INNOVATION OF INPS FOR THE RECOVERY OF THE COUNTRYXX ANNUAL REPORT

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Extended executive summary

The XX Annual Report of INPS covers in its entirety the year 2020 (and sometimes also the first months of 2021), an exceptional year in many respects: despite the uniformity and simultaneity of the shock that hit all national economic systems and all the sectors, the outcomes were very different because the various actors benefited from different degrees of protection. The various European countries have tried to provide protection to the widest possible audience of citizens affected by the loss of income and/or employment, not hesitating to extend their debt resources in an extraordinary way. Nevertheless, in a categorical welfare system that characterized our country in the last century and that in some ways still survives in the myriad of case studies, the same shock produces different effects on different workers, precisely because they enjoy different insurance coverage. The universal insurance instruments, the citizenship income RdC (fortunately introduced before the pandemic phase, and strengthened in its coverage by the temporary introduction of the Emergency Income REm), and the redundancy fund in derogation CIG-Covid (introduced simultaneously with the decree closing the sectors considered as non-essential) represented a barrier against a drastic worsening of the condition of poverty and deprivation in the period of the crisis. This report documents this difficult phase, in which the fall in production and employment triggered various responses from the legislator, implemented by INPS, which cushioned the impact of the crisis, with differentiated effectiveness. In the period in question, the commitment and actions deployed by the Institute have multiplied the services rendered, quickly and extensively providing an effective response, simultaneously activating innovations aimed at users and digital transformation. The enlargement of the areas of intervention of the Institute does not prevent us from continuing to reflect on the main area of activity, represented by pension benefits, in this phase of transition from the benefit-defined to the contribution-defined system. Also in this case one of the transversal themes is that of equity, between generations and within each generation.

The first chapter of the report presents the cyclical fluctuations of the dimensions that impact the activity and the financial balance of the Institute. From whatever perspective we analyse it, 2020 is characterized by a sharp fall in labour requirements: a 2.8% reduction in employment is accompanied by a 7.1% decrease in labour units and 7.7% in hours worked, suggesting a wide reduction of the labour contribution. Some workers, although attenuated by the freeze on firing, lost their jobs, but most of them kept on working and earned less.

The data from the Istat survey on the labour force depict a blocked market, where the unemployed are growing little, fixed-term contracts are not renewed and self-employed workers lose significant components, even though the unemployment rate does not rise. The block also appears in INPS administrative data on flows: in the pandemic year the flows concerning all types of employment relationships contracted and stiffened. Hiring has undergone a contraction of around 30%, reaching almost 40% for intermittent labour contracts and apprentices. Transformations decreased by 21% and terminations fell by 25% on average, with higher levels in particular for apprenticeships (-31%) and for open-ended contracts (-29%), i.e. the types of contracts most affected by the firing block and the contextual appeal to the Cig Covid.

The jobs preserved with the firing block in the period March 2020-February 2021, compared to the physiology of the labour market as documented by the available statistical data, can be estimated as about 330,000 and for more than two thirds attributable to small businesses (employers up to 15 employees). It will now be a question of how this balance will evolve following the removal of the firing block. It should be borne in mind that in the years preceding the pandemic, layoffs of an economic nature exceeded half a million per year, despite a positive hiring dynamic. Overall, considering all types of contracts, at the end of February 2021 the number of employees in private companies had decreased by 37,000 units compared to the same time of the previous year

When we consider the total volume of INPS contributing workers, an indirect indicator of the totality of regular workers, it did not decrease in 2020, reaching 25,546 million, a value practically identical to that of

2019. The pandemic has not so much reduced the absolute number of contributors as the average number of weeks of actual work: from 42.9 weeks in 2019, it dropped to 40.1 in 2020. And this corresponds to a contraction in labour input equal to -6.5%, in line with other labour market indicators. A significant part of this decline was passed on to the foreign component, experiencing a significant reduction during 2020. The invariance in the number of contributors is accompanied by a non-negligible turnover of cancellations and new registrations of about 2 million people, of which a significant component is created by new enrolment following the baby-sitting bonus (431,000 new contributors).

