

WORKING ANYTIME, WORKING ANYWHERE AT THE ITALIAN NATIONAL INSTITUTE OF STATISTICS (ISTAT)¹

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Abstract. The COVID-19 pandemic prompted a widespread shift toward remote work, significantly altering traditional work arrangements and locations. This transformation has had a profound and enduring impact on the operational modalities of Italian Public Administrations (PAs). This study investigates the smart working model implemented by the Italian National Institute of Statistics (ISTAT), with the aim of assessing the frequency and intensity of both in-office and remote work practices. The novelty of this work lies in its focus on the evolving organizational frameworks within the public sector -such as workflow management, team dynamics, leadership styles, and institutional culture - where smart working remains a developing paradigm. By offering quantitative insights into the application of smart working, this study contributes to the broader discourse and supports future research in this domain.

1. Introduction

The COVID-19 pandemic catalyzed the adoption of remote work, exposing both its potential and limitations, even within traditionally rigid public sector structures. Smart working has since evolved from an emergency response into a strategic lever for modernizing public administration in the digital era.

Evaluating its impact requires a multidimensional approach, encompassing productivity, institutional efficiency, transparency, service delivery, and employee well-being. In the Italian context, where public administration plays a pivotal role in socio-economic governance, such analysis must also address how the sector addresses the digital divide and supports the development of digital infrastructure and policy. Furthermore, it is imperative to comprehend the manner in which smart working contributes to the enhancement of work-life balance, employee satisfaction, and organisational culture, enhancing public service effectiveness.

In the following discussion, the characteristics and differences between remote working, smart working, teleworking, will not be examined in depth. For a more detailed analysis of these concepts, the reader is referred to the relevant specialist

¹ This article is the result of the common contribution of the joint study of the two authors.

literature on the subject (ILO, 2020, Pareschi, 2021, CIPD, 2008). We shall instead refer to the concept of smart working or “*lavoro agile*” as introduced into the Italian legal system by Art. 18, Law No. 81 of May 22nd 2017 as a “*method for the execution of the employment relationship established by agreement between the parties, even with forms of organization by phases, cycles and objectives and without precise constraints of time or place of work, with the possible use of technological tools for the performance of the work activity. The work activity is performed, partly inside company premises and partly outside without a fixed location, within the limits of maximum duration only of daily and weekly working hours, deriving from the law and collective bargaining*”. In brief, smart working is subject to regulation through a voluntary agreement that is embedded within the broader employment relationship. This agreement confers upon employees the autonomy to determine their working hours and location, subject to general arrangements established with the employer. In contrast, remote work is formally defined in the employment contract itself – or subsequent amendments – and involves fixed specifications regarding the place of work, the tools to be used, and the working schedule.

The paper is structured as follows. The next section reviews the organizational measures adopted by the Italian National Institute of Statistics (ISTAT) to comply with the legislative framework governing the implementation of smart working. The third session outlines the data sources and methodological choices made during the data processing. The fourth section presents the results the empirical findings, with particular attention to gender-related outcomes. The final section presents potential avenues for future research on working time.

2. Smart working in the years 2023 and 2024: ISTAT internal provisions

In the aftermath of the COVID-19 pandemic, ISTAT implemented a hybrid work model grounded in the principle of prevalence, mandating that 51% of workdays be conducted in-person and 49% remotely. Between 2023 and 2024, the Institute experimented with two scheduling methodologies—monthly and bi-monthly—to optimize flexibility, work-life balance, productivity, and resource management without overburdening facility managers.

In detail, as a result of the various internal regulations that followed, three distinct regulatory phases were observed:

- a. Jan–Feb 2023: A bi-monthly cap of 20 smart working days was introduced, with a mixed modality (16 full days + 4 half-days). “Fragile”² and special teleworking employees were granted full remote work exemptions.
- b. Mar 2023–Apr 2024: A monthly cap of 10 days was adopted (8 full + 2 half-days). Decentralized work from one ISTAT office different from the one where the assigned structure is located was enabled, and exemptions for vulnerable employees were maintained. Additional smart working days were allowed in cases of workplace unavailability.
- c. May 2024–Feb 2025: Two profiles were defined—ordinary (20 days/2 months) and enhanced (24 days/2 months), the latter for employees with documented personal or health-related constraints. Mixed modality, location-based exceptions and workplace unavailability were upheld. A medical review process was introduced to authorize temporary full remote work for vulnerable employees.

