PERCEPTION OF HOME TELEWORKING DURING COVID-19 CRISIS IN SPAIN: SIGNIFICANT FACTORS AND ASSYMETRICAL INFLUENCE ON ACCEPTANCE AND RESISTANCE

Abstract

Purpose: The present paper aims to shed a light on the perception of the consequences of implementing home teleworking for both employers and employees from the pandemic. By so doing, the research analyses the factors that explain firms and workers' perception of home teleworking and the symmetry of their impact on its acceptance and rejection.

Design/methodology/approach: We used a survey of the Spanish public agency "Centro de Investigaciones Sociológicas" on the perceptions of digital society during the COVID-19 pandemic (March 2021). The explanatory variables were selected and classified using the well-known taxonomy of Baruch and Nicholson (i.e., individual factors, family/home, organizational, and job-related).

Findings: The global judgement of HTW is positive, but factors such as gender, age, children in care, or being an employer nuance that perception. While some factors like the attitude of employees toward information communication technologies (ICTs), perceived productivity, or the distance from home to work have a significant link with both positive and negative perceptions of HTW, other factors can only explain either positive or negative perceptions. Likewise, we observed that being female and having children on care had a detrimental influence on opinions about HTW.

Originality: We have also measured not only the significance of assessed factors on the overall judgement of HTW for firms and workers, but also whether these factors impact acceptance and resistance attitudes toward teleworking symmetrically.

Practical implications: A clearer regulation of teleworking is needed to prevent imbalances in rights and obligations between companies and employees. We also highlight the potentially favourable effects of telecommuting on mitigating depopulation in rural areas.

Keywords: Teleworking, home teleworking, COVID-19 pandemic, asymmetrical impact of factors

1. Introduction

Telework (TW), or telecommuting, is a work arrangement that consists of making tasks outside the conventional workplace, such as at home or in a remote place. Implementing TW often requires the use of information communication technologies (ICTs) to perform job tasks, communicating with members of the firm, or with other organizational stakeholders (Bailey and Kurland, 2002). The TW implemented at home is called home-based TW (HTW). Although we are mainly interested in the perception of the impact of HTW on employees and firms, many questions outlined in this paper could be extended to any kind of TW.

Until March 2020, the development of HTW across countries showed significant variability (Gschwind and Vargas, 2019). Whereas many governments did not support and rule HTW until recent periods (Vargas-Llave *et al*., 2022), Harris (2003) documents strong support by the UK Government as early as the beginning of 21th century. Therefore, Anglo-Saxon and Nordic countries have achieved greater development in TW than in European southern states such as Spain (Elldér, 2019; Gschwind and Vargas, 2019).

This panorama suddenly changed because of an emergency caused by COVID-19. The Spanish government approved a set of employment-related dispositions through the

publication of the Royal Decree-Law 8/2020 on March, 17th. Similar measures have been applied in Portugal (Tavares et al., 2021) and Italy (Donati et al., 2021). This leads to many firms and workers with low (or even no) experience in HTW to improve telecommuting (Corral and Isusi, 2020). Thus, from to 2020-2021, many Spanish citizens used services implemented by ICTs, and practically all workers whose jobs were adaptable to HTW used it. Likewise, news in the mass media about HTW measures of multinational companies has been widely announced (Belzunegui-Eraso and Erro-Garcés, 2020).

Lockdowns across the world due to the COVID-19 crisis could be understood as a natural experiment that will state the actual limits of adopting HTW (Tocarchuk et al., 2021).

Telework in the COVID-19 crisis displayed particular characteristics. First of all, it was conducted from home and launched without previous planning (Belzunegui and Erro-Garcés, 2020). Secondly, because schools were closed, it was challenging to balance work and family obligations with children at home (Di Domenico et al, 2020; Fana et al, 2020). Thirdly, companies did not have the necessary technological resources to address the difficulties associated with working remotely (Belzunegui and Erro-Garcés, 2020). Finally, employees often contributed with the technological infrastructure (Abulibdeh, 2020).

In the implementation of teleworking, there are a number of concerns that should be considered, especially if the change is unplanned, as it was in the pandemic. For instance, work-life balance can be impacted if personal and professional domains are not differenciated (Erro-Garcés et al, 2022), and job satisfaction might drop if workers are unsure of how their managers are evaluating them. The teleworking “boom" and the

pandemic's unique characteristics justify the relevance of this study. Accordingly, the present paper aims to shed some light on the perception of the consequences of implementing home teleworking for both employers and employees from the pandemic. y so doing, the research analyses the factors that explain firms and workers' perception of home teleworking and the symmetry of their impact on its acceptance and rejection.