Corresponding to the decline in labour input, there is a decline in income from work: the taxable pension income fell by about 33 billion, falling from 598 billion in 2019 to 564 billion in 2020 (- 5.6%). In absolute value, the most significant decline was that of private employees' fund (from 369 to 340 billion, equal to -7.9%), while for the self-employed fund the decrease was equal to -6.0%.

If we consider individual salaries, the average annual salary of employees dropped from € 24,140 in 2019 to € 23,091 in 2020 (-4.3%, corresponding to a loss of just over € 1,000), following the average reduction in worked weeks. This contrasts with what happened to the average of private sector employees who worked full time for the entire year: in this case, wages increased from 32,668 to 36,448 euros (+ 11.6%). These two figures are indicative of a tendency to diverge within dependent employment, as a consequence of increasing insecurity.

The recession has mainly affected the small business sector. Using the full-time equivalent contribution as a measure of labour demand, in 2020 the effective demand for employees decreased by 8.5% due to the pandemic crisis which mainly affected the private sector (-10.6% corresponding to approximately 1.3 million man-years), with particular intensity in the area of small businesses up to 15 employees (-16.6%) but significantly also in the area of medium-sized enterprises between 15 and 99 employees (-11.3%) also decreasing in larger companies (-5.3%). The contribution of the public sector was also negative (-0.7%), mainly due to the generational turnover.

As in other years, the chapter then reports detailed information on the dynamics and composition of the various subgroups of workers who make up the population of contributing members, from agricultural workers to domestic workers, from self-employed workers (artisans, traders, farmers) to non-standard contracts managed by a separate Fund (*gestione separata*) and to occasional workers. Finally, a box summarizes the evidence currently available for workers in the so-called GIG economy.

The first chapter also reviews the exceptional use of income support tools: the short-time working allowances (CIG) has seen an increase with following the derogation, rising from 1.4 in 2019 to 18.7 billion in 2020, as a consequence of the increase in the number of beneficiaries, from 620,000 to 6.7 million, with an average per capita benefit equal to 2,788 euros. This was a widespread phenomenon among all workers, if we consider that the employees working zero hours (*Cassaintegrati a zero ore*), initially equal to half in the first lock-down (45% in April 2020), fell to 9% (November 2020) up to 7% (February 2021). Together with the data on individual persistence (half of the employees have been laid off for up to three months), these data tell us that the recession appears at the same time as generalized and transitory, since the group of employees for whom the suspension from work was massive is actually a minority. They can be identified as the group laid off for at least 10 months and with an overall contributed hours exceeding 60% of workable hours: these are 310,000 employees, for whom the number of hours integrated in the period observed has exceeded 1,000.

If we focus on companies permanently present in the last two years (1,267,000 companies), 43% of them (541,000) never used the Cig, 18% (227,000 companies) resorted to the Cig exclusively in the most severe phase of the lock-down in the spring 2020 and 17% (211,000 companies) had some drag, however ending in 2020. There is therefore a residual 22% (288,000 companies, which corresponds to 26.5% of employment) that at the beginning of 2021 still made use of Cig and had not yet managed to recover from the pandemic crisis.

Lastly, the chapter reports data on NASpI, which not surprisingly show a negative trend compared to 2019 as the freezing of layoffs has reduced the entry into unemployment: compared to 2019, the beneficiaries after firing, which in 2019 were 811,000, became 654,000, while the component coming from terminated contracts increased slightly (from 1,656,000 to 1,723,000).

The second chapter describes the trend of the stock and pension flows in 2019 and 2020, in aggregate by gender and by management. Italian pensioners at 31 December 2020 amounted to approximately 16 million, of which 7.7 men and 8.3 women.

