

# HOW COGENT CONDITIONS COULD FAVOR OR DISCOURAGE AGILITY ON THE JOB: A PSEUDO SMART-WORKING-SATISFACTION

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## ABSTRACT

*The authors investigate satisfaction and applicability of a non-traditional working-model and its settings in a cross-sectorial manner, balancing several perspectives concerning different job-tasks. In that view, the analysis would be focused on the cogency, deriving by the urgency conditions due by Covid-19 spread, in considering high flexible work-environments, providing the distance and remote-working approach for long-time. The authors, through a field analysis, vehiculated by questionnaires, try to explore the cogent smart-working application and the variables able to modify the Smart-Working-Satisfaction (SWS) through the Work-Life-Balance (WLB). The authors deliver a sample of No. 119 high implementing Smart-Working (SW) employees during Covid-19 spread in Italy. The originality of the paper would reside in the comparative approach and in the irreproducible urgency condition defined by the sanitary emergency, globally favoring habits change, opening a privileged way for hermeneutical inferences on the theme that nowadays appears a renewed mainstream, not merely with positive repercussions.*

**Keywords:** Work-life-balance, Covid-19, Epidemics, Smart-working, Comparative analysis, Repercussions, Flexible work-environment, Non-linear conditions, Cogency.

## INTRODUCTION

Among the epochs many disasters occurred affecting single territories and whole countries. These nefarious occurrences had different origins: (1) by man intervention; (2) by nature influence. Epidemics enter in the latter case. Nowadays, the global sanitary emergency, provoked by the Covid-19 disease is newly paralyzing most of the working-activities, having dramatic impacts on work and employment (Hodder, 2020; Diab-Bahaman & Al-Enzia, 2020) in a global manner, changing human habits and rapidly obliging to an accelerated innovation acceptance (Rogers, 1962; Rainero & Modarelli, 2020). Academically, the main investigation directions have been addressed to epidemics and influenza on several aspects: demographic repercussions, consequent financial crisis etc. By contrast, the authors avoid duplications, focusing the attention on the ICTs pervasive utilisation in working-activities to cope emergency, implementing SW through electronic-mediated-communication (Pantely & Dawson, 2002). The authors specifically analyse SWS through a critical view on WLB, evaluating SW-model in non-linear conditions, during an irreproducible, disruptive and dramatic global sanitary emergency (Covid-19).

The Covid-19 pandemic, on one hand destructive, but on the other generative, made renewed interest in human creativity to solve the problems through a wide pervasiveness of ICTs.

The SW-model, quite neglected, initially emerged in Italy during 2014-2015, recently finds new vigor (De Masi, 2020), shaping a new philosophy of work (Neri, 2017). The world was already strongly interconnected, but the Covid-19 obliged to social distance, affecting people and sectors regardless of borders. Schleicher (2020) in an OECD document declares that the Covid-19 has a wide-range impact and “*education is no exception*”.

Even if currently there is a great mix between machines and human beings, to date, it would be natural to ask what would be the real company asset, especially during crisis, the “*engine*” that gives propulsion to the “*machine*”, the founding pillar of each organisation. The answer would appear certainly money or fixed assets, others could answer robots (Brynjolfsson & McAfee, 2014); (Ford, 2015); (Howcroft & Taylor, 2014); (Schwab, 2016); (Spencer, 2018), but it would not be that the way for success. Workers would be holder of specific characteristics capable of dragging the world towards innovation: creativity, flexibility and emotion. These are the main forces that moved people to change habits (Lally et al., 2010), rapidly accepting “*disruptive*” (Bresciani, 2016) new settings in the working-environment to get-out of the crisis. It would be precisely people who make-up the *raison d’etre* of organisations, but organisations are complex social systems, obliging to manage differences and interdependencies, being aware that any variable would be counterproductive modifying their stability Zimmerman et al. (1998) define complexity-science as a field in which contingencies move in a non-linear manner, making possible the emergence of phenomena, able themselves to create non-linear-dynamics and change. In this direction, the authors move their interest in analysing a social phenomenon in business area (SW) and its consequences (SWS) under non-linear-conditions (Covid-19).

In literature is well recognised that motivation appears directly proportional to satisfaction on the job, and a myriad of variables could influence it affecting satisfaction (Angelici & Profeta, 2020; Locke, 1976; Steinhaus & Perry, 1996). Smart-working would be a strategical lever to enhance satisfaction, productivity and commitment (Angelici & Profeta, 2020), by contrast the authors would investigate on the theme through the WLB and a socio-technical view (Bednar & Welch, 2020; Mubaroq, et al., 2020) enhanced by the ICTs pervasiveness (Frey & Osborne, 2017) during Covid-19 spread. According to the fact that, academically wide accepted, both flexible place and flexible time are highly appreciated by workers (Angelici & Profeta, 2020; Torre, 2015; 2020), interesting questions would emerge: (1) what happens if the choice for a flexible working-model is obliged? (2) And if perpetrated over time? (3) What kind of effects would happen on WLB? (4) Is SW acceptable and applicable with satisfactory levels within WLB to different types of jobs?

According to motivation what aforementioned: SW is associated with higher organisational commitment, motivation, satisfaction and perceived well-being on the job. These apparent positive consequences (observable when the choice is freely adopted and shared with principals) could cost to smart-workers in terms of intensification, overabundant work, unbalancing the WLB in the long-run (Felstead & Henseke, 2017). Therefore, the compromise existing between private and working-sphere, the psychological contract (McLean et al., 1998) metaphorically signed between workers and employers, would permit to balance the multiple occurrences and complexity by reality. Contrarily, employees need a clear perception of the WLB enhancing motivation and satisfaction with positive repercussions on the outcomes; vice versa the results could be counterproductive (Ashforth & Humphrey, 1993; Bakker, 2011; Bakker et al., 2008; Kahn, 1990; Locke, 1976; Macey & Schneider, 2008).

Unfortunately, the methodological approaches and tools, working-practices and working-environments are dramatically changing (Birkinshaw, 2010; Neirotti, et al., 2013; Hoeven & Zoonen, 2015; Fogarty, et al. 2011) especially due by the recent Covid-19 emergency and the efforts in coping it (Gastaldi et al., 2014). In this sense what most call “*smart*”, could be an inappropriate configuration due by the cogent home-based-working (HbW), creating other imbalances and inequities. From these appreciable inequities and insights produced by the extraordinary moment, the authors decided to conduct the study proposed following this formal structure of investigation: introduction; a background view to periodisation and legal frame of SW-model rise involving its repercussions; a referring paradigm presentation; explanation of the main methodological steps and measures used for data collection and analysis; main results presentation; critical discussion and conclusion.

### **Background Periodisation and Legal Frame**

The World Health Organisation (WHO) (from China) was informed (on 31<sup>st</sup> December 2019) about the spread of a new and unknown pneumonia cases in several patients in the Hubei Region. Several repercussions in terms of closures and sanifications started to take place globally and also in Italy; nowadays the situation appears newly dramatic, after the first wave of contagion (10 months ago). The emergency due by Covid-19 affected the world entirely in all of its fragmented and joint activities, obliging the identification of new models of working to balance the continuity of bureaucratic and economic activities, protecting public health (Langè & Gastaldi, 2020). Traditionally, public administrations would be refractory to change (Cinar, Trott & Simms, 2019), furthermore teleworking and smart-working already had barriers to application (Pèrez et al., 2004). Contrary to what reported in previous years, during the first wave of Covid-19 spread in Italy, almost all of the public administrations accepted SW-models and in the private sectors it has been however strongly promoted and recommended by the government (from 23<sup>rd</sup> February 2020).

The extraordinary measures introduced to cope the emergency, both with reference to the public and private sectors, have strongly impacted the working-environment in all its forms. The “*agile*” way of working, even if redefined and limited by movement restrictions (in derogation from the prescription that originally defined it), would have become the ordinary pactice and a new challenge for the world of work.

As recognised by Russo (2020), a rapid succession of regulatory measures to deal with the emergency has reopened a debate and renewed interest in a non-traditional form of work: Smart/Agile/Remote-Working. Several Decrees provided by the President of the Ministerial Council have been adopted to cope the Covid-19 spread, starting from the 23<sup>rd</sup> February 2020, providing limitations for the hot-spots-territories with higher risk.

According to what aformentioned, urgent measures, refresh the Law.81/2017 on “*Agile-working*”, defining it as an execution way of the employment contract through the possible use of ICTs tools in working-activities (without a fixed place) both at the internal and external of the offices. According to the SW-model described, waived for the entire duration of state of need during the pandemic, becomes automatically applicable to every employment contract, unbalancing the workers’ choice, veichulating it, and overtaking the mandatory safeguard employees’ BIO-PSYCO-SOCIAL integrity, ensured by Civil Law and specific legislations in field of job-secutiry (art.2087 c.c. and Legislative Decree.81/2008) (Russo, 2020; Zappalà, 2017).

In this sense, the aims pursued by the SW, could be disruptive under the profile of job-security, determining a quite critical context and inequities in which smart-workers could be differently treated, opening privileged niches and controversial working-conditions for others.

### **Smart-Working Model**

Once defined legally what is intended with the term SW, it would be crucial to move to the academical perspective. In fact, academically, is recognised that through the SW application it would be possible to optimise the WLB (Jenkins, et al, 2016). This balancing would be possible if the satisfaction levels match professional and private aspects. If on one hand, the job-satisfaction could be shaped as the ability to feel positive emotions in regard the job (Aziri, 2011), a combination of psychological, physiological and environmental circumstances (Hoppock, 1935) referred to the attitude and feelings people have to be satisfied of the job (Armstrong, 2006), over the years, the logic undelying the New Public Management (NPM) produced a sort of heterogenesis of purposes. So, WLB levels started to drop dratsically also in terms of motivation (Ruffini & Modarelli, 2015). New levers as reward systems or performance-related-pay (PRP) have been adopted, including the possibility of flexibility on the job and SW. During the SW period there are no specific time and places to work, and through the technological tools, the employees can do their working-activities by remote without schedules, but achieving objectives through a result-oriented-approach, typical of the private sector. There would be academic and empirical evidence on the beneficial potential of positive consequences on the WLB through the SW application adopted on the free choice of the worker during periods characterised by linearity. On the contrary, there is a little evidence during periods of health emergency.