To summarize, the Institute's smart working model offers high flexibility in terms of when and where work is done. This innovative model reorganizes work and promotes a healthy work-life balance while adapting to a changing work world. This model constitutes a marked deviation from the paradigm of more flexible telework. In contrast to traditional teleworking practices - typically characterized by home-based work with fixed schedules - the adopted framework imposes only two specific constraints on employees' autonomy in managing their work-life balance: (1) a cap on the number of days that may be performed in smart mode, and (2) a defined contactability window, which delineates the time frame during which employees are expected to be reachable for communication and meetings. Nonetheless, the scheduling of in-office and smart working days, as well as the contactability band, are not imposed; rather, they are defined in consultation with the service manager, upon the proposal of the employee(s). Moreover, given the absence of compulsory return days in the workplace, work performance in smart mode is not constrained by specific days of the week or limited by the enjoyment of other institutions of absence. It is particularly salient to note that no regulations have been established to prevent or limit work. Specifically, since no rules have been determined that prevent and/or restrict smart working in relation to vacation or leave, it is possible to work agile in the days before or after vacation is taken, without the obligation to make any return to headquarters.

To ensure the continuity of statistical production processes and the organization's general functioning, ISTAT provided laptops and connectivity tools, enhanced the

² The definition of the category of “fragile workers” was entrusted to a Decree of the Ministry of Health dated Feb. 4, 2022, which includes patients with situations of severe immune system impairment, patients with at least 3 or more concomitant serious diseases among those indicated by the same DM, and people with documented exemption to vaccination.

technological infrastructure, and acquired and deployed software tools — specifically, technologies for video conferencing. The organization also offered support to employees through various telematic channels to ensure proper configuration and training. ISTAT has adopted advanced solutions for secure data and information access in order to comply with security standards. Virtual Desktop Infrastructure (VDI) and Virtual Private Networks (VPN) were configured, and additional servers were set up to provide the aforementioned services. ISTAT is implementing a progressive migration to the cloud of applications, software and documents with a view to fostering collaboration among workers, even when they are working remotely.

ISTAT employees like hybrid work - i.e., work performed in a mixed mode between presence at the office and one of the forms of remote work³. On 31 December of each year, only 1% of the in-service workforce, respectively amounting to 1,851 and 1,843, choose voluntarily not to use any form of remote work. In contrast, 90% of employees confirmed their choice to join smart working. There are no significant differences in the choice of doing part of one's work in agile mode by gender, age groups and occupational position⁴. Considering the employees in service on 31 December of the year, with respect to gender, women choosing to work in agile mode in the two years considered exceed 92% of the female employees in service; men exceed 88% of the employees in service (Figure 1).

With respect to age groups, the percentage of employees who voluntarily decide to take advantage of smart working, while maintaining values above 80% of the current workforce, decreases as age increases (see Figures 2).

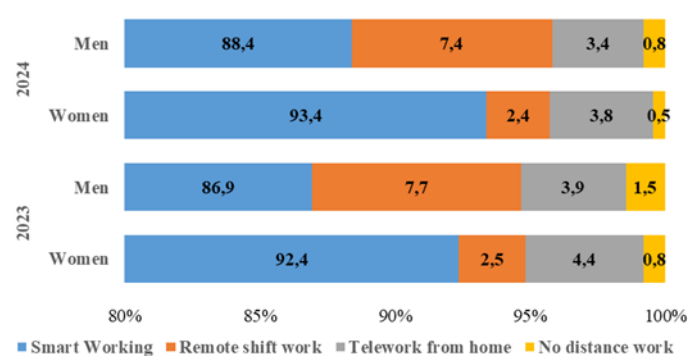
Reading the figure without knowing the composition of the workforce could lead to the assumption that older employees, free from the responsibilities of caring for

³ Smart working adoption in Italy was significantly lower than in other E.U. Countries. According to Eurostat data, in 2023, a mere 4.4% of Italian workers had the capacity to perform at least half of their weekly hours in a remote capacity. This figure stands in stark contrast to the European average of 9%. Following Italy, Cyprus (3.9%), Hungary (3.7%), and Romania (1.2%). Finland (21.7%) and Sweden (14.3%) are at the top of the list (cfr. <https://data.europa.eu/>). As reported by the Smart Working Observatory of the Politecnico di Milano, in the 2024, 61% of Italian public administration organizations had adopted smart working initiatives. This percentage increases to 70% considering all remote working opportunities (cfr. <https://www.osservatori.net/>).