In relation to the macroeconomic context, the dynamics of pension expenditure shows a slowdown in growth starting from 2014. However, the ratio between the number of retired and employed persons remains at a level that is among the highest in the European context. Furthermore, the ratio between the total amount of pensions (in nominal terms) and the number of employed persons increased by 70% between 2001 and 2020. Between 2012 and 2020, the difference between the male and female median pensions visibly increases, a sign of an increase in gender inequality among pensioners. The difference increases starting from 2012 both for early retirement (*pensioni di anzianità* - from about 400 to 550 euros) and for old-age ones (*pensioni di vecchiaia* - from about 200 to 250 euros). The interquartile gap also increased significantly for both early retirement and old-age pensions. Among men, the increase is respectively 67 and 83%. Among women, the increase is instead 84% for early retirement pensions and 148% for old-age pensions.

The public debate on pensions in recent years has focused on flexibility and the possibility of early exit from the labour market. Quota 100 allowed the early retirement of 180,000 men and 73,000 women in the two-year period 2019-20, while Woman Option (*opzione donna*) brought about 35,000 retirements in the same period. The chapter analyses the take up of both measures using data from the administrative records. From the analysis of Quota 100 it emerges that the measure was mainly used by men, with medium-high incomes and relatively more frequently by public employees. If, on the other hand, we limit ourselves to private sector employees, in addition to gender and income, health in the last years of careers also plays a role. Compared to the employment impacts of Quota 100, the analysis conducted on company data does not show clear evidence of a stimulus to greater hires by early retirements.

From the analysis of a sample of women with the requisites for joining the Woman Option, it emerges that, unlike what is described for Quota 100, this option was mainly adopted by subjects with low incomes, sometimes without contributions in the years prior to retirement. Even limiting itself to the private sector only, low income is confirmed to be the most significant determinant of this choice.

Considering that Quota 100 was experimental in nature and only workers who meet the requirements in the three-year period 2019-2021 could enjoy this opportunity, the public debate has focused on some proposals for revision of the pension system. In this chapter, three are examined in depth from the point of view of the financial effects on pension expenditure in the short and long term. Specifically, a) the proposal to allow early retirement with 41 years of contributions, regardless of age, b) the option to retire using a full contributory scheme with 64 years of age and 36 of contributions and c) an early retirement using the fraction of contribution only, until the age of age retirement.

The analysis shows that the first proposal is the most expensive and reaches up to 0.4% of the Gross Domestic Product. The second, more equitable in intergenerational terms, produces savings already shortly before 2035 due to the lower portion of the pension due to the early exit but above all to the savings generated by the contributory method. In the last proposal analysed, flexibility is guaranteed only by the contributory component of the pension allowance with much lower costs for the system. In the long run, all three proposals lead to a reduction in pension expenditure compared to current legislation.

The analysis of the early pension choices shows a trend towards voluntary contribution to redeem periods not covered by compulsory or notional contributions by those who opt for early retirement. For the purpose of further study, the effects of Legislative Decree 4/2019 were analysed, which introduced the possibility of redeeming the years of university program at a subsidized cost. From the analysis of the data relating to the practices for redemption requests (*riscatto volontario*) sent by private sector employees in the period 2016-2020, it is clear that the degree redemption is an increasingly used tool. In fact, the requests tripled between 2018 and 2019, thanks to both the facilitated redemption and the ordinary redemption, presumably required to increase not only the contribution coverage, but also the contribution amount.

The last paragraph analyses a relevant aspect for the equity of the pension system, which is the difference in life expectancy related to the socio-economic condition. The analysis shows that this is a relevant problem mainly for the male population, for which the transition from the first to the fifth quintile of the distribution of retirement income is associated with a gain in terms of life expectancy at 65 years of more than two years. In addition, it is analysed whether the excess mortality in the pandemic period had accentuated this phenomenon. The result is a relative worsening in the central quintile of income distribution.