This fact motivates our paper, which, using a survey by the Spanish Government Agency *Centro de Investigaciones Sociológicas* (Research Centre of Sociology, CIS) "Tendencies in the digital society during COVID-19 pandemic in Spain" that was complained about in March 2021, assesses the following four research questions (RQ):

RQ1: Which factors impact firms/workers' positive perception of HTW in Spain?

RQ2: Do the assessed factors impact the acceptance and rejection of HTW symmetrically? It should be noted that the factors that lead to the acceptance of new technology are not the same as those that induce rejection (Gauttier, 2019).

The remainder of the article is organized as follows. The next section presents the theoretical framework. Section 3 describes the data and Section 4 presents the methods used to conduct the empirical analysis. Section 5 includes main results, whereas Section 6 develops a discussion from the previous results. Finally, Section 7 describes the main conclusions of the paper.

2. Theoretical background

The advantages and drawbacks of teleworking have been extensively studied and empirically tested (Beauregard et al., 2019). The positive outcomes of HTW and the energy crisis in the 70s of 20th century led to academics predicting its generalized

adoption in that decade, at least in developed countries (Bailey and Kurland, 2002). However, this fact did not come either at the beginning of 21th century (Illegems *et al*., 2001) or until spring 2020 (Fana et al., 2020) despite the majority of jobs being adapted to the use of ICTs (Baruch, 2000). A recurrent reason is the reluctance of managers to allow telecommuting (Gschwind and Vargas, 2019; Beno, 2021) due to issues such as problems in coordinating operations, difficulty in controlling and monitoring workers' performance, or the loss of teamwork benefits (Baruch, 2001; Bailey and Kurland, 2002). Likewise, adopting teleworking requires companies to make several changes that require significant effort or that could be perceived as impossible to implement (Aguilera et al., 2016).

Baruch and Nicholson (1997) classified the factors that influence attitude (toward) and adoption (of) teleworking into individual circumstances, family/home factors, organizational culture, and the nature of the job. As in Baruch and Nicholson (1997), we are interested in the influence of these variables on the perception of the advantages that adopting HTW provides for both workers and firms.

2.1 Individual factors

These four categories underlie home-computer interaction issues (Fisher et al., 2021). For example, while within individual factors, we can outline personal skills and attitudes toward ICTs (Fisher et al., 2021), a factor linked with family has good Internet connectivity at home (Tahavori, 2014).

The explanation about attitude toward HTW could be focused on as an assessment of the acceptance of a new technology in such a way that attitude, behavioural intention, and adoption of HTW can be modelled using the Technology Acceptance Model (TAM) (Pérez et al., 2004). TAM postulates that the main determinants of attitudes toward any

information technology are performance expectancy and easiness expectations (Davis, 1989). Employees and employers will have a favourable attitude toward telecommuting if they perceive the usefulness of this work arrangement (e.g., it avoids road travel to employees and reduces to employers the cost of maintaining a workplace) and is easy to use (e.g., having skills in ICTs is an enabler of workers' favourable perceptions of HTW). Within the TAM framework, all the advantages and disadvantages of teleworking are antecedents of performance expectancy and/or easiness expectation. Whereas Pérez et al. (2004) and Silva-C et al. (2019) applied TAM to model the adoption of telecommuting by organizations, Donati et al. (2021) did so from the employees' perspective, and Ollo-López et al. (2021) provided a broader vision that embedded individual, organizational, and social perspectives.

Although telecommuting is generally performed by senior workers (Gschund and Vargas, 2019), a significant link is commonly found between lower ages and favourable good perception of TW, since ICT skills generally decrease with age (Asgari *et al*., 2014; Malik *et al*., 2016; Nguyen, 2021; Raišienė *et al*., 2020). Likewise, it can also be argued that baby boomers tend to appreciate satisfactory social interactions and judge telecommuting activities as unproductive, X-Generation members prefer autonomy and flexibility, and the Millennial generation is the first generation to use ICTs in its peak (Giedré *et al*., 2021). However, López-Igual and Rodríguez-Modroño (2020) reported a greater adherence to HTW at intermediate ages.

Several papers have outlined a clear link between high social status and positive perceptions of HTW. Members of higher social status develop jobs that are well suited to ICTs (Elldér, 2019; Asgari *et al*. 2022). Likewise, being more likely to use ICTs has been found to be significant because it increases the easiness expectation of HTW (Donati *et al*., 2021; Fischer *et al*., 2021; Asgari *et al*., 2022).

2.2 Family/home factors

Workers' gender is a recurrent individual explanatory variable. Despite mainstream findings, TW practitioners are linked to be male (Sener et al., 2011; Fisher *et al*., 2021), and females are often more receptive to HTW arrangements (Illegems, 2001; Malik et al., 2016; Raišienė et al., 2020; Astroza et al., 2020). A common explanation is that home care is traditionally linked to women, and HTW allows for balancing household-work duties. However, this finding is not in unanimous agreement. Therefore, Giedré et al. (2021) report that this statement depends on the generation; Ollo-López et al. (2021) did not find gender significant, and Beno (2019) and Asgari et al. (2022) reported a more favourable perception in males.

