphasize the effects of low wages. They are also sectors where public intervention plays a prominent role in supporting employees' income indirectly by financing their employers with fiscal incentives, a further element helping to explain the low level of wages.

More varied is the picture emerging from the analysis of the largest segment of employees relating to the non-agricultural private sector. In this case, given also the size of the activities (we talk about 15 million individuals), some specializations related to low wage workers can be identified. Some service sectors evidently generate poorly paid labor: this is the case, for instance, in accommodation and food service activities and personal services, where median incomes are just over 10 thousand euros. Nevertheless, there are other business services activities that offer rather poor wages, such as temporary employment agencies, cleaning and security services where the presence of intense outsourcing commissioned by medium and large economic units amplifies the spread of low paid work. The seven NACE divisions with the highest rate of low-earners (recreation and sports, food and beverage, accommodation, services to buildings, personal services, education, and employment and recruiting agencies) explain more than a half of total employees below the threshold of yearly gross earnings. Industry is more rarely involved in low earnings, although food and textile industries are - like construction - more risky with their relatively higher rate of low-wage earners.

More generally, the economic activities where yearly gross earnings are lower are also those where hourly gross earnings are lower. Although an adequate level in hourly earnings is a necessary condition to have decent yearly earnings, we argue that poor work remains essentially a problem of low incomes from work: duration and intensity of labour contract is often insufficient to sustain individual earnings. Low income of employees depends on the quality of their jobs. When quality is scarce, and contracts are short-termed or with a low intensity, for a large part of employees low-earnings become a sort of a trap, a sort of a swamp from which it is difficult to get out. The exit from the low-earning condition most of the times the only escape from the enterprises and the economic activities that offer low quality jobs. Job quality, though, is also an issue relating the quality of the employer: for people who succeed to escape the low-earnings trap it is often fundamental to work in enterprises that grows in size and performance.

Given this picture, we think that further steps of this research could be dedicated to a large amount of subjects. We just highlight a few of them. On the one hand, the role of the employer in the dynamics of employees earnings needs to be more exploited: the evolution of its profit & loss accounts, the characteristics of its workforce, the distribution of earnings among employees, the type of reference market (local or foreign). On the other hand, some light must be shed over the interactions between low-earnings and the government support to individual incomes: the short but meaningful and troubled story of these measures in Italy interacts with the events in the labour market for a large set of employees. We already know what comes from the most critical service sectors but a deeper exploitation of the longitudinal information delivered by the statistical registers can really support a better knowledge of these welfare policy issues. Finally, geographic aspects of the issues need to be revealed by placing on the territory low-wage earners and their employers.

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