⁴ In the framework of Italian administrative law, public sector employment is typically categorized into executive personnel and non-executive personnel. Executive personnel (or *personale dirigente*) are entrusted with managerial, organizational, and decision-making responsibilities, often acting as the heads of administrative units or departments.. In contrast, non-executive personnel (*personale non dirigente*) perform operational, technical, or clerical functions under the direction of executives, without holding autonomous decision-making authority. This structural distinction reflects the broader principle of the separation between political direction and administrative management, as established by legislative reforms such as Legislative Decree No. 165/2001, which delineates the respective roles and responsibilities within the public administration.

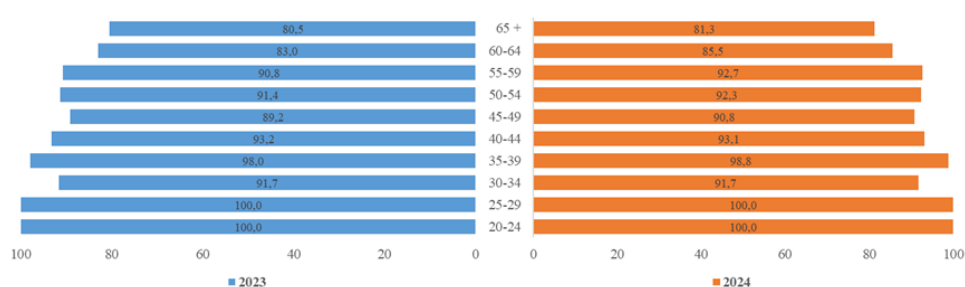
young children and elderly parents, prefer to work on-site rather than remotely. The hypothesis is considerably weakened by the fact that the staff who take advantage of the other flexible work modes, namely special teleworking and remote shift performance, which likewise do not involve onsite presence, belong to the more adult age group.

Figure 1 - Employees in service at 31 December by types of work, gender and year. (% values).



Source: authors' elaborations based on Istat administrative data

Figure 2 - Smart workers in service at 31 December by class of age and year (% values).



Source: authors' elaborations based on Istat administrative data

Regarding occupational position, we note that almost all executive personnel (nearly 99% in 2024) and non-executive staff (91% in 2024) adhere to smart working.⁵

The adoption of smart working across all gender, age groups and professional categories is a significant indicator of organizational well-being. It promotes fairness, inclusion, autonomy and the empowerment of people in the workplace without reducing the effectiveness of management and productivity. Access to agile working is shown to strengthen the perception of organizational justice, reduce the risk of discrimination and promote a more equitable working environment. This voluntary choice fosters enhanced involvement and participation of all employees in business processes, thereby stimulating clear objectives, direct communication, and consistency. Relational dynamics based on trust, responsibility and autonomy are developed and help overcome the traditional opposition between managers and employees. The agile management style of these leaders demonstrates that leadership can be executed with a high degree of flexibility. By focusing more on collaboration and less on physical presence, managers set a new example and prove the model works, integrating it into the organization's strategy. When all staff adopt smart working, it helps effective change management and new digital and organizational policies. It can optimize processes and cut overheads (e.g. offices, travel) without risk of internal resistance and process fragmentation.

3. Working at ISTAT: methodology and data source

The underlying assumption of this analysis is that work performance can be categorized into four distinct types: work in the presence at one of the Institute's Roman or territorial offices (i.e. office work), smart working, vacation and other paid leave. The term "vacation" encompasses vacation days, compensated time off and compensated absences for increased services rendered. The category designated as "other paid leave" encompasses absences resulting from leave or those situations explicitly addressed and legally protected by current legislation (i.e. Law No.104/92 permission, parental care absence, etc.).

The calculation of working days was performed by aggregating the justification codes, attributable to the previously mentioned four modes, recorded by the URBI personnel management system adopted by the Institute to certify work performance

⁵ Executive personnel includes 1st and 2nd level administrative managers, technical directors and service managers. non-executive is composed of the remaining staff classified in the profiles of researcher and technologist and that of civil servant, collaborator and technical and administrative worker. In 2023, executive personnel is 70 and non-executive personnel is 1,781. In 2024, these two distinct group are 71 and 1,772.