A relevant issue within home/family factors is adequate infrastructure. This implies having not only sufficient ICTs resources (Elldér, 2019; Kitikawa et al., 2021) but also a comfortable working space (Harris, 2003; Kitakawa et al., 2021). Similarly, the distance from home to the workplace is a relevant issue (Eom et al., 2016; Malik et al., 2016; Silva-C., et al., 2019; et al., 2021; Ton et al., 2022). Moens et al. (2022) observed a better acceptance of HTW by the inhabitants of the suburbia of cities than by those of its centre, which usually places administrative working centres.

Another key variable tied to family is the number of children in households, whose link with telecommuting acceptance is not univocal. HTW is used by workers with dependent children, since theoretically, it balances home and job duties. Consequently, having children in care has shown a significantly positive impact on the judgment of HTW (López-Igual and Rodríguez-Modroño, 2020; Ollo-López et al., 2021; Asgari et al., 2022). However, telecommuting could also interfere with family relations (Harris et al., 2003; Beauregard et al., 2019; Tavares et al., 2021; Magnier-Watanabe et al., 2022)

because the worker may feel that it must be connected 24/7 (Cai et al., 2021) or the volume of work may be greater than in conventional arrangements (Tahavori, 2014). These questions explain why, whereas several authors have found a negative relationship between having a child and HTW (Beno, 2019; Elldér, 2019).

2.3 Organizational culture

Regarding organizational factors, the alleged advantages of TW for firms depend on their economic activity (Baruch and Nicholson, 1997). Therefore, an employer's attitude toward telecommuting relies on the perceived benefits of that work arrangement (Tokarchuck *et al*., 2021). Also trust in management impact the performance of workers working remotely (Jaiswal et al, 2022). Workers present a greater acceptance of telework if they internalize telecommuting in their culture (Martínez-Sánchez et al., 2007) and provide firm support to workers in this regard (Park and Cho, 2020). It has also been verified that worker satisfaction with HTW relies on clarifying the limits between family and work (Harris, 2003).

2.4 The nature of the job

The suitability of HTW depends on the type of job in such a way that one of the main empirical determinants of its acceptance is perceived productivity (Wilton et al., 2011; Eom et al., 2016; Malik et al., 2016; Beno, 2019; Houghton et al., 2018). It must attain several conditions, such as being cerebral rather than manual or having a high degree of autonomy (Baruch and Nicholson, 1997). HTW is better addressed in clerical jobs and is more intellectual, skilled, and qualified (Park and Cho, 2022). This explains why a higher acceptance degree usually comes from persons with a greater academic level, who tend to develop intellectual and qualified tasks (Illegems et al., 2001; Nguyen,

2021), some kind of managers and professionals (López-Igual and Rodríguez-Modroño, 2020), and public workers (Asgari et al., 2014).

3. Materials

This study uses a survey by the Spanish Government Institution "Centro de Investigaciones Sociológicas" (CIS) (Research Centre on Sociology) displayed in CIS (2021). It was carried out in March 2021 in Spain, one year after the first (and principal) lockdown due to the COVID-19 pandemic and is grounded in the structured questionnaire CIS (2021). Table 1 shows that the overall sample included 3,014 responses (51.66% females and 48.34% males). We constrained our analysis to the active working population (57.75% of the base sample), and consequently, the final sample had 1,739 answers.

[Insert Table 1 about here]

Tables 2a and 2b present the questions used to quantify the explanatory and explained factors. Whereas items used to build up input factors are denoted as IQX (input question number X), the answers measuring the acceptance/rejection of HTW are denoted as OQX (the Xth question linked to output variables). The age of respondents (IQ2) presented the following distribution by generation: baby boomers (20.36%), X-generation (57.39%), and millennials and others (22.55%).

Likewise, the mainstream opinion about HTW is closer to its acceptance than to its rejection. In the questions about the suitability of HTW for firms, whereas in OQ1 67.78% of responses reported an overall good evaluation (only 9.52% gave a bad evaluation), 67.08% outlined at least one positive effect of HTW (OQ3), and only

9.47% had one or more undesired consequences (OQ4). Regarding the adequacy of HTW for workers, in OQ2, while 54.49% of the answers indicated that the overall evaluation was good, 18.45% provided a bad judgement. Likewise, whereas in OQ5, 54.49% of the answers pointed out one or more positive consequences for employees, in OQ6, 18.07% of the answers indicated at least one detrimental effect.