In this frame, the Covid-19 would be a propaedeutic and privileged observation point. It is possible to collect several definitions of SW and open debates have been presented during the years starting from teleworking, remote-working and home-working concepts, according to a need to consider unique indications on the theme (Sullivan, 2003). The CIPD (Chartered Institute of Personnel and Development) (2008) defines the labile concept aforementioned as an approach to working-activities-organisation with efficiency and efficacy objectives combining flexibility, autonomy, cooperation in an integrated way through working environment and tools. In addition, Hill et al. in the same year (2008) define SW as a new concept, comprehending the whole opportunities offered to employees for working in integrated and flexible manner. In this sense, Mubaroq, et al. (2020), twelve years later describe SW as evolutionary change that is occurring in the world of work, especially during Covid-19 spread. Langè & Gastaldi (2020) define SW as a new managerial philosophy, involving approaches to work based on higher flexibility and autonomy without constraints in terms of spaces, time and tools.

As aforementioned in academic literature, positive repercussions have been associated to SW application (in normal-condition-periods). A scarce information on the theme during non-linear periods is present, probably due by the impossibility to observe phenomena under the urgency variable until now. Bloom (2014) started to demonstrate that ICTs could have shown beneficial repercussions on employees' productivity and their WLB. By contrast, isolation and overworking could have reduced the positive influence that SW would have been showed.

Several models have been structured during the years to better approach SW application, implementing adequate standards to gain benefits from this non-traditional working-model (Lake, 2016). Nowadays, a double perspective tends to coexist, on one hand the socio-technical approach, overlapping in a complex view the integration of social and technological aspects, and

on the other one, the attempt to re-enhance the role a "*re-newed humanism*" (Morin, 2012; National guidelines – Official Gazette 5-Feb-2013, n.30.), basing the interest on the person in its entirety, involving the consideration related to the individual, like a BIO-PSYCHO-SOCIAL entity (Engel, 1977) involving biological, psychological and social factors.

In this sense, the authors need to proceed with the description of the investigation pillars concerning a considerable part of the working population: the smart-workers during Covid-19 emergency.

### **Teleworking Model History and Smart Working Emergence**

The term SW is often mistakenly associated with teleworking or just with the possibility that workers have to fulfil their duties from home (or remotely). Teleworking and smart-working would be considered similar, but intrinsically they are not precisely the same. It would be possible to link both, but they are not considerable with interchangeable meanings and contents. Probably the former could be directly connected to the latter, and the latter could be considered as a deriving concept of the former.

According to Messenger & Gschwind (2016), it would be possible to segment teleworking evolution into the three generations: Home-Office, Mobile-Office and Virtual-Office, related to ICTs development and pervasiveness. In the specific sense, teleworking would shape the lines of a kind of work-organisation profoundly mediated by the utilisation of ICTs, providing access to working-activities from remote locations. Teleworking is a relatively new concept, because it has origins already in the 70s and later in Italy its application appears to be connected to several rules (Law.191/1998; Legislative Decree.29/1993; Decree of the President of the Republic.70/1999 and Framework-Agreements 2000,2004). By contrast, the smart-working would be based on objective-driven approach also for public administrations regulated by Law.81/2017 and subsequent Directives in 2017, defining the perspective of agile-working.

If on one hand, teleworking as considered in 1970 would permit a way to work at home and to reduce overheads, cut absenteeism, increase white collars' productivity, providing organisational flexibility (Pèrez et al., 2004), under the re-newed lens identified as SW, this perspective would go beyond boundaries, permitting work in locations different from the single home (i.e. restaurants, hotels, train etc.) according to an outcome-driven approach.

Following Vargas & Weber (2020), SW shows several pillars: (1) any form of work; (2) carried out regularly; (3) for a substantial amount of time; (4) from one or more locations other than traditional workplace; (5) using ICTs. A recent unique e-survey provided by EuroFound (2020) (Working during Covid-19-dataset –<https://www.eurofound.europa.eu/data/covid-19>) would demonstrate that most EU workers had a positive experience through SW, but very few desire to continue in this way all the time, showing critical views on risks related to physical and emotional exhaustion for overworking. In general, under SW-model, the employees would be free to move and work when and how they want, focusing the attention on the result, freely fixing time and pursuing the objectives related to job tasks, contrarily the SW during Covid-19 appears affected by restrictions in this sense, and limitations occurred due by the urgent measure to cope contagion spread.

Resistances to teleworking occurred among employees from the 70s. In fact, the development was very low due to technological limits and high costs of ICTs at the time (Pèrez et al., 2004). Recently it would be possible to assist at a wide-range acceptance of SW, those years before the Covid-19 spread would have been totally unexpected: between the units of medium size from 50-249 employees and large units from 250 employees and over, the rate of

adoption appears relatively 73.1% and 90% of cases and in educational contexts the data appear similar. Twenty years before, Hogarth et al. (2000) revealed a very little evidence of SW, only 20% of the sample involved worked from home and most cases preferred this kind of work on an occasional basis.

It has been observed that white-collars and managers are reluctant, as the majority of employees (Pèrez et al., 2004) to change working habits, especially in public sector (Cinar, et al. 2018) in favor of innovation when they cannot see its need of change or its perceiving usefulness and ease of use (Davis, 1989) highlighting a refractory habit to change (Lally et al., 2010). Several authors as Pagonis (1995), Shin et al. (2009); Rasmussen & Corbett (2008) shape the line around the why of low acceptance and diffusion of teleworking. Given the case proposed, and the sample involved for the investigation, for which concern the teaching profession and the SW-application, a premise should be needed. Schleicher (2020) affirms that the Covid-19 is showing globally a dramatic impact on educational-systems. In this direction, not only office-workers have been called to find alternative working-models, also in educational-systems, teachers moved to on-line lessons using technologies and applying of smart/agile-working, rapidly improving the right to study, dematerializing work-places and learning-contexts (Law.107/2015). In addition, they demonstrate an impressive response in the modification of habits (Rainero & Modarelli, 2020), despite the initial enthusiasm necessary to meet the needs and challenges imposed by Covid-19 in each sector and area, collides with the underestimated criticalities and the repercussions of a cogent-SW-application (limited and partial) for long-periods.

### **Work-Life-Balance, Contingencies and Smart-Working**

The promising enthusiasm for SW-challenge could be held back by the a-posteriori evaluation on WLB and the repercussions that SW-cogent-adoption (therefore only partial compared to its full potential) could have under the light of urgency variable. The ICTs pervasive utilisation combined with the SW-adoption (in a not full explication of potential) could be similar to a limited setting: the home-based-working model. Academic literature is aware about the risks existing on non-plenty-adequate SW-adoption: social isolation added to overworking and stress due by the overlapping of family duties and working ones (Hardill & Green, 2003). Atkinson & Meager (1986) proposed the theory of the flexible firm, in which employees work through flexible ways, leaving a strong autonomy degree and flexibility of individual choice on performing the job requirements under three directions: (1) how; (2) when and (3) where, fixing the objectives and the outcomes. During the emergence of debates on the flexible-firm, Clark (2000) started considering that the binomial home-work could produce critical results, influencing the success of the duties of one at the expense of the other. In this context, the research fields on WLB took place, defining this fragile aequilibrium as a satisfaction balance among private life (home) and working-activities. Difficulties, for remote-workers, would have been demonstrated in terms of switch-off working-activities, precise definition of working-time and private-time, stress etc. (Felstead & Henseke, 2017).

More recently, authors tend to associate SW with a win-win solution (Sarti & Torre, 2017; Angelici & Profeta, 2020; Di Martino & Wirth, 1990), but it would be a counterpart solution, including trade-offs. The main motivations behind this value attribution would be traceable both to the potential benefits deriving from the flexibility on places and times, reducing costs for employees and companies at the expense of constant monitoring and reporting activities. In this

sense, the home-working, would be not precisely a SW-application-model, but in terms of WLB it may not be the most convenient way to replace traditional-working.

The literature shows that general repercussions on WLB would be depression, stress, lower productivity and quality, higher exhaustion and absenteeism (Issahaku, Anthony & Bakari, 2020); in addition, results provided by Mann & Holdsworth (2003) suggest negative emotional impacts as loneliness, irritability, worry and guilt, experiencing more mental-health symptoms than who perform working-activities on the work-place. Supporting the view in highlighting the power of political choice related to the diffusion of popular images of ICTs for working-flexibility, Whittle & Mueller (2009) consider tales of isolation, disconnection, disaffection, and cynicism, observed into a group of managers. The greater benefits could be achievable increasing outcomes to productivity and maintaining balanced the satisfaction between work and private life when employees, through the SW-adoption, are free to move, choosing the place where work, when and how, with autonomy.

The cogent-SW-application (due by the Covid-19) could be an influencing variable on SWS, interfering on the WLB. As recognised by Hardill & Green (2003), working-specificities during the last decades have been in most cases re-shaped by the wide movement possibility, facilitated by the globalism.

The choice for non-traditional-working-models would be moved by the need to fulfill socially expected family responsibilities, especially in women who internalise social norms of family, they appear more incline to alter their working-activities and difficulties could emerge through the attempt in protecting work-time and productivity, balancing personal and family duties (Hilbrecht et al., 2013). Since the last mid-century the mobility (Martinotti, 1993) dominated the social scenario. The research of pursuing advancement, justified the pendularism, and nowadays the ICTs and globalism may justify the SW-choice, but when people are obliged to work in a similar-smart-working-way (partialized-SW), the ideal benefits that would arise by flexibility on the job (academically-validated), could decay.