(attendance/absences). The analysis exclusively considers personnel in service as of the last day of the month analyzed, thus excluding personnel on secondment, detached, or absent due to other types of expectations.

In analyzing the data, it was necessary to take into account the following elements. Firstly, the work performance rendered in person can be greater or less than 7 hours and 12 minutes, which is the contractual daily working time stipulated by the CCNL of the "Education and Research" sector. The hourly flexibility recognized by the CCNL and the current internal regulation of working time allows the individual employee to determine, based on their needs, the amount of daily hours effectively worked. The hours worked in reality are allocated to a "virtual hour bank," which is accessible to employees in accordance with the provisions concerning the legal classification profile (researcher/technologist or technical-administrative staff). Consequently, in the subsequent analysis, any day on which the employee's timecard records 7 hours and 12 minutes is designated as an in-office day⁶. Secondly, some paid leave can be utilized on an hourly basis. Finally, internal regulations have established a mixed mode for the implementation of smart working. That said, in order to calculate the daily hours of effective work, the office work and the mixed smart working day were parameterized at 7 hours and 12 minutes.

In addition, it was decided to count smart working justification codes in the month they were used, regardless of whether internal regulation defined use on a month or two-month basis. This choice facilitates a monthly comparison of the data, but may obscure the effects of seasonal absence due to traditional vacation periods.

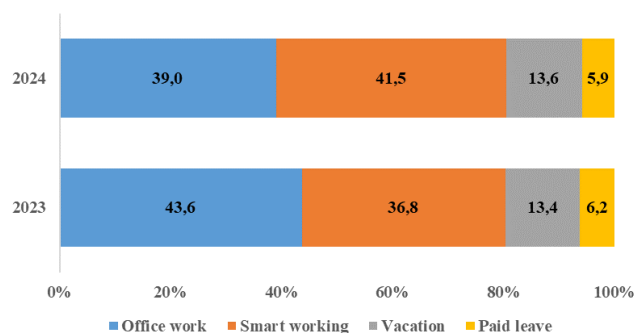
4. Working anytime at ISTAT

ISTAT employees are increasingly comfortable with hybrid work arrangements, whereby job duties are performed partly on-site at one of the institution's locations and partly through smart working. In 2023, out of a total of 456,526 workable days, approximately 37% were worked remotely, 44% in-office, and the remaining 19% were not worked due to vacation, leave, or illness. In 2024, out of a total of 457,595 workable days, the proportion of days worked remotely increased to 41% (a rise of 5 percentage points compared to the previous year), while the share of office-based

⁶ On average, employees working on-office tend to exceed the standard daily working time of 7 hours and 12 minutes. In 2023, the raw count of badge swipes certifying physical presence at the workplace amounted to 198,913 days. When adjusted for standard working time, this figure corresponds to 199,173 days - indicating an excess of 260 full working days. Similarly, in 2024, the raw count of on-office attendance days was 178,106, which, once standardized, equates to 178,531 days - reflecting an additional 425 full working days.

work declined to 39%. Absences, including vacation and other forms of paid leave, remained stable at 19% (see Figure 3).

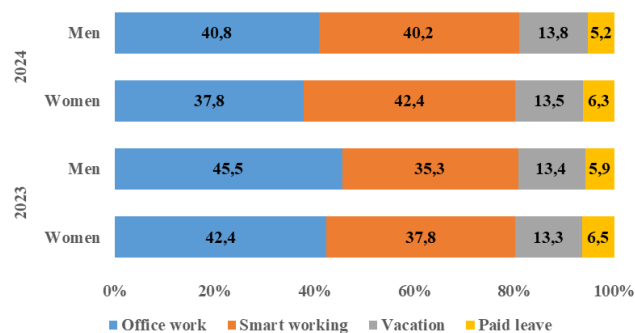
Figure 3 - Annual days worked by employees in service by types and year (% value).



Source: authors' elaborations based on Istat administrative data

The percentage composition of annual work performance by gender, relative to total working days, shows that in both years analysed, female employees used smart working more than their male counterparts (see Figure 4).