[Insert Tables 2a and 2b about here]

4. Methods

RQ1 and RQ2 embed several regression analyses, whose explanatory factors are defined from the questions in Table 2a and output variables from the items in Table 2b.

The response variables measured the perceived advantages of HTW for firms and employees. The overall evaluations for firms (F_OVER) and employees (E_OVER) are defined from OQ1 and OQ2, respectively. They are modelled to be fitted by means of ordered logistic regression in such a way that 2 stands or a good evaluation, 1 for neutral/no evaluation and 0 in the case of negative perception. From OQ3 (OQ4), we define the variable F_POS (F_NEG) as the number of items that the surveyed person points out as having a positive (negative) effect of HTW on firms. Similarly, we define E_POS from OQ5 and E_NEG from OQ6. These outputs are count variables in such a way that they are linked to explanatory factors by means of negative binomial regressions.

We classify the input variables by following the classical taxonomy in Baruch and Nicholson (1997), as described in Section 2. Therefore, we define the input variables linked to individual factors from IQ1, IQ2, IQ3, and IQ4 as follows:

- GENDER= dichotomous variable, where 1 stands for an answer from a female and 0 otherwise. It is obtained from the IQ1.
- Age (IQ2) was measured using two dichotomous variables: GENX, which corresponds to members of the X generation (between 35 and 54 years) and B_BOOMER (55 years and more).
- H_SOC_CLASS was obtained from IQ3. It takes 1 if the respondent reports belonging to the high-upper middle class and 0 otherwise.
- TC_ACT is obtained from IQ4 and is defined as the normalized sum in [0,1] of actions declared in the answers. It quantifies the habit before the lockdown in March 2020 to execute current activities such as buying food and clothing using the Internet. We used this variable as a proxy for workers' attitudes toward ICTs.

We defined family/home variables from questions IQ5, IQ6, IQ7, IQ8, and IQ9:

- The adequacy of the equipment was measured using two variables. BAD_CONNECT is a dichotomous variable built up from the IQ5. It takes 1 in the case of reporting problems with internet connectivity during the COVID-19 crisis. The variable E_DEV is the number of electronic devices per user in a home, that is, the ratio IQ8/IQ9.
- The capital of the provinces is located in a great part of the workplaces with clerical jobs within these geographical areas. Therefore, we defined N_CAP_PROV using IQ7. It takes 1 if the respondent reports not living in the capital of the province, and 0 otherwise.
- The number of children in the household (IQ6) is quantified using two dichotomous variables: ONE_CH, which stands for the case of reporting one child in the household, and TWO_M_CH for two or more children.

We built organizational variables using IQ10, IQ11, and IQ14. So:

- EMPLOYER is defined by IQ14, which takes 1 if the answer comes from an entrepreneur. This variable models the position of firms toward HTW one year after the beginning of the COVID-19 crisis.
- We consider the habit of the employee to perform HTW before March 2020 (IQ10) as a measure of the degree of HTW implantation in organizational culture. We define two dichotomous variables: TW_USU, if the respondent worked always/habitually in the TW regime, and TW_OCC, if the individual telecommuted occasionally.
- SUPPORT measures firm support for developing HTW during the SARS-COV-2 pandemic. It is the normalized value within [0,1] obtained from the sum of the items in the IQ11.

We quantify job factors from responses in IQ12, IQ13 and IQ14. So:

- TW_PROD measures the perception of work performance due to the use of HTW during the lockdown period before March 2020. It takes 0 if the perception is worse than 0.5, in the case of neutral perception, and 1 if the performance is perceived better.
- From IQ13, we define the dummy variable GRADUATE, which takes the value of 1 if the response comes from a university graduate.
- From IQ14, we can define two dummy variables linked to two relevant job situations for the perception of telecommuting: MANAGER, which applies if the answer comes from a manager, and PUB_WORKER, if the response comes from a civil servant.

To assess RQ1, which simply inquiries about the capability of the proposed input factors to explain the perception of the goodness of HTW on firms and workers, we

fitted an ordered logistic regression for F_OVER and E_OVER with respect to the input variables mentioned above.

The evaluation of RQ2 relies on the results of the count regressions on F_POS and F_NEG for firms and E_POS and E_NEG for employees. Therefore, if a significant factor explaining the overall judgement of HTW in companies (F_OVER) is also significant in explaining the number of positive and negative perceived effects (F_POS and F_NEG, respectively), we can conclude that the impact of that factor on acceptance and rejection from a firm perspective tends to be symmetrical. Otherwise, if this factor significantly impacts either F_POS or F_NEG, we conclude that it only contributes to acceptance or resistance to HTW.

5. Results

5.1. Results of research question 1

Table 3 displays the results of fitting the global judgement of the impact of HTW on companies and workers using ordered logistic regressions. This table provides an answer to RQ1, which searches for the relevant factors impacting judgements about the convenience of HTW on both sides of the labor market.