The fluidity that in abstract would justify job-flexibility and non-fixed workplace, during emergencies (as the recent one due by Covid-19), would risk to facilitate an heterogenesis of ends. The stillness of the context, due by the period, would risk to fix SW as a conventional-working-mode, but shifting it from a flexible-way to work to an extremely stationary, standardised and frustrating approach, useful only to ensure continuity (often partial) to working-environment affected by non-linear conditions.

The loss of the time horizon of what is the duration of the working-day, and what are the times to devote to private-life, already influenced by the BYOD approach (Ballagas et al., 2004) is dramatically risking to affect people's daily lives by providing isolation and interests-overlapping between working- and private-life.

This condition would expose workers, not only to health risks (Felstead & Henseke, 2017; Mann & Holdsworth, 2003; Whittle & Mueller, 2009), but to contractual terms not respected (European Working Time Directive No.88-2003-EC) and unpaid-overtime.

## **Referring Paradigm**

### **A Socio-Technical View: Integrating Bio-Psycho-Social Condition, Technological Tools and Working Settings to Cope Emergencies**

Dudau & Brunetto (2020) consider that the pervasiveness of technology in working-environments and artificial intelligence emergence would lead organisations to new workplace-

design. Mubaroq, et al. (2020) introduces the concept of socio-technical view that the authors consider as referring paradigm. This concept needs to be explained in detail, because it refers to a process that demonstrates a coexistence of technical systems and social ones, highlighting that both are not separate entities, but they can be seen as a unitary dualism. In fact, ICTs are increasingly present in the personal and professional life of each of us (Zappalà, 2017).

Cook (2008) identifies the 4Cs to increase productivity and allow for greater simplification of activities by making them faster: (1<sup>st</sup>C) Connection; (2<sup>nd</sup>C) Collaboration; (3<sup>rd</sup>C) Communication and (4<sup>th</sup> C) Co-operation.

To apply the socio-technical view at the organisational environment would signify that the organisation tends to emphasise the interconnections between social and technical spheres, not only as networked elements in a working-dimension, but consistent in a strong interdependence generative of open dynamics. Even if the remote-working arose thanks to developments achieved during past decades in computer-sciences (Azasu & Babatunde, 2020), the why behind the decision to start the investigation on the smart-world of working-environments, born from the direct experience and observation during the global Covid-19 spread. That moved the authors to deeply analyse the two spheres of “smartness”, both from the ideal benefits side and from the probable counterproductive repercussions one.

The authors, through the socio-technical-view, have begun to question whether the harmony of integration between technical tools and social aspects should not cost or be achieved at the expense of individual limitations influencing dramatically WLB (Felstead & Henseke, 2017; Mann & Holdsworth, 2003; Whittle & Mueller, 2009).

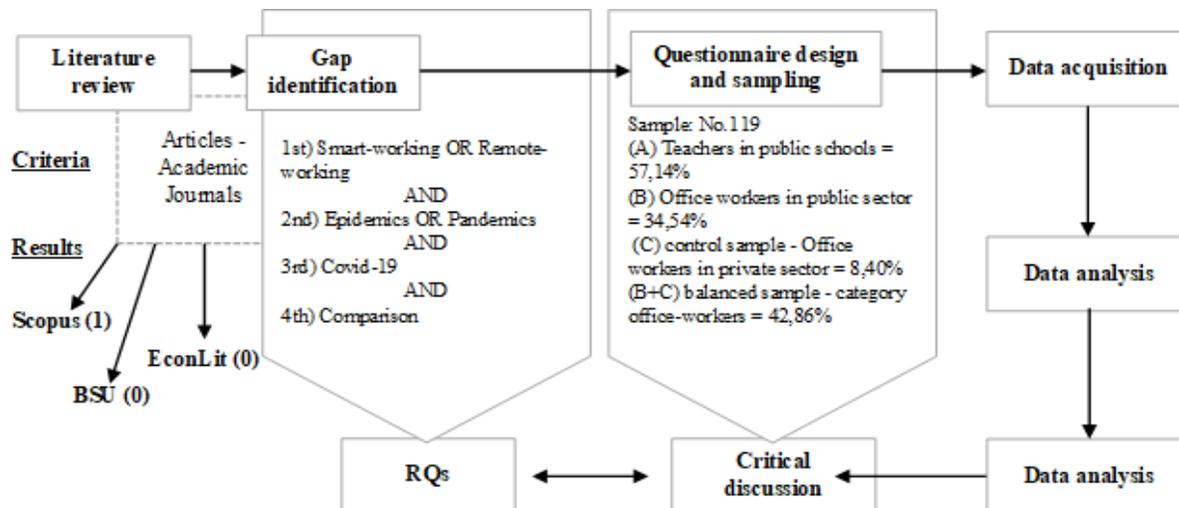
So, the development and diffusion of ICTs may suggest a easyness in cooperation, sharing immediately ideas and information, traceability, efficiency etc. (Chudoba et al., 2005; Mesmer-Magnus & DeChurch, 2009; Jarvenpaa & Staples, 2000).

SW could be a model implemented by the human-resource-management (HRM) (McEwan, 2016; Gastaldi et al., 2014) in the face of the pervasive introduction of technological tools in the social systems as organisations are. According to what aforementioned, in literature, Mann (2013) and Gastaldi et al. (2014) consider that to apply a SW-model, three pillars should be respected: (1) the technological element; (2) the social element reflecting human resources and (3) the design and layout of workplace.

These three elements should be integrated with the legal aspects considered in the normative frame: (1) employees’ free choice to apply the model shared with the principal; (2) no constraints on time and workplaces. These pillars would be necessary to keep in mind for the critical discussion provided by the authors in the following paragraphs.

## **METHODOLOGICAL ASPECTS**

The research design considers several steps: (1) literature review; (2) gap identification; (3) questionnaire structuring and data acquisition; (4) data filtering and analysis (5) results reporting; (6) critical discussion Figure 1.



Source: our elaboration.

**FIGURE 1**  
**RESEARCH DESIGN**

Once operated a literature review focused on SW and WLB, the gap identification follows unexplored ambits on the theme. The database-searching-activity has been structured on four levels of keywords, as reported in Fig.1: 1st) “Smart-working” OR “Remote-working” AND 2nd) “Epidemics” OR “Pandemics” AND 3rd) “Covid-19” AND 4th) “Comparison”, filtering results through “Articles” published on “Academic Journals” by titles, abstracts and keywords. On BusinessSourceUltimate database from the 1st level of investigation results passed from No.71 to No.0, reflecting no comparative studies on the theme specifically oriented to epidemics/pandemics (No.5), precisely during Covid-19 (No.5). Searching on the EconLit database the result appeared the same, passing from 1st investigation level that showed No.11 studies on Smart-working or Remote-working to No.0 comparative studies during Covid-19 (No.1) or in general during epidemics/pandemics (No.2).

The last literature database investigated (SCOPUS) provided No.1459 results at 1st level, No.46 at the second one, No.40 at the third one and just No.1 related to the last level of investigation following the query formula:

*(TITLE-ABS-KEY(smartANDworking)ORTITLE-ABS-KEY(remoteANDworking)ANDTITLE-ABS-KEY(epidemics)ORTITLE-ABS-KEY(pandemics)ANDTITLE-ABS-KEY(covid-19)ANDTITLE-ABS-KEY(comparison))AND(LIMIT-TO(DOCTYPE,"ar"))AND(LIMIT-TO(SUBJAREA,"soci"))AND (LIMIT-TO(SRCTYPE,"j"))*

From the literature review and the gap identification derived the research questions reported:

*RQ1: what happens to the WLB if the SW-model is obliged?*

*RQ2: what happens if the SW-model is perpetrated over time?*

*RQ3: is SW-model acceptable and applicable with satisfactory levels within WLB to different types of jobs?*

Angelici & Profeta (2020) conducted an experiment that, once completed, showed results consistent to a good increase well-being levels and satisfactory work-life balance – but during an emergency application of the model would the results remain unchanged?

In this sense, the employee would have a strong advantage when the company in which operates provides the opportunity to apply SW-models (informally or through employees' free choice) (Standen, 1997), according to the fact that it would be possible to match own private needs and satisfactory productivity through increasing quality levels (Mann & Holdsworth, 2003); (Whittle & Mueller, 2009); (Felstead & Henseke, 2017); (Locke, 1976), involving a wider autonomy result-oriented. By contrast, when the employees are obliged (by cogency and external variables) for long-time, would the satisfaction levels, involved in the WLB, be respected in the same way?

Ahuja et al. (2007) affirm that thanks to the development and ever increasing diffusion of ICTs, their penetration levels through personal computers and smartphones easy-to-use it would be possible to support SW-model application.

The research proposed aims to look into the meanders of the SW-black-box (Fiocca, 2020), examining elements, presumably unexplored before, with the objective to produce insights for multidisciplinary cross-fertilisation.

The authors structured a questionnaire based on 16 points (affirmative sentences) regarding several investigation aspects on SW-application during the period May-October 2020. The answer possibility has been structured on a 5 points Likert scale (from 1 to 5), considering 1 as the lowest agreement grade and 5 the highest one. Several points have been compressed to better explain graphically the meanings of the data collected. Some other answer graduation points have been structured with perception percentages (from 0% to over 50%), and just an answer scale has been structured with 6 points.