Figure 4 - Annual days worked by employees in service by type, gender and year (% values).



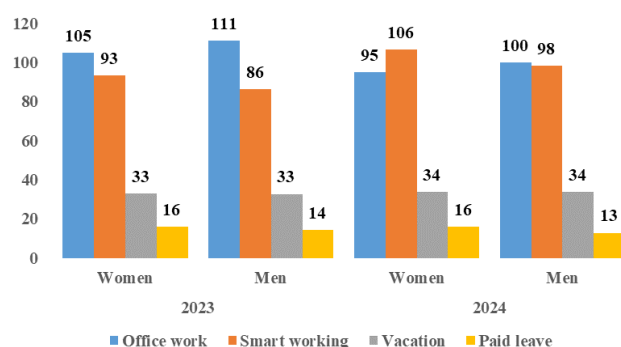
Source: authors' elaborations based on Istat administrative data

In 2023, out of 274,182 workable days for women, 38% were worked remotely, 42% in-office and the remaining 19% were accounted for by absences due to vacation, leave, or illness. In contrast, of the 182,343 workable days for men, 35% were worked remotely, 45% in-office and 19% were similarly attributed to absences.

In 2024, among the 276,364 workable days for women, 42% were worked remotely, 38% in-office and 19% were lost to vacation, leave, or illness. For men, out of 181,231 workable days, 40 % were worked remotely, 41% in-office and the remaining 19% were due to absences.

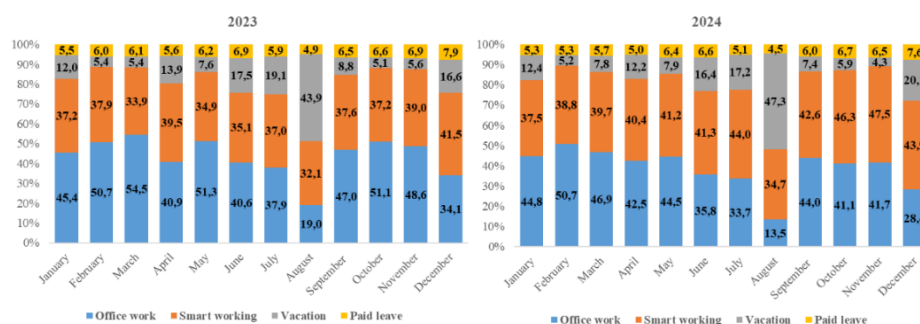
Average days show similar trends for the two genders: performance in smart working increased in 2024 compared to 2023 (+14% for both) (see Figure 5) with monthly variations showing peaks in certain months (Figure 6); office work and other paid leave decreased in 2024 compared to 2023.

Figure 5 - Annual days worked by employees in service by type, gender and year (average values).



Source: authors' elaborations based on Istat administrative data

Figure 6- Annual days worked by employees in service by type, month and year (percentage values).



Source: authors' elaborations based on Istat administrative data

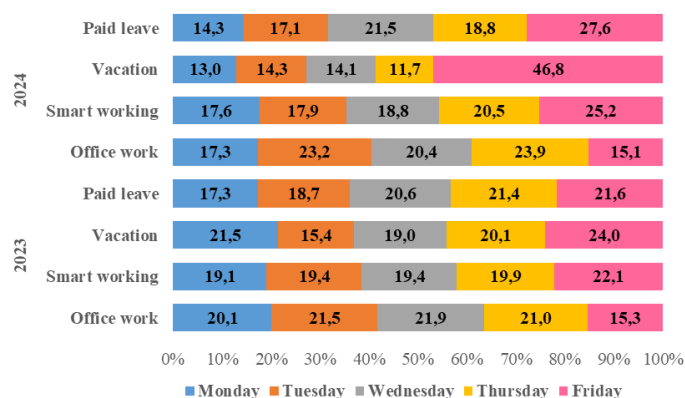
The monthly distribution of working time reveals, as expected, fluctuations with peaks in absences during certain months. In both years analyzed, the lowest levels

of on-site attendance were recorded in the months traditionally favored by Italians for holidays - namely July, August, and December. During these months, the number of vacation days increases significantly.