The model that adjusts F_OVER presents McFadden's pseudo R2 =6.79% and is significant because the likelihood ratio (LR) is 191.550 ($p<0.0001$). Among the individual factors, only TC_ACT had a clear positive significance, with a marginal effect (me) of 0.053 ($p<0.0001$). Being female had a weak significant negative relationship with F_OVER (me=-0.111, $p<0.085$). Regarding family factors, only TWO_M_CHILD (me=-0.146, $p<0.084$) had a statistically significant level. Within organizational variables, whereas EMPLOYER had a negative impact (me=-0.200, p=0.048), SUPPORT (me=0.125, p=0.002) and TW_USU (me=0.236, p=0.070) had a

positive influence. Regarding job factors, TW_PROD (me=0.618, p<0.0001) and GRADUATE (me=0.181, p=0.014) were significant.

The model adjusted for E_OVER (Table 3) presented a McFadden pseudo R2 = 5.38% and an LR=185.49 (p<0.0001). Being female (GENX, H_SOC_CLASS, and T_ACT) had a remarkably significant negative (positive) impact on E_OVER. Within the family variables, having two or more children (me=-0.243, p=0.002) had a significant negative impact, and N_CAP_PROV (me=0.168, p=0.006) had a positive influence. Regarding organizational factors, having occasional teleworking activity (me=0.176, p=0.081) and support for teleworking by employers (me=0.081, p=0.024) had a statistically relevant impact. Among the proposed job factors, only the perception of an increase in productivity (me=0.623, p<0.0001) was significant.

Notice that while GENDER; TC_ACT; the number of children in home; the habit of teleworking before the first lock-down and TW_PROD impacts on both, the overall judgement of HTW for firms and workers; on the other hand having an university degree and being an employer (age, perceived social class and place of residence) present only a significant influence on F_OVER (E_OVER).

[Insert Table 3 about here]

5.2. Results of research question 2

The symmetry of the impact of the assessed factors on the perceived positive and negative effects of HTW on firms (F_POS and F_NEG) and employees (E_POS and E_NEG) is analyzed using the results displayed in Table 4.

Regarding the perception of HTW at the firm level, Table 4 shows that TC_ACT, TW_USU, and TW_PROD have positive (negative) significant impacts on the number

of positive (negative) perceived effects of HTW on firms. In the case of TC_ACT, me=0.039 (p<0.0001) for F_POS, and me=0.09 (p=0.001) for F_NEG. TW_USU had me=0.131 (p=0.073) over F_POS and me=-0.760 (p=0.059) over F_NEG. Likewise, TW_PROD exhibited me=0.293 (p<0.0001) for F_POS and me=-1.306 (p<0.0001) for F_NEG. Thus, the impact of these variables on positive and negative judgements of HTW on enterprises is nearly symmetrical.

On the other hand, Table 4 shows that GENDER, EMPLOYER, TW_OCC, SUPPORT, and GRADUATE, despite having a significant impact on the number of declared positive arguments, do not follow on F_NEG. Thus, for F_POS, we found a significant positive impact of SUPPORT (me=0.069, p=0.005) and GRADUATE (me=0.096, p=0.047) and a negative impact of GENDER (me=-0.073, p=0.092) and EMPLOYER (me=-0.128, p=0.075). Thus, these variables are relevant only to explain the positive perceptions of the effect of HTW on enterprises.

On the contrary, although age, number of children, and TW_OCC were significantly linked with F_NEG, this significance was not detected in F_POS. In the adjustment of F_NEG, GENX had me=-0.460 (p=0.021), ONE_CH displayed me=0.360 (p=0.082), and TWO_M_CH, me=0.483 (p=0.016).

Thus, the findings from Table 4 commented on the above two paragraphs and outline the existence of asymmetrical influences by factors such as age or the number of children on F_POS and F_NEG.

Table 4 shows the significant symmetrical influence of TC_ACT, TWO_M_CH, N_CAP_PROV, and TW_PROD on the number of positive and negative opinions about the consequences of HTW on employees. So, for TC_ACT, me=0.037 (p<0.0001) on E_POS and me=-0.036 (p=0.063) over E_NEG. In the case of TWO_M_CH, me=-

0.225 (p=0.003) on E_POS and me=0.323, p=0.028 over E_NEG. For N_CAP_PROV, we adjusted me=0.172 (p=0.003) for E_POS and me=-0.284 (p=0.015) over E_NEG. Finally, for TW_PROD, me=0.445 (p<0.0001) for E_POS, and me=-1.173 (p<0.0001) for E_NEG.