The questionnaires have been submitted on a randomized (voluntary-based) snowball way (Goodman, 1961) in public and private sector (Italy), reaching n.119 (40,34% Males and 59,66% Females – Age: 13,45%,18-29 – 23,53%, 30-44 – 63,03%, 45-64) high level SW-applicants (76,47% - Table 2-Sec.A-Q1) segmented and balanced as follows (Table 2): (A) Teachers in public schools, representing the 57,14% of the total.; (B) Office workers in public sector, representing the 34,54% of the total and finally, the control sample (C) Office workers in private sector, representing a smaller part of the sample for verification (8,40%), reflecting a total balanced sample for the category office-workers about 42,86% (B+C).

The consistency proposed, relatively to the sample involved, would reflects the following data. In fact, in the complex, the sample involved expresses that in the long-run SW-model negatively affects work relational sphere (76,47% - Table 2-Sec.1-Q9) and collaborative contribution (68,91% - Table 2-Sec.1-Q15), considering it as a good opportunity solely in periods characterized by need and urgency (85,71% - Table 2-Sec.1-Q10).

About half of the sample demonstrates increased monitoring and reporting procedure during SW-application (53,78% - Table 2-Sec.1-Q11), considering increased distress (72,27% - Tab.2-Sec.1-Q12) especially due by 1) Platform malfunctions/internet malfunctions (30,41% - Table 2-Sec.1-Q13), 2) Non-uniqueness/uniformity of the platforms used (15,20% - Table 2-Sec.1-Q13), 3) Relational difficulty (isolation) (17,91% - Table 2-Sec.1-Q13), 4) Reporting and monitoring activities (12,50% - Table 2-Sec.1-Q13), 5) Non-compliance of physical spaces with work activities (9,80% - Table 2-Sec.1-Q13), 6) Interference in the private sphere (14,19% - Table 2-Sec.1-Q13).

<b>TABLE 1</b>	
<b>QUESTIONNAIRE DESIGN</b>	
Q1.I adopted smart-working during the covid-19 emergency	
Q2.I believe that smart-working can have a positive impact on family management	
Q3.I believe that smart-working can have positive effects in terms of reducing pollution and reducing work-related costs	
Q4.I believe that smart-working can replace traditional work	
Q5.In the percentage of: 0%      10-25%    25-35%    35-50%    over 50%	
Q6.I believe that smart-working has repercussions in terms of increasing working hours and availability	
Q7.In the percentage of: 0%      10-25%    25-35%    35-50%    over 50%	
Q8.I believe that the smart-working activity has resulted in an increase (in terms of working hours) equal to: 0%      10-25%    25-35%    35-50%    over 50%	
Q9.I believe that smart-working in the medium-long term negatively affects the relational aspects connected to the working sphere	
Q10.I believe that smart-working can be a valid alternative in times of need and urgency	
Q11.I believe that smart-working leads to an increase in reporting and monitoring procedures for activities	
Q12.I believe that smart-working induces more stress	
Q13.Drouting from: (even more than one answer) 1) Platform malfunctions/internet malfunctions 2) Non-uniqueness / uniformity of the platforms used 3) Relational difficulty 4) Reporting and monitoring activities 5) Non-compliance of physical spaces with work activities 6) Interference in the private sphere	
Q14.I believe that smart-working is NOT appropriate for my job-tasks	
Q15.I believe that smart-working negatively affects work activities that involve a collaborative contribution	
Q16.I believe that the activities carried out in smart-working have resulted in an increase in productivity equal to: 0%      10-25%    25-35%    35-50%    over 50%	

Source: Our elaboration

### Data Collection and Comparative Analysis Results

The authors in this section show the results deriving from the data collected through the questionnaires.

The Table 2 reports the four sections of the analysis, in which section 1 (Figure 1) propose the aggregated data related to Q1, Q9, Q10-13 and Q15, regarding qualitative information on the sample and its prerogatives. Others three section (2-4) consider specifically the answers to Q2-8, Q14 and Q16, according to a precise cross-sectorial (public-private) and Job-tasks-basis of the sample involved. The authors, to make the data easier to understand, propose the tree diagrams as graphical solution (Figures.1-4 - Appendix).

The sample involving teachers in public schools (Table 2-Sec.2-A) (Figure 2) would reflect a frame about SWS in line with the office-workers, under certain aspects (Table 2-Sec.3-4; B-C), by contrast, in the face of an imbalance in the work-life binomial that appears generalised (in certain aspects) respects for jobs such as teaching, the situation seems to get even worse.

Though teachers demonstrate (more than half of the sample 51,47%) a great perception related to positive repercussions of SW on family management, reduction of pollution and work-related-costs (73,53%), considering SW able to substitute traditional working-models (44,12%) with a substitutionality level between 35-50% (the 32,35% of the sample) and over 50% (23,53% of the sample), the office-workers (Table 2-Sec.3-B) (Figure 3) demonstrate two polarized levels of perception related to positive repercussions of SW on family management, reduction of pollution and work-related-costs.

<b>Sec.1 Aggregated analysis</b>			<b>Sec.2 (A) Teachers – Public sector</b>			<b>Sec.3 (B) Office workers– Public sector</b>			<b>Sec.4 (C) Office workers– Private sector</b>		
No.	Answers	%	No.	Answers	%	No.	Answers	%	No.	Answers	%
Q1	1-2)	17,65%	Q2	1-2)	29,41%	Q2	1-2)	48,78%	Q2	1-2)	30,00%
	3)	5,88%		3)	19,12%		3)	7,32%		3)	0,00%
	4-5)	76,47%		4-5)	51,47%		4-5)	43,90%		4-5)	70,00%
Q9	1-2)	12,61%	Q3	1-2)	19,12%	Q3	1-2)	39,02%	Q3	1-2)	20,00%
	3)	10,92%		3)	7,35%		3)	12,20%		3)	30,00%
	4-5)	76,47%		4-5)	73,53%		4-5)	48,78%		4-5)	50,00%
Q10	1-2)	7,56%	Q4	1-2)	44,12%	Q4	1-2)	68,29%	Q4	1-2)	60,00%
	3)	6,72%		3)	11,76%		3)	2,44%		3)	0,00%
	4-5)	85,71%		4-5)	44,12%		4-5)	29,27%		4-5)	40,00%
Q11	1-2)	15,97%	Q5	1)	4,41%	Q5	1)	46,34%	Q5	1)	50,00%
	3)	30,25%		2)	23,53%		2)	17,07%		2)	10,00%
	4-5)	53,78%		3)	16,18%		3)	4,88%		3)	0,00%
Q12	1-2)	9,24%		4)	32,35%		4)	17,07%		4)	30,00%
	3)	18,49%		5)	23,53%		5)	14,63%		5)	10,00%
	4-5)	72,27%	Q6	1-2)	11,76%	Q6	1-2)	37,50%	Q6	1-2)	40,00%
Q13	1)	30,41%		3)	14,71%		3)	25,00%		3)	10,00%
	2)	15,20%		4-5)	73,53%		4-5)	37,50%		4-5)	50,00%
	3)	17,91%	Q7	1)	0,00%	Q7	1)	12,50%	Q7	1)	30,00%
	4)	12,50%		2)	8,82%		2)	25,00%		2)	10,00%
	5)	9,80%		3)	14,71%		3)	25,00%		3)	10,00%
	6)	14,19%		4)	32,35%		4)	30,00%		4)	30,00%
Q15	1-2)	16,81%		5)	44,12%		5)	7,50%		5)	20,00%
	3)	14,29%	Q8	1)	5,88%	Q8	1)	17,07%	Q8	1)	20,00%
	4-5)	68,91%		2)	11,76%		2)	41,46%		2)	20,00%
				3)	20,59%		3)	21,95%		3)	30,00%
				4)	33,82%		4)	9,76%		4)	30,00%
				5)	27,94%		5)	9,76%		5)	0,00%
			Q14	1-2)	27,94%	Q14	1-2)	56,10%	Q14	1-2)	90,00%
				3)	14,71%		3)	9,76%		3)	0,00%
				4-5)	57,35%		4-5)	34,15%		4-5)	10,00%
			Q16	1)	17,65%	Q16	1)	73,17%	Q16	1)	60,00%
				2)	36,76%		2)	7,32%		2)	40,00%
				3)	17,65%		3)	14,63%		3)	0,00%
				4)	22,06%		4)	4,88%		4)	0,00%
				5)	5,88%		5)	0,00%		5)	0,00%

In fact, only the 43,90% consider SW-model with positive repercussions on family management. That would be significant because the office-workers sample has been involved in the last part of SW application, while teachers in the previous phases, demonstrating increased enthusiasm and positiveness. The data would have been confirmed by the higher disagreement (39,02%) by the office workers in public sector (19,12% teachers) on the perceived costs and pollution reduction. In addition, symptomatic would be the office-workers' perception related to the SW (after more of 6 months of application) as possible alternative to traditional working-models, the 68,29% of the sample (for which SW would be more advisable) consider SW not satisfactory alternative to traditional working-model and about the fifty per cent (46,34%) attribute a 0% substitutability level. The frame in the control sample provided by the private sector about office-workers (Tab.2-Sec.4-C) (Figure 4) demonstrates results substantially in line with the other clusters, but in some cases with higher peaks. The 70% consider positive repercussions on family management and 50% on pollution and work-related-costs reduction (relatively 51,47% teachers and 43,90% office-workers in public sector – 73,53% teachers and 48,78% office-workers in public sector), although generally refractory (60%) they demonstrate a higher (30%) substitutability propensity (between 35-50%) of traditional working-model with SW than the colleagues in public sector (17,07%).

As regards the working-hours and availability teachers demonstrate the highest level of working-pervasiveness (73,53%), determining increased working-day from 35-50% (32,35% of the sample) and over 50% (44,12% of the sample), while the office-workers would seem that their working-day has not changed much, considering half the percentage of teachers (37,50%) with a very low level of overworking (over 50%) perception (7,50% of the sample), though from 35-50% the level seems to be in line (30%) with the one expressed by teachers (32,35%). In the private sector the 50% of the sample perceive an increased working-day and availability, the 30% perceive increased levels from 35-50% and the 20% perceive increased levels over 50%.