The chapter also contains inserts that focus on technical but important aspects in the functioning of the current pension system. The first box, on the transformation coefficients of the contribution amount into a pension annuity, highlights the inconsistency of assigning these coefficients to the retirement cohort and not to the individual's birth cohort. The second box highlights the reduced infra- generational redistribution capacity of the contributory system compared to the previous pay-as-you- go system. The third box analyses how the excess mortality created by the pandemic has a temporally limited effect on the transformation coefficients calculated on the life expectancy of the elderly population; it also discusses the effect on pension requirements and the distortion of the rules that provide for their adjustment to life expectancy.

The third chapter deals with the income support measures disbursed during 2020, and in particular it focuses on the Citizenship Income/Pension subsidy, Bonuses for self-employed and the short-time working allowances (wage guarantee fund), with attention to the profiles of beneficiaries and the impacts in terms of equity. It is worth mentioning that from the beginning of the pandemic, the Institute has spent 44.5 billion euros on income support measures that have reached 15.1 million citizens overall. The chapter is divided into five parts. The first focuses on the Citizenship Income/Pension (RdC/PdC) subsidy, the main measure against poverty ever introduced in Italy, which, although introduced before the pandemic crisis, has proved to be of particular importance in addressing the worsening of the economic conditions of the weakest part of the population exposed to the crisis. The analysis shows that two-thirds of the 3.7 million beneficiaries are not recorded in the INPS archives for years 2018 and 2019, and are therefore detached from the labour market (and perhaps not immediately re-employable); the remaining one-third, which is instead present, reveals on average an income equal to 12% of the average annual wages of private sector workers in Italy, and only 20% of them worked for more than 3 months during the period prior to introduction of the subsidy. This evidence describes a situation of considerable social exclusion for the individuals who have benefited of the measures. As regards the geographic distribution of RdC/PdC recipients, municipal data show that the incidence of the subsidy (measured as the ration between number of beneficiaries in the municipality and local population) is largely explained by indicators of local economic hardship. In fact, once socio-economic conditions are taken into account, differences in the incidence of beneficiaries between macro-regions are nil.

The second part of the chapter focuses on the distribution of the benefits of the *Cassa Integrazione Guadagni* (Cig), the short-term working allowance, introduced by the government during the pandemic, which has played a crucial role in supporting companies and workers during the crisis. First, we consider the intensity of use of the measure at the firm level, trying to understand the firm characteristics associated with a greater intensity of utilization. The analysis confirms that firms that in the pre-Covid period had lower liquidity and worse profitability are characterized by a higher intensity. The chapter also questions the internal firm strategies for the Cig, investigating the firm choice between equal distribution of the wage loss associated to the use of the CIG among workers or the concentration of the loss on certain groups of workers. Together with a rather high average concentration (with a Gini concentration index of the individual share of Cig hours in the firm equal to 0.51), there is also heterogeneity related to firms characteristics, with higher concentration in companies characterized by higher job instability and wage dispersion.

In order to understand which workers have suffered most from the wage reduction associated with the measure, the intensity of its use is analysed at an individual level. Among the most relevant results, it emerges that the intensity at the individual level substantially decreases with the salary of the worker, the seniority in the company, the work experience, while it increases with the age of the worker, especially for workers with permanent contracts. The chapter also investigates the role played by the Covid-19 CIG in countering wage losses and the widening of inequalities, showing how this measure made it possible to significantly mitigate the economic losses faced by the weaker segments of the employed workforce. Considering the group of workers who experienced at least one Cig Covid-19 event in the year, it is shown that in the absence of the Cig the median earnings for the workers involved would have decreased by 60% (from approximately 1,700 euros in February 2020 to 680 euros in April), while this loss is reduced to 34% when we consider the earnings integrated by the Cig. As regards inequality, the Gini index calculated on employees' earnings, equal to 0,29 in the months of January and February, would have increased to 0,42 and 0.56 in March and April, respectively, while due to Covid-19 Cig, the increase has been actually much more contained, with the Gini index reaching a value of 0,45 in April. Comparing the indicators of observed inequality, which increased by 55%, with the counterfactual hypothesis of no shock absorber (increased by 93%), we can argue that the policy has managed to halve the impact of the pandemic crisis on income inequality. Furthermore, it is interesting to note that the compensation due to Cig is higher for fragile employees, such as women and young people.