Table 4 shows that GENDER, H_SOC_CLASS and PUB_WORKER only impact significantly on E_POS, i.e., they only influence positive perceptions of HTW on employees. So, in E_POS we fitted me=-0.122 (p=0.026) for GENDER; me=0.232 (p=0.012) for H_SOC_CLASS and me=0.159 (p=0.054) for PUB_WORKER. On the other hand, dichotomous variables linked to age, TW_OCC and SUPPORT have a significant impact on E_NEG but not on E_POS, i.e., they only are relevant to explain negative arguments about influence of HTW on workers. For GENX we fitted me=-0.342 (p=0.015); for B_BOOMER, me=-0.320 (p=0.062); for T_OCC, me=-0.549 (p=0.015) and in the case of SUPPORT, me=-0.151 (p=0.05).

[Insert Table 4 about here]

6. Discussion

The COVID-19 pandemic has deeply transformed Spanish society. One consequence is the spread of teleworking (TW) and home teleworking (HTW) in the labor market. HTW has gone from being a marginal way of working to being widely used. Descriptive statistics show a positive global perception of the consequences of implementing HTW for both employers and employees. These findings are consistent with those of mainstream literature (Tavares et al., 2021; Nguyen, 2021; Ton et al., 2022; Alotaibi and Alharbi, 2022; Moens et al., 2022)

This paper has answered two research questions (RQ) about the perceptions of Spanish active population on HTW with a survey by the “Centro de Investigaciones

Sociológicas" conducted in March 2021. Regarding RQ1, which inquiries about the factors that explain the overall perception of the goodness of HTW for firms (F_OVER) and employees (E_OVER), we found some common explanatory factors as well as specific variables that are only significant on one side of the labor market. Common factors are gender, the habit of carrying out daily activities by using ICTs before COVID-19 (TC_ACT), having two or more children (TWO_M_CH), having firm support (SUPPORT), and performance perception of HTW during the pandemic (TW_PROD).

The positive impact of TC_ACT on the perception of HTW is supported by a large number of studies (Donati et al, 2021; Ollo-López et al., 2021; Fischer et al., 2021). This statement also applies to the positive influence of SUPPORT (Park and Cho, 2020; Nguyen, 2021 and Ollo-López et al., 2021). The positive impact of perceived performance on the favorable perception of telecommuting has also been found in several studies (Beno, 2019; Houghton et al., 2018; Nguyen and Armoogum, 2021). We must point out that the negative relationship between being female and HTW perception is unusual but reaffirms the reports by Beno (2019) and Askari et al. (2022). Likewise, the negative relationship between having a child and the sign of the opinion on HTW arrangements is in accordance with Beno (2019) and Elldér (2019). The reasons for these last two findings may be that telecommuting interfered with household care during the COVID-19 pandemic since its use was not agreed upon but mandatory, and there was no clear regulation about the conditions to implement it (Corral and Isusi, 2020). Likewise, females may be more affected than men because the traditional roles of women within the family often persist (Gálvez et al., 2020). Moreover, this last problem has sharpened owing to the lockdown of schools (Fana et al, 2020).

Being GRADUATE (EMPLOYER) has a significantly positive (negative) influence on the perception of the impact of HTW on firms. The positive influence of having a university degree is in accordance with Giedré et al. (2021) and Nguyen (2021); the negative impact of being an employer is supported by Pérez et al. (2002) and Aguilera et al. (2016).

The variable linked to the place of residence, N_CAP_PROV, indicates a positive relationship between living outside the capital of the province and the perception that HTW benefits workers. Therefore, avoiding commuting is a relevant motivation to accept HTW for workers (Eom et al., 2016; Ollo-López et al., 2021; Tokarchuk et al., 2021; Ton et al., 2022).

Having TW as a usual working mode before the pandemic (TW_USU) implies that TW was within the organizational culture. Similar to Tokarchuck et al. (2021), we find that this variable has a positive influence on the perception of the goodness of HTW at the firm level.

We also have to note that we did not find statistical significance in the variables linked with home equipment in terms of ICTs: reporting problems with internet connection (BAD_CONNECT) and the number of electronic devices used (E_DEV).

As far as RQ2 is concerned, *do the assessed factors symmetrically impact acceptance and rejection of HTW?*, we found that, whereas some factors could explain positive and negative attitudes toward HTW, others are relevant to explain exclusively either acceptance or resistance. This is in accordance with the statement that the factors that influence a positive attitude toward a new technology in a given setting (in our case, ICTs in work) are not necessarily the same as those that influence the perception of resistance (Gauttier, 2019).

TC_ACT and TW_PROD are significant in explaining F_OVER and have a symmetrical impact on positive perceptions (F_POS) and negative perceptions (F_NEG). The analogous effects of TC_ACT and TW_PROD on the perceptions of HTW for workers can be outlined. They are linked positively with E_OVER and have a significant positive impact on the number of perceived positive consequences of HTW on employees (E_POS) and a significant negative influence on the negative ones (E_NEG).