According to the data furnished, on one hand, the perception-range on the working-hours during Covid-19 SW-application would reflect an overworking condition, on the other one, the data would be verified by the results on the effective duration of working-day and perceived productivity, but with substantial difference among job-types. In fact, the teachers in public sector (33,82%) evaluate and effective overwork about 35-50% and the 27,94% declare to have worked over 50% more of the contractual time with an estimated increased productivity (by the 36,76% of the sample) between 10-25%, (by the 17,65% of the sample) between 25-35%, (by the 22,06% of the sample) between 35-50%. The office-workers in public sector (17,07%) and in private one (20%) demonstrate lower levels of agreement in estimating perceived overwork (teachers:5,88%).

However, office-workers in public sector would demonstrate an effective overtime-working (41,46% of the sample) between 10-25%, the 21,95% of the sample affirm overtime-working about 35-50% and respectively the 9,76% declare overtime from 35% to more than 50%.

By contrast, their perceived increased productivity levels are lower (73,17% of the sample declare 0%) than the ones observed in the other clusters (teachers: only 17,65% declare 0%; office-workers in private sector: 60% declare 0% with no answers about increased productivity over 25%). Although there are appreciable levels of productivity increase, the control sample would determine a result consistent with the one observed among the respondents of the cluster

with the same job-tasks in public sector, determining the possibility of working-overtime needed by malfunctions of the platforms, coordination and reporting activities and probably the difficulties in managing documents from remote, due by a non-completely adopted dematerialisation and digitalisation practices. On the other hand, the cluster including teachers, despite the presence of the same problems highlighted in the aggregated analysis of data (Table 2-Section Q13) (Figure 1) could have exploited the overtime for didactic activities and materials functional to a better quality learning needed by the ICTs mediated relation with students.

The 27,94% of teachers involved declare SW-model adequate to their job-tasks, the 90% of the control sample (office-workers in private sector) declare adequacy, while surprisingly the 34,15% of the public sector office-workers declare inadequacy of SW to their job-tasks, demonstrating a stronger refractory to change traditional working-models and confirming a supremacy of private sector, even if public sphere and the private one would be similar according to the innovative drivers. Unfortunately, once again the key would be recognizable in the managerial strategical approach (Hartley et al., 2013) albeit the scenario demonstrates structurally fragmented and harbinger of inhomogeneous configurations between different working-areas, confirming no panacea solutions. Probable developments could involve another cluster related to teachers in private sector; certainly, the research finds limits, especially in the size of the sample, due by the difficulties of the period. By contrast, also remaining at this stage, thanks to the comparative approach provided, could be a great tool able to produce insights for multidisciplinary developments and cross-fertilisation.

## DISCUSSION AND CONCLUSION

According to what aforementioned, and following the lines of the research design structured ad hoc for the investigation, the authors provide a privileged observation lens involving a comparative approach during a period through which SW has been widely adopted both in public and private sector.

This precise point of view, integrated in a socio-technical-interpretative-paradigm, would have permitted to investigate on the cogency of the SW-phenomenon, critically evaluating its repercussions on WLB and satisfaction.

The recent sanitary emergency, under the light of the data provided, able to produce preliminary insights on the theme, could be a valid opportunity to question on the critical aspects that for years have slowed down SW-adoption in several working-areas and sectors both public and private.

Though the urgency variable has generated a substantial application, according to substantial levels of acceptance (Rogers, 1962; Rainero & Modarelli, 2020), although fragmented and incomplete at ideal level, public administrations, intending office-workers in public sectors, seem quite averse to change.

Probably the obstacles are to be found primarily in a strong reluctance to SW-application prolonged over time, in technological delay (Russo, 2020), in the high average age of public employees and in a managerial culture not attentive to the individual characteristics of its human resources, forgetting the role of guiding to change. In this sense, the results would be consistent to what observed by Donnelly and Proctor-Thomson (2015), relatively to the home-based teleworking (HbTW) during disasters, indicating a good level of readiness to return to work, reserving to a restricted SW (more precisely HbTW in the case of disasters like the one observed during Covid-19 spread) a urgency-alternative-measure. For these reasons it would be possible to

cite Harari (1994) who posed a question in the late 1994, affirming that the dominant issue for the new millenium would have been “*why do people work smart?*”, relating the question to the approaches in working according to the discretionary power in order to satisfy minimal objectives.

It has been observed that SW-application produces benefits in terms productivity and WLB, but through the data proposed by the authors, the question posed by Harari (1994) seems to be actual as never before, but in its negative version: “*why don't people work smart?*”. Intrinsic motivation could be an answer, under free-movement-approach, in doing extra efforts. On the other hand, this study opens a window to critically assess the most dominant issues on augmented perceived productivity due by a temporary “*workplaces death*” due by the spatial-social-reengineering observed during Covid-19 spread. Evidences to answer the question appear scarce, including research not specifically focused on cogent variables, but considering SW-benefits and SWS through the WLB only during normal-condition-periods.

The authors intend to fill this gap introducing a comparison between clusters through the urgency variable due by Covid-19, underlying crucial aspects on SW-application failures. In fact, a EuroFund study (Vargas-Llave et al., 2017), showing EU28 data about Telework and ICT-based Mobile Work (TICTM), would have confirmed around 19% of workers in the EU have TICTM arrangements at work, but only 2.8% regularly engaged in HbW. Contrarily, during the Covid-19 spread the data about HbW (intended as a pseudo-SW-adoption) demonstrate a quite complete application. If on one hand, literature associates SW with the “*new nomads*” (Gurashi, 2018), re-shaping the concept of pendolarism (Martinotti, 1993), inducing advantages in terms of pollution and productivity, satisfaction, commitment, motivation, creativity etc. (Gastaldi et al., 2014; Angelici & Profeta, 2020; Mann & Holdsworth, 2003; (Whittle & Mueller, 2009); Felstead & (Henseke, 2017; Locke, 1976), on the other hand the specificity of the moment would paralyze the full potential inherent SW as a strategic lever, due by the compression of movement freedom and the restrictions that oblige people to work at home.

The cogency and contingencies would demonstrate a zeroing of social relations, a total abandon of traditional workplaces with hardly foreseeable repercussions on the personal sphere that the authors try to highlight through the possibility of investigating the black box of the SW, paying attention to its influence on WLB under specific conditions. In this sense, it would be precisely the possibility of free choice related to SW-application that could move to higher WLB satisfactory levels, allowing the worker to have more control on private- and working-life, benefiting of positive returns, reducing stress and exhaustion, due by the compulsory movements home-office-home and overlapping of family duties. Though a flexible way to work, would demonstrate consequent savings in terms of costs for transoports, time, pollution etc. (as reported in the data analysis), unfortunately these would be internalized by individual contracts for services like internet, investments in ICTs and increased cost for electricity due by the long perdurance at home.

Repercussions related to the unmanaged SW-strategical-lever (Mello, 2007), would have been observed under the BIO-PSYCHO-SOCIAL well-being and on the productivity side, risking to be counterproductive, constituting an etherogenesis of the purposes. The substantial application and SW- model-acceptance during Covid-19, would risk to filfill the prophecy.

Workhaolism (Bakker, et al, 2009; Noonan & Glass 2012), overlapping conditions among family and working duties (Tietze & Musson 2005; Hilbrecht et al., 2013), perceived pressure to productivity, reporting and availability, the pressing interference in the private sphere (Tremblay,

2002), could be the main factors of inefficient remote-working application, empowering traditional working-model-preference.

Even if authors as Angelici & Profeta (2020); Langè & Gastaldi (2020) suggest that promoting SW would be an effective way to boost productivity, improving well-being and WLB, that could be true when the employees choose freely its adoption, following the free-movement-approach to work (how, when and where); other perspectives, consistent with the results provided by the analysis proposed, like Bloom's et al. (2014) point of view, would show that ICTs can produce benefits for productivity and WLB, although at the expense of increased isolation, counterproductive effects in the long-run, determining uncertainty and lower satisfaction levels. Often, perceived increasing productivity, would identify a quantitative aspect rather than a qualitative one: overwork. In addition, the possible malfunction of a platform, or the difficult availability of a document by remote would underline the negative effects of the distance from the office as a physical place and from colleagues with whom the coordination activities could be more complex, in addition to the reporting ones, generating frustration. To sustain the results provided, it would be crucial to cite Golden & Veiga (2005). They observed an inversely proportional relationship between satisfaction and SW, exceeding a certain threshold (not very large – 15.1 hours per week) satisfaction tends to drastically drop.

The SW-application proposed during the emergency, through the evidence of the investigation, would lack some elements starting from the freedom of the choice and the free-movement-approach. In this sense, the cogent-SW-application (prolonged over time) and the restricted workplace choice, could produce negative influences on the WLB, reducing benefits deriving from flexibility, in this case only partial due by the urgency of the moment and by the restrictive measures necessary for the Covid-19 containment. Therefore, in an emergency condition, in which social distance, closure and quarantine seem to be the only existing alternative, the choice of the place from which work would be home, nullifying (in the medium-term) the advantages otherwise deriving from the application of the SW as a strategic lever without constraints (Angelici & Profeta, 2020).

The research would answer the questions: RQ1 affirming that the cogency variable for SW-application would produce negative effects on employee WLB; RQ2 if the SW-model is perpetrated over time under cogency would be counterproductive, defining inhomogeneity among job with different tasks, scarce acceptance and applicability according to lower satisfactory levels of WLB, downgrading the model to a mere anti-crisis expedient (RQ3).