In the third part of the chapter, attention is paid to the support offered to self-employed workers and certain specific categories of employees. Starting from March 2020 subsidies of 600 and 1,000 euros were made available to these workers with about 8.8 million payments during the year, for a total expenditure of almost 6 billion euros (the share of self-employed and seasonal workers exceeds 70% of the total). The number of beneficiaries amounted to 4.2 million, with an average individual benefit of 1,400 euros during the period covered by the policy. Taking into consideration the specificities of these subjects, our analysis describes a quite heterogeneous situation. Seasonal, intermittent and show business workers, thanks to the subsides obtained in 2020, have maintained almost unvaried their income compared to 2019; indeed for a non-negligible group of individuals, earning in 2020 were even higher than in 2019. For freelancers (not enrolled in a professional register, '*professionisti non ordinistici*'), it is shown how the population of 318,000 beneficiaries of the subsidy (600 euros in March and April 2020) drastically reduces in May, due to the introduction of a number of controls aimed at detecting an effective fall in revenues: the reduction in the number of beneficiaries has been mainly driven by workers who were inactive in 2019 and by those who in 2019 had high taxable income. Finally, for self-employed workers, we investigate the take-up rate, showing how a non-negligible share of "silent" workers (those with no social security contributions in 2018, 2019 and 2020) has applied for the subsidy.

The fourth part of the chapter examines two measures offered to families to cope with the closure of schools and childcare services: the Covid-19 parental leave and the baby-sitting bonus. Recipients of the two measures are compared in terms of nationality, area of residence and gender, as well as age of children for whom the request was made. For private sector employees, the comparison also concerns a number of job characteristics. Among other things, it emerges that the baby-sitting bonus has been used by relatively richer workers, employed in smaller companies compared to those employing parents who have benefited of the parental leave scheme. Then, taking into consideration only families that have opted for the Covid-19 leave, we examine variables that influence fathers' take-up probability. Fathers taking the Covid-19 leave represent 21% of beneficiaries and the take-up probability is positively correlated to the ratio between the income of the mother and that of the father.

The entire system of family support is currently subject to revision by the legislator, we discuss the unification of family support benefits with an analysis of the single temporary allowance (*Assegno unico*) and its integration with other measures of income support (RdC). The chapter concludes with a fifth and last part in which some of the criticisms emerged during the pandemic of the current system of social safety nets are discussed: fragmentation of the various institutions, lack of a more equitable insurance-contribution mechanism, financing with differentiated contribution rates not only by production sector and by company characteristics, but also on the basis of the effective use of the measure.

The fourth and last chapter reports on the digital transition that INPS is developing, calling on internal and external project resources. Although the digitization of public services has been an ongoing process for many years, citizens still do not perceive digital transactions as the most effective way to regularly interact with the Public Administration. The reason lies in the low usability of the services offered by the public sector, as a result of a technological transformation that has often limited itself to replacing existing physical processes with digital equivalent solutions, without changing established practices, nor the service logic, nor the settings based on previous technologies or internal organization structures. For this reason, the Board has adopted two plans for the current three-year period ("Digital Strategic Plan 2020-2022" and "ICT Strategic Plan 2020-2022") with the aim of outlining the transition to digital that INPS has already started.

The two Strategic Plans adopted in 2020 have been articulated into a coherent program of innovation projects, developed in parallel with the ordinary processes of maintenance and incremental updating of the ICT infrastructures. This chapter reports on the 14 digital innovation projects selected and implemented during the first year of implementation. Project progress is reported in periodic project meetings, as part of a specific governance model by a Steering Committee chaired by the General Director and consisting of a broad representation of management that includes ICT, product, organization and human resources development.