We also found that the positive influence of TW_USU on the judgement of HTW for enterprises also impacts F_POS (positive significant relation) and F_NEG (negative significant relation) symmetrically. Likewise, N_CAP_PROV (having at least two children at home) had a significant positive (negative) influence on E_POS and a negative (positive) influence on E_NEG.

Despite the negative relationship between EMPLOYER and the overall judgement of HTW on firms, we also check that this relationship is because of a significant negative relationship with reporting positive outcomes of HTM but not due to a tendency to report reasons for telecommuting. Consequently, we feel that after COVID-19, the traditional resistance to HTW by some entrepreneurs may turn into a lack of interest in implementing this work mode.

The support of the firm to TW (SUPPORT) is significant in explaining F_OVER and E_OVER, but in both cases, it has an asymmetrical impact on acceptance and rejection. Therefore, SUPPORT has a positive significant impact on F_POS, but this significance does not hold for F_NEG. On the other hand, the positive influence of SUPPORT over E_OVER is exclusively due to SUPPORT having a significant negative impact on

E_NEG, that is, perceiving that a lack of firm support induces negative arguments about the influence of HTW on workers.

The negative relationship between being female and the overall judgement of HTW from both the firm and worker's point of view is induced by the negative influence of GENDER on F_POS and E_POS (i.e., the lack of positive arguments supporting a positive attitude) but not to enabling resistance arguments.

Although we have found that age is far from the most relevant variable to explain the judgement of HTW, we have checked that presents some statistical relevance. Therefore, like López Igual and Rodríguez-Modroño (2020), we have found that members of the X-Generation present a slightly more favourable perception about the consequences of HTW. This perception is explained by the significant negative relationship with reporting arguments against HTW, since the relationship between GENX and F_POS and E_POS is not significant.

The negative relationship between being female and having children with the sign of the perception of HTW may indicate that HTW often interferes with household and family duties during the pandemic. Therefore, Spanish legislation on teleworking did not solve this imbalance of rights and obligations between companies and workers, as pointed out by Corral and Isusi (2020). We must understand that the legislation of TW is still a work in process, whose result must rely on social agreement.

The relevance of living outside urban areas, such as the capital of provinces, in the perception of HTW for workers shows that HTW spreading provides advantages not only in alleviating environmental and ecological problems (Hopkins and McKay, 2019) but also mitigates the depopulation of rural areas, which is a great concern in Spain (Pérez-Morote et al., 2021). To achieve this, it is necessary for people to perceive that

living outside provincial capitals is not a barrier to developing administrative and clerical jobs, traditionally linked to living in urban areas. The spread of HTW could mitigate depopulation, but to achieve this positive effect, a wide development of ICT infrastructure in rural environments (Pérez-Morote et al., 2021).

7. Conclusions

This study inquired about the perception of HTW in Spain one year after the COVID-19 crisis started. The overall judgement of HTW by the active population was positive. However, factors such as gender, age, or the presence of children in care nuances. Likewise, we have shown that whereas some factors such as attitude of employees toward ICTs, perceived productivity, or the distance from home to work affect acceptance and resistance attitudes toward HTW, other factors such as support by the organization to HTW impact only either negative or positive perceptions of HTW.

We are aware of the limitations of our analysis, which may be the focus of further research. This study was based on a cross-sectional survey conducted in Spain in March 2021, when COVID-19 was still a deep concern for health authorities around the world. Therefore, to obtain a more complete picture of the perception of HTW, it is necessary to develop subsequent studies at more advanced phases of the SARS-COV-2 crisis. Likewise, our study is centred in Spain, which has a similar labour culture to countries such as Portugal or Italy, and, like in these countries, TW displayed a marginal implantation before March 2020. However, the culture and status of TW in the Spanish labor market were far from other countries, such as Anglo-Saxon countries. Therefore, we must apply with care the results of our study should be applied to other territories. It would be of interest to develop a similar analysis in other geographical areas to identify

similar and dissimilar patterns in the influence of explanatory factors of HTW on its acceptance and resistance.

In our study, output questions about HTW did not differentiate that this arrangement could be implemented with different weekly frequencies: all days, two or three days a week, occasionally, etc. Therefore, further research on the asymmetric influence of individual, family, organizational, and job factors on HTW may be conducted by considering the relevant nuances linked to the frequency of HTW.

References

Abulibdeh, A. (2020). "Can COVID-19 mitigation measures promote telework practices?" Journal of Labor and Society, Vol. 23, No. 4, pp. 551-576. https://doi.org/10.1111/wusa.12498

Aguilera, A., Lethiais, V., Rallet, A., and Proulhac, L. (2016). "Home-based telework in France: Characteristics, barriers and perspectives". *Transportation Research Part A: Policy and Practice*, Vol. 92, pp. 1-11.