Once operated the critical observation on the data, it would be possible to conclude describing SW as a still quite ambiguous concept and to be defined even more in detail. Certainly there are considerable and appreciable advantages of SW-adoption, but an attentive HRM would be crucial and vital in achieving of the best results in terms of WLB applying non-traditional working-models.

The proponents will promise great challenges, but scholars must consider all the aspects, even the negative ones related to a prolonged broad-spectrum and little-shared application, notwithstanding the essential opening the boundaries of workplaces to ensure prosperity through creativity. Therefore, the authors certain of the observable advantages feel the need to look at innovations in every ambit of social life through the lens of reality and evidences, providing a prudential point of view free from technologically-oriented deterministic-positivism, consistent with a part of existing literature (Spencer, 2018; Thompson & Briken, 2017).

## REFERENCES

- Ahuja, M.K., Chudoba, K.M., Kacmar, C.J., McKnight, D.H., & George, J.F. (2007). IT road warriors: Balancing work-family conflict, job autonomy, and work overload to mitigate turnover intentions. *Mis Quarterly*, 1-17.
- Angelici, M., & Profeta, P. (2020). Smart-working: Work flexibility without constraints.
- Armstrong, M. (2006). *A handbook of human resource management practice*. Kogan Page Publishers.
- Ashforth, B.E., & Humphrey, R.H. (1993). Emotional labor in service roles: The influence of identity. *Academy of management review*, 18(1), 88-115.
- Atkinson, J., & Meager, N. (1986). Changing Working Patterns: How companies achieve flexibility to meet new needs. *Institute of Manpower Studies, National Economic Development Office, London*.
- Azasu, S., Babatunde, Y. (2020) Open-ended, Office space and remote working in the age of Covid-19, *Journal of Property Management*, 4, 34-35.
- Aziri, B. (2011). JOB SATISFACTION: A LITERATURE REVIEW. *Management Research & Practice*, 3(4).
- Bakker, A.B. (2011). An evidence-based model of work engagement. *Current directions in psychological science*, 20(4), 265-269.
- Bakker, A.B., Schaufeli, W.B., Leiter, M.P., & Taris, T.W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & stress*, 22(3), 187-200.
- Bakker, A.B., Demerouti, E., & Burke, R. (2009). Workaholism and relationship quality: A spillover-crossover perspective. *Journal of Occupational Health Psychology*, 14(1), 23.
- Ballagas, R., Rohs, M., Sheridan, J.G., & Borchers, J. (2004, September). Byod: Bring your own device. In *Proceedings of the Workshop on Ubiquitous Display Environments, Ubicomp* (Vol. 2004).
- Bednar, P.M., & Welch, C. (2019). Socio-technical perspectives on smart working: Creating meaningful and sustainable systems. *Information Systems Frontiers*, 1-18.
- Birkinshaw, J. (2010). *Reinventing management: Smarter choices for getting work done*. John Wiley & Sons.
- Bloom, N. (2014) To raise productivity, let more employees work from home, *Harvard business review*, Vol.92, No.1-2, 28-29.
- Bresciani, S. (2016) *Le innovazioni dirompenti*, Giappichelli Editore, Torino.
- Brynjolfsson, E., McAfee, A. (2014) *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*, WW Norton & Company, New York.
- Chudoba, K.,M., Wynn, E., Lu, M., Watson-Manheim, M.,B. (2005) How Virtual Are We? Measuring Virtuality and Understanding Its Impact on a Global Organisation, *Information Systems Journal*, Vol.15, 279–306.<https://doi.org/10.1111/j.1365-2575.2005.00200.x>.
- Cinar, E., Trott, P., Simms, C. (2019) A systematic review of barriers to public sector innovation process, *Public Management Review*, Vol.21, No.2, 264-290.DOI:10.1080/14719037.2018.1473477.
- CIPD (2008) *Smart working, The impact of work organisation and job design*, Chartered Institute of Personnel and Development.
- Clark, S.,C. (2000) Work/family border theory: A new theory of work/family balance, *Human relations*, Vol.53, No.6, 747-770. <https://doi.org/10.1177/0018726700536001>.
- Cook, N. (2008) *Enterprise 2.0: How Social Software Will Change the Future of Work*, Routledge, London.<https://doi.org/10.4324/9781315256382>.
- Davis, F. (1989) Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology, *MIS Quarterly*, Vol.13, No.3, 319-340.DOI:10.2307/249008.
- De Masi, D. (2020) *Smart working: La rivoluzione del lavoro intelligente*, Marsilio Editori spa, Venezia.
- Di Martino, V., Wirth, L. (1990) Telework: A new way of working and living, *International Labor Review*, Vol.129, No.5, 529-554.
- Diab-Bahaman, R., Al-Enzia (2020) The impact of Covid-19 pandemic on conventional work settings, *International Journal of Sociology and Social Policy* (In-press)
- Donnelly, N., Proctor-Thomson, S., B. (2015) Disrupted work: home-based teleworking (HbTW) in the aftermath of a natural disaster, *New Technology, Work and Employment*, Vol.30, No.1, 47-61.<https://doi.org/10.1111/ntwe.12040>.
- Dudau, A., Brunetto, Y. (2020) Managing emotional labour in the public sector, *Public Money & Management*, Vol.40, No.1, 11-13.DOI:10.1080/09540962.2019.1665912.
- Engel, G.,L. (1977) The need for a new medical model: a challenge for biomedicine, *Science*, Vol.196, No. 4286, 129–36.DOI:10.1126/science.84746.

- Felstead, A., Henseke, G. (2017) Assessing the growth of remote working and its consequences for effort, well-being and work-life balance, *New Technology, Work and Employment*, Vol.32, No.3, 195-212. <https://doi.org/10.1111/ntwe.12097>.
- Fiocca, R. (2020) Percezioni, relazioni, interazioni ei misteri della black box, *Impresa Progetto - Electronic Journal of Management*, No.1,1-18
- Fogarty, H., Scott, P., Williams, S. (2011) The half-empty office: dilemmas in managing locational flexibility, *New technology, work and employment*, Vol.26, No.3, 183–195. <https://doi.org/10.1111/j.1468-005X.2011.00268.x>.
- Ford, M. (2015) *Rise of the Robots: Technology and the Threat of a Jobless Future*, Basic Books, New York.
- Frey, C.,B., Osborne, M.,A. (2017) The future of employment: How susceptible are jobs to computerisation?, *Technological Forecasting and Social Change*, Vol.114, 254-280. <https://doi.org/10.1016/j.techfore.2016.08.019>.
- Gastaldi, L., Corso, M., Raguseo, E., Neirotti, P., Paolucci, E., Martini, A. (2014) Smart Working: Rethinking Work Practices to Leverage Employees' Innovation Potential, *15th International Continuous Innovation Network (CINet) Conference "Operating Innovation – Innovating Operations"*, 337-347.
- Golden, T.,D., Veiga, J.,F. (2005) The impact of extent of telecommuting on job satisfaction: Resolving inconsistent findings, *Journal of management*, Vol.31, No.2, 301-318. <https://doi.org/10.1177/0149206304271768>.
- Goodman, L.,A. (1961) Snowball sampling, *The annals of mathematical statistics*, 148-170. <https://doi.org/10.1214/aoms/1177705148>.
- Gurashi, R. (2018) The era of the smart people. How technocapitalism is changing the lifestyles of the individuals of the smart society, *Periodico telematico di Storia e Scienze Umane*, No. 86, 1-12.
- Harari, O. (1994) Working Smart: The New Strategic Imperative, *Management Review*, Vol.83, No.5, 30-33.
- Hardill, I., & Green, A. (2003). Remote working—altering the spatial contours of work and home in the new economy. *New Technology, Work and Employment*, 18(3), 212-222.
- Hartley, J., Sørensen, E., & Torfing, J. (2013). Collaborative innovation: A viable alternative to market competition and organizational entrepreneurship. *Public administration review*, 73(6), 821-830.
- Hilbrecht, M., Shaw, S.M., Johnson, L.C., & Andrey, J. (2013). Remixing work, family and leisure: teleworkers' experiences of everyday life. *New Technology, Work and Employment*, 28(2), 130-144.
- Jeffrey Hill, E., Grzywacz, J.G., Allen, S., Blanchard, V.L., Matz-Costa, C., Shulkin, S., & Pitt-Catsoupes, M. (2008). Defining and conceptualizing workplace flexibility. *Community, Work and Family*, 11(2), 149-163.
- Hodder, A. (2020). New Technology, Work and Employment in the era of COVID-19: reflecting on legacies of research. *New Technology, Work and Employment*.
- ter Hoeven, C.L., & van Zoonen, W. (2015). Flexible work designs and employee well-being: examining the effects of resources and demands. *New Technology, Work and Employment*, 30(3), 237-255.
- Hogarth, T., Hasluck, C., Pierre, G., Winterbotham, M., & Vivian, D. (2000). Work-life balance 2000: Baseline study of work-life balance practices in Great Britain: Summary report. *London: Dept. for Education and Employment*.
- Hoppock, R. (1935) *Job Satisfaction*, Harper and Brothers, New York.
- Howcroft, D., & Taylor, P. (2014). 'Plus ca change, plus la meme chose': researching and theorising the new, new technologies. *New Technology, Work and Employment*, 29(1), 1-8.
- Jarvenpaa, S.L., & Staples, D.S. (2000). The use of collaborative electronic media for information sharing: an exploratory study of determinants. *The Journal of Strategic Information Systems*, 9(2-3), 129-154.
- Jenkins, S., Bhanugopan, R., & Lockhart, P. (2016). A framework for optimizing work–life balance practices in Australia: Perceived options for employee support. *Journal of Employment Counseling*, 53(3), 112-129.
- Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of management journal*, 33(4), 692-724.
- Lake, A. (2016). *Smart flexibility: Moving smart and flexible working from theory to practice*. CRC Press.
- Lally, P., Van Jaarsveld, C.H., Potts, H.W., & Wardle, J. (2010). How are habits formed: Modelling habit formation in the real world. *European journal of social psychology*, 40(6), 998-1009.
- Langè, V., & Gastaldi, L. (2020). Coping Italian Emergency COVID-19 through Smart Working: From Necessity to Opportunity. *Journal of Mediterranean Knowledge*, 5(1), 163-171.
- Locke, E.A. (1976) *The nature and causes of job satisfaction*, In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology*.
- Macey, W.H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and organizational Psychology*, 1(1), 3-30.