The projects have been attributed to the responsibility of dedicated team leaders (cross-functional teams) who make use of the contribution of resources from multiple corporate functions, whose members are able to operate in a dynamic, multidisciplinary and creative context. The innovation teams operate with an Agile methodology, according to a development plan that provides for intermediate releases with quarterly frequency, frequent reporting to the Steering Committee and evaluations of results on an annual basis through the adoption of specific key performance indicators (KPI), such as the percentage of automation achieved, the degree of usability of a given web service, the share of personnel involved in a skill building process. Obviously, digital transformation cannot be limited to the innovation of procedures, but requires intervention aimed at changing the skills of the staff currently in service, which must therefore be guided and trained through a Change Management plan. INPS has therefore started the mapping of available skills at the national level, highlighting their distribution within the organizational structure, in order to identify the personnel with greater adaptability to innovative contexts, supporting the composition of flexible and online work groups with emerging needs, stimulating internal creativity and awareness of the changes underway.

The first innovation projects selected by the Steering Committee in 2020 relate to the themes of internal effectiveness, the improvement of services to citizens and their experience of use, the maximum exploitation of data and the identification of innovative architectural solutions. The organizational Reassessment project consists in a rethinking of the role of the Agencies and of the model of distribution of services and production activities. The team proposed and tested a production model with differentiated operations in three provincial offices, in which the nature and distribution of the activities takes into account the balance between the need for proximity to users and the advantages deriving from the centralization of some resources and skills. The process of extending the model throughout the country is underway. The digital management of corporate skills project has experimented in some areas with a set of applications capable of mapping corporate knowledge and supporting the evolution of personnel skills. To support the sharing of knowledge, a project was also selected for the "Creation of collaborative environments, training and support for the activity of remote employees".

With reference to the relationship with final users, the following projects have been activated. The Co-participation of intermediaries in the generation of public value project has developed a two-way communication platform with the patronage bodies as well as an enhancement of the functionalities (company evidence) in a two-way box for consultants. The communication platform with the patronages creates a direct method of conversation with the Institute, thus allowing the discontinuation of the use of communications via institutional email boxes. This new service is currently being tested throughout the national territory. The Co-participation with citizens project: the development of the MyInps reserved area consists of the advanced personalization of the MyInps reserved web area, together with the generalized transition to SPID, with the aim of consolidating the long-term relationship with users by offering them content and services based on the respective target membership. The Customer Relationship Management (CRM) Strategy project intends to evolve the existing operational CRM system into a unified technological platform that makes interactions with the same subject available in a single environment through the different contact channels, physical and virtual, allowing to know in detail the reasons and the results of the contact. The aim is tracing, generating and extracting value from interactions with users in the long term. In parallel, the integrated Work Area project consists of the construction of a work interface that favours the sharing of tools, information and activities by offices that act on the same subject in different times and places. Finally, the User Experience Integral Management System project consists of creating a structured system for collecting and analysing users' feedbacks (external and internal), to support strategic decisions and continuous improvement processes. Additional projects (Consolidation and qualification of individual contributory accounts, Enabling advanced ecosystem services through a Blockchain infrastructure) aim to improve the Institute's information system by also introducing innovative enabling technologies. INPS has infrastructural and security features that allowed the nomination as a National Strategic Pole (PSN). The path includes an accreditation process towards the Italian Agency for Digital where the Institute must demonstrate the possession of technological and organizational requirements such as to ensure the resilience of its digital services as well as the infrastructural and methodological capabilities to share its ICT platforms. Other infrastructure projects are the Consolidation of a Data Lake of clients' data and services, and the creation of a Hub for accessing non-retirement benefits and integrated payment management. With the "Thinking, designing and creating digital project", INPS turns its attention to the digital experience of users who intend to evaluate the opportunity to redeem their degree.

The chapter closes with an illustration of two project initiatives that are considered strategic due to the impact they may have in the socio-economic context of reference: the introduction of the Disability Card, which certifies the condition of disability or non self-sufficiency, and the platform for the GIG Economy, i.e. the co-creation of a digital register for riders with institutional partners from the private sector, a platform where all the actors involved are recorded and process events and data relating to both relationships and work procedures can be brought together.

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