The months with the highest proportion of office attendance are February, March, and May. These are periods in which ISTAT employees are particularly engaged in ensuring the timely release of official statistics and related products. As a result, recourse to overtime becomes necessary, including extended working hours beyond the standard 7 hours and 12 minutes, as well as work on holidays (Saturdays and Sundays) through extraordinary openings of office locations. Finally, it is worth noting that the use of vacation days affects only on-site attendance, while the proportion of smart working remains relatively stable throughout the months considered.

The cultural model of "working anytime" has become so deeply embedded in the organizational culture of the Institute that there are no designated days for either on-site or smart working (see Figure 7). An analysis of the weekly distribution of annual work performance across the two years under comparison reveals that ISTAT employees have selected their workdays based on the optimal reconciliation of professional and personal responsibilities.

Figure 7 - Annual days worked by employees in service by types, week-day and year (percentage values).



Source: authors' elaborations based on Istat administrative data

In 2023, Monday emerged as the most preferred day for on-office work (27.7%), whereas in 2024, Tuesday held that position (26%). Conversely, the lowest levels of office attendance were recorded on Tuesday in 2023 (11%) and on Thursday in 2024 (4.7%). As regards smart working, in the two years the preferences are reversed: if in

2023 the preferred days to carry out their work performance in agile were Monday (29 %) and Friday (25 %), in 2024 the choice is reversed. The days when "like" to work in agile less are, in both years, on Thursday and Tuesday.

As was to be expected, the preferred days for the enjoyment of vacation and compensatory absences for higher performances are Friday and Monday (long weekend effect).

5. Conclusion

ISTAT employees are increasingly looking for flexible working arrangements, such as remote working (from home and anywhere), hybrid models and flexible hours, to improve work-life balance. As evidenced by the absence of preferred days for working in presence or agile, ISTAT employees seem to take full advantage of not being obliged to come to the office every day to work from their usual desk, but rather to be able to achieve their goals wherever they want, without location constraints. In this way, they can have the flexibility to design their days so that their private and professional lives can be lived to their full potential and coexist in a flexible and non-conflicting manner.

The hybrid work model currently being consolidated at the Institute necessitates a profound cultural shift in the conceptualization of work. The physical office must increasingly serve as a space for collaboration and interpersonal engagement, technologies must facilitate collaboration and thus guarantee maximum flexibility and mobility. Employees must be empowered and managed through goal-oriented approaches, grounded in mutual trust between colleagues and with management, in order to foster both productivity and well-being.

In the context of this transformation, the Institute must address not only the transition from the physicality of individual workstations to shared spaces (e.g., desk-sharing, co-working) or virtual environments (e.g., cloud-based systems), but also the need to establish clear boundaries between professional and private life. This includes, for example, the introduction of virtual time-sharing mechanisms aimed at safeguarding individual health and well-being. Moreover, it is essential to develop new strategies to strengthen professional relationships and to prevent physical distance from undermining the quality of interpersonal interactions, the overall social climate within the Institute, and organizational well-being.

To support people in changing their working methods and in the use of digital tools, ISTAT has organized training courses and implemented a broad change management program with the aim of raising awareness among people about the correct management of work-life balance and providing them with the necessary digital skills and soft skills. The Institute has also promoted courses to improve

organizational culture and leadership style. At the same time, a section of the Institute's intranet has been developed for continuous training on the use of technological systems.

However, today the Institute should invest in knowledge, that is, carry out an internal survey to allow workers to report the possible negative effects of smart working actually experienced. The ideal would be to carry out an internal survey on an annual basis, given that the latest available data on the matter can be extracted from a survey carried out by ISTAT (CUG)⁷ back in 2021. Several studies (Li *et al.*, 2024; Milea, 2024) highlight that many workers report difficulties in separating private life from work time. The absence of clear boundaries can lead to hyperconnection and overworking phenomena, with a consequent increase in work-related stress and fatigue. Another of the most frequently reported risks is the isolation of workers. Remote working reduces opportunities for informal discussion, with negative effects on collaboration and psychological well-being, on the perception of opportunities for professional growth. All this can compromise the sense of belonging, work engagement and the quality of professional relationships, the ability to attract and retain the Institute.

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⁷ Between 8 February and 15 March 2021, the CUG conducted a survey among Istat employees to collect information on well-being at work and identify possible areas of hardship. 1,315 employees participated in the survey, with a response rate of 65.9%.