- Mann, S. (2013). Smart flexibility: Moving smart and flexible working from theory to practice. *Leadership & Organization Development Journal*.
- Mann, S., & Holdsworth, L. (2003). The psychological impact of teleworking: stress, emotions and health. *New Technology, Work and Employment*, 18(3), 196-211.
- Martinotti, G. (1993). *Metropoli: la nuova morfologia sociale della città* (Vol. 399). il Mulino.
- McEwan, A. M. (2016). *Smart working: Creating the next wave*. CRC Press.
- McLean Parks, J., Kidder, D.L., & Gallagher, D.G. (1998). Fitting square pegs into round holes: Mapping the domain of contingent work arrangements onto the psychological contract. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 19(S1), 697-730.
- Mesmer-Magnus, J.R., & DeChurch, L.A. (2009). Information sharing and team performance: A meta-analysis. *Journal of applied psychology*, 94(2), 535.
- Messenger, J.C., & Gschwind, L. (2016). Three generations of Telework: New ICT s and the (R) evolution from Home Office to Virtual Office. *New Technology, Work and Employment*, 31(3), 195-208.
- Mello, J.A. (2007). Managing telework programs effectively. *Employee Responsibilities and Rights Journal*, 19(4), 247-261.
- Morin, E.,C., Simonigh (2015). *Pensare la complessità. Per un umanesimo planetario*, Saggi critici e dialoghi di Edgar Morin con Gustavo Zagrebelsky e Gianni Vattimo, Mimesis edizioni, Sesto San Giovanni.
- MUBAROQ, S.R., ABDULLAH, A.G., & SETIAWAN, A. (2020). The evolution of smart working and sustainability in socio-technical perspective: a scientometrics technology analysis. *Journal of Engineering Science and Technology*, 15(3), 1868-1882.
- Neirotti, P., Paolucci, E., Raguseo, E. (2013) Mapping the antecedents of telework diffusion: firm-level evidence from Italy, *New Technology, Work and Employment*, Vol.28, No.1, 16-36. <https://doi.org/10.1111/ntwe.12001>.
- Neri, M. (2017) *Leggere criticamente lo smart working*, in Neri M. (2017) *Smart Working: Una prospettiva critica*, TAO Digital Library, Bologna.
- Noonan, M.C., & Glass, J.L. (2012). The hard truth about telecommuting. *Monthly Lab. Rev.*, 135, 38.
- Pagonis, J. (1995). The teleworking explosion: fact or fallacy?.-Public service management is reluctant to approve telework. *Search* (Sydney, NSW), 26(7), 203.
- Panteli, N., & Dawson, P. (2001). Video conferencing meetings: changing patterns of business communication. *New Technology, Work and Employment*, 16(2), 88-99.
- Pérez, M.P., Sánchez, A.M., de Luis Carnicer, P., & Jiménez, M.J.V. (2004). A technology acceptance model of innovation adoption: the case of teleworking. *European Journal of innovation management*.
- Rainero, C., & Modarelli, G. (2020). Empowering Technology Acceptance Through the Added Value of Urgency: Teaching Profession Smart-Working Case.
- Rasmussen, E., & Corbett, G. (2008). Why isn't teleworking working?. *New Zealand Journal of Employment Relations*, 33(2), 20.
- Rogers, E.M. (1962) *Diffusion of Innovations*, Simon and Schuster..
- Renato, R., & Giuseppe, M. (2015). Retribuzione e motivazione nella pubblica amministrazione oggi. *RU-Risorse Umane nella PA*, (6).
- Russo, M. (2020) Emergenza lavoro agile nella P.A., *GiustiziaCivile.com*, No.1.
- Sarti, D., & Torre, T. (2017). Is Smart Working a Win-Win Solution? First Evidence from the Field. *Well-being at and through Work*, 9, 231.
- Schwab, K. (2016). The Fourth Industrial Revolution: World Economic Forum. *Zulfu Dicleli: The Optimist Publications*. pp, 15.
- Shin, B., El Sawy, O.A., Sheng, O.R.L., & Higa, K. (2000). Telework: Existing research and future directions. *Journal of organizational computing and electronic commerce*, 10(2), 85-101.
- Spencer, D.A. (2018). Fear and hope in an age of mass automation: debating the future of work. *New Technology, Work and Employment*, 33(1), 1-12.
- Standen, P. (1997). Home, work and management in the information age. *Journal of Management & Organization*, 3(1), 1-14.
- Steinhaus, C.S., & Perry, J.L. (1996). Organizational commitment: Does sector matter?. *Public Productivity & Management Review*, 278-288.
- Sullivan, C. (2003). What's in a name? Definitions and conceptualisations of teleworking and homeworking. *New Technology, Work and Employment*, 18(3), 158-165.

Schleicher, A. (2020). The Impact Of Covid-19 On Education Insights From Education At A Glance 2020. Retrieved from oecd.org website: <https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf>.

Tietze, S., & Musson, G. (2005). Recasting the home-work relationship: A case of mutual adjustment?. *Organization Studies*, 26(9), 1331-1352.

Thompson, P., & Briken, K. (2017). 12 Actually Existing Capitalism: Some Digital Delusions. *The new digital workplace: How new technologies revolutionise work*, 241.

Torre, T. (2015) Tutto è smart...anche il lavoro, *Impresa Progetto-Electronic Journal of Management*, 3, 1-10.

Torre, T. (2020) Smart Working: Soluzione ad ogni emergenza? Prospettive oltre l'emergenza, *Impresa Progetto-Electronic Journal of Management*, 1, 1-11.

Tremblay, D.G. (2002). Balancing work and family with telework? Organizational issues and challenges for women and managers. *Women in Management Review*.

Vargas, L.O., Weber, T. (2020) *Regulations to address work-life balance in digital flexible working arrangements*, EurWork by EuroFound, Publications Office of the European Union, Luxembourg

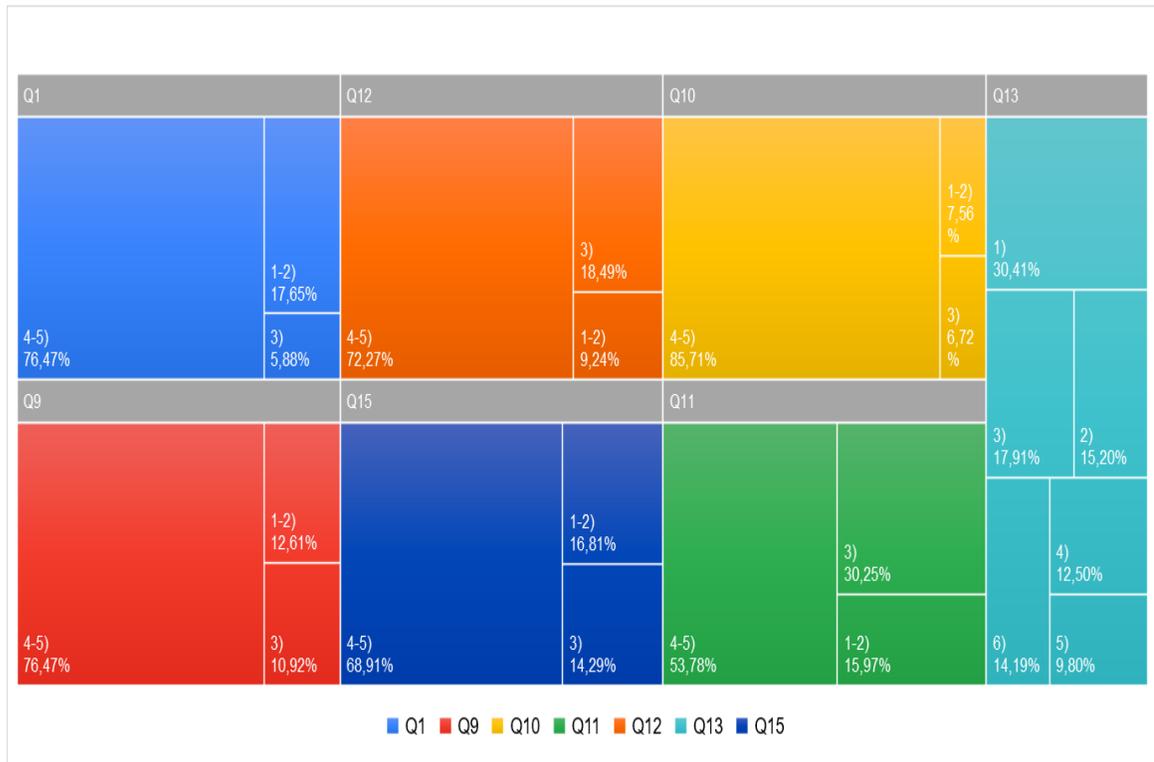
Vargas-Llave, O., Mandl, I., Weber, T., Wilkens, M. (2017) *Digital Age, Telework and ICT-based mobile work: Flexible working in the digital age*, New forms of employment series, Publications Office of the European Union, Luxembourg.

Whittle, A., & Mueller, F. (2009). 'I could be dead for two weeks and my boss would never know': telework and the politics of representation. *New Technology, Work and Employment*, 24(2), 131-143.

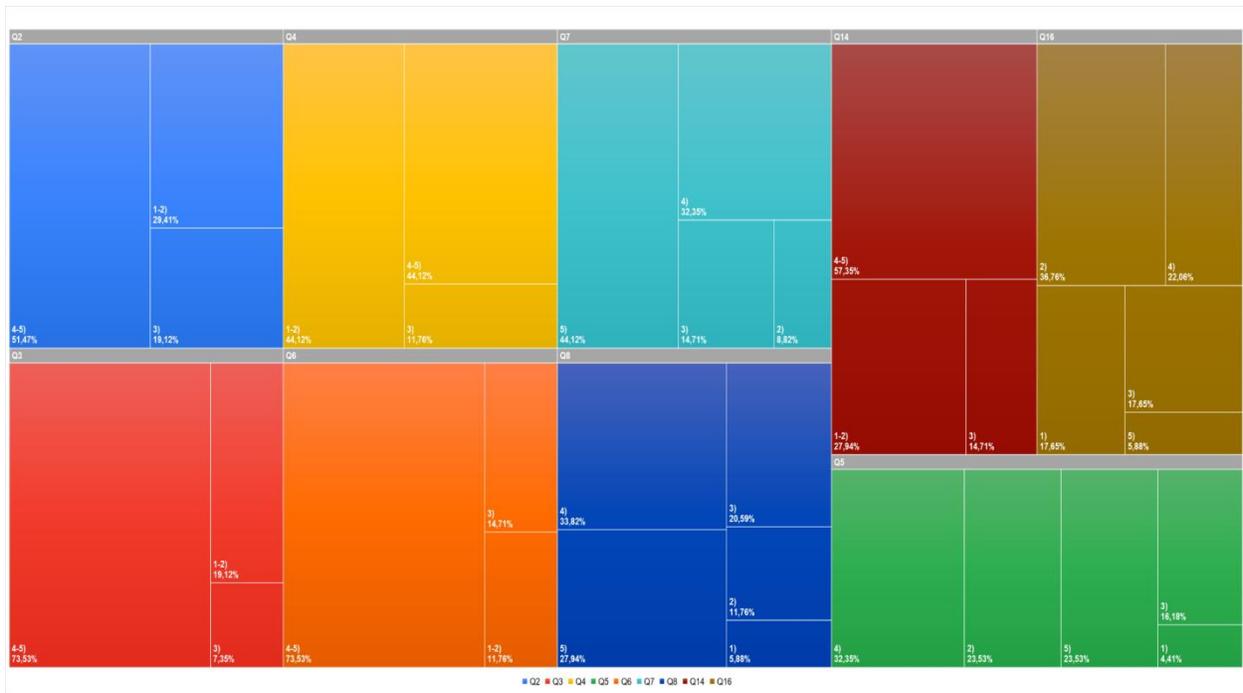
Zimmerman, B., Lindberg, C., Plsek, P. (1998-b) *Edgework: Insights from Complexity*, Health Care Leaders, Irving, TX: VHA.

Zappalà, S. (2017) *Smart working e fattori psico-sociali*, in Neri M. (2017) *Smart Working: Una prospettiva critica*, TAO Digital Library, Bologna.

**APPENDIX**

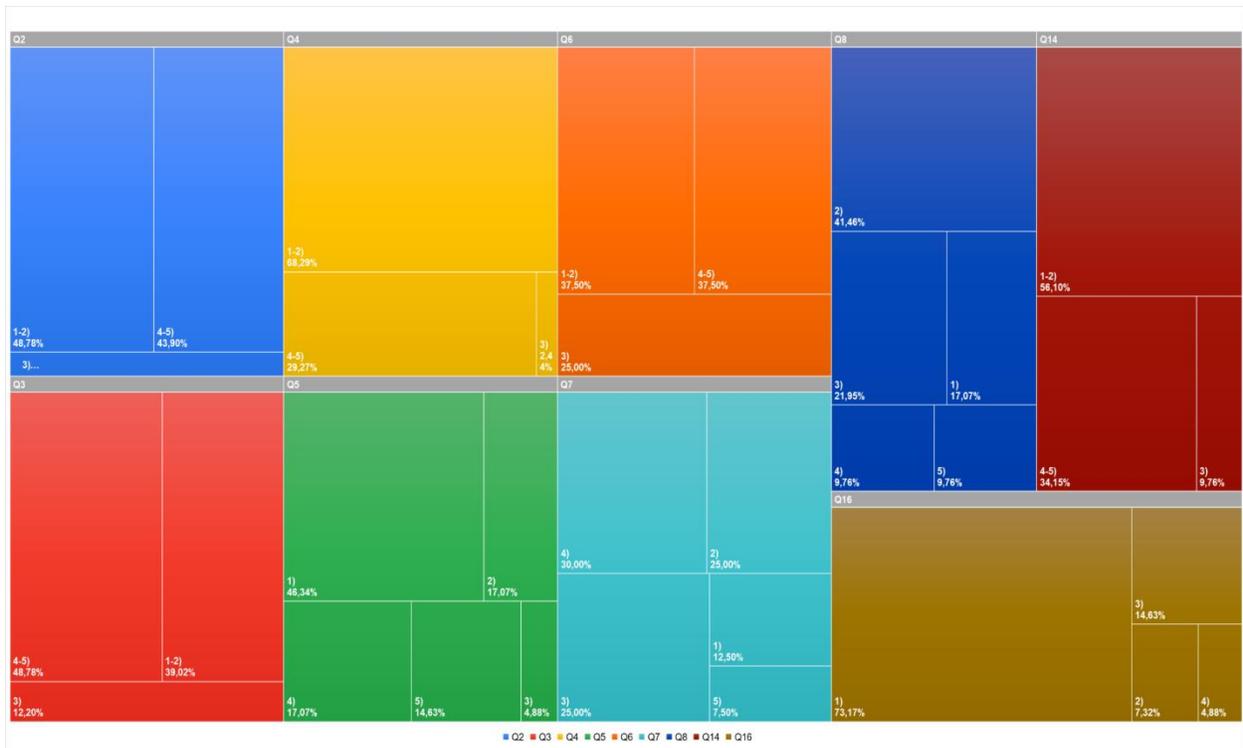


**FIGURE 1**  
**AGGREGATED DATA ANALYSIS (TABLE 2-SECTION 1)**



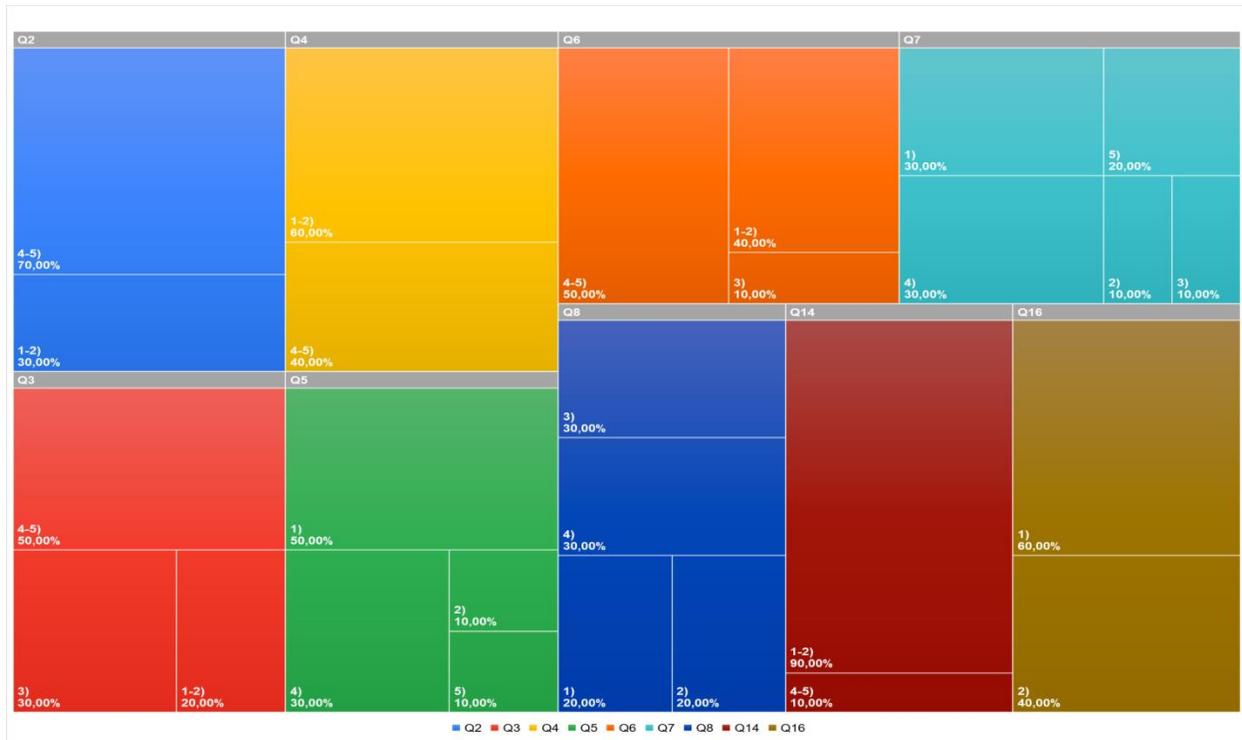
**FIGURE 2**  
**TEACHING PROFESSION IN PUBLIC SCHOOLS (TABLE 2-SECTION 2-A)**

Source: Our elaboration



**FIGURE 3**  
**OFFICE-WORKERS IN PUBLIC SECTOR (TABLE 2-SECTION 3-B)**

Source: Our elaboration



**FIGURE 4**  
**OFFICE-WORKERS IN PRIVATE SECTOR (TABLE 2-SECTION 4-C)**

Source: Our elaboration.