Alotaibi, M. N., and Alharbi, Z. H. (2022). "Sentiment Analysis to Explore User Perception of Teleworking in Saudi Arabia". *International Journal of Advanced Computer Science and Applications*, Vol. 13, No. 5.

Asgari, H., Gupta, R., and Jin, X. (2022). "Impacts of COVID-19 on Future Preferences Toward Telework". *Transportation Research Record*, Vol. 0, No. 0.

Asgari, H., Jin, X., and Mohseni, A. (2014). "Choice, frequency, and engagement: Framework for telecommuting behavior analysis and modeling". *Transportation Research Record,* Vol. 2413, No. 1, pp. 101-109.

Bailey, D.E., and Kurland, N.B. (2002). "A review of telework research: Findings, new directions, and lessons for the study of modern work". *Journal of Organizational Behaviour*, Vol. 23, pp. 383–400.

Baruch, Y. (2000). "Teleworking: benefits and pitfalls as perceived by professionals and managers". *New technology, work and employment*, Vol. 15, No. 1, pp. 34-49.

Baruch, Y. (2001). “The status of research on teleworking and an agenda for future research”. *International journal of management reviews*, Vol. 3, No. 2, pp. 113-129.

Baruch, Y., and Nicholson, N. (1997). “Home, sweet work: Requirements for effective home working”. *Journal of General Management*, 23, No. 2, pp. 15-30.

Beauregard, T. A., Basile, K.A., and Canónico, E. (2019). “Telework: outcomes and facilitators for employees”. In: Landers, R.N. (ed.) *The Cambridge Handbook of Technology and Employee Behavior*. Cambridge, UK: Cambridge University Press, pp. pp. 511-543.

Belzunegui-Eraso, A., and Erro-Garcés, A. (2020). “Teleworking in the Context of the Covid-19 Crisis”. *Sustainability*, Vol. 12, pp. 3662.

Beno, M. (2019). “Home-based Telework and the Role of Gender-Results of a Study in Austria”. In *CONF-IRM* (p. 12).

Cai, J., Ryu, S. J., Wohn, D. Y., and Kum-Biocca, H. H. (2021). “Teleworker’s Perception of Technology Use for Collaborative and Social During the COVID-19 Pandemic”. In *34th British HCI Conference,* Vol. 34 (pp. 329-342).

Centro de Investigaciones Sociológicas (CIS). (2021). “Tendencies in the digital society during COVID-19 pandemic [in Spanish]”. http://datos.cis.es/pdf/Es3316marMT_A.pdf.

Corral, A., and Isusi, I. (2020). *Impact of the Covid-19 confinement measures on telework in Spain - A qualitative survey*, JRC Working Papers on Labour, Education and Technology 2020-08, Joint Research Centre (Seville site). https://joint-research-centre.ec.europa.eu/publications/impact-covid-19-confinement-measures-telework-spain-qualitative-survey_en

Davis, F.D. (1989). “Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology”. *Mis Quaterly*, Vol. 13, No. 3, pp. 319–340.

Di Domenico, L., Pullano, G., Pullano, G., Hens, N., and Colizza, V. (2020). “Expected impact of school closure and telework to mitigate COVID-19 epidemic in France”. *EPIcx Lab*, Vol. 15, pp. 1-15.

Donati, S., Viola, G., Toscano, F., and Zappalà, S. (2021). “Not All RemoteWorkers Are Similar: Technology Acceptance, Remote Work Beliefs, andWellbeing of

RemoteWorkers during the Second Wave of the COVID-19 Pandemic". *International Jounal of Environmental Research and Public Health*, Vol. 18, pp. 12095.

Elldér, E. (2019). "Who is eligible for telework? Exploring the fast-growing acceptance of and ability to telework in Sweden, 2005–2006 to 2011–2014". *Social Sciences*, Vol. 8, No. 7, pp. 200.

Eom, S.J., Choi, N., and Sung, W. (2016). "The use of smart work in government: Empirical analysis of Korean experiences". *Government Information Quarterly,* Vol. 33, No. 3, pp. 562-571.

Erro-Garcés, A., Urien, B., Čyras, G., and Janušauskienė, V. M. (2022). "Telework in Baltic Countries during the Pandemic: Effects on Wellbeing, Job Satisfaction, and Work-Life Balance". *Sustainability*, Vol. 14, pp. 10, 5778.

Fana, M., Milasi, S., Napierala, J., Fernández-Macías, E., and Vázquez, I. G. (2020). "Telework, work organisation and job quality during the COVID-19 crisis: a qualitative study (No. 2020/11)". *JRC Working Papers Series on Labour, Education and Technology.*

Fischer, T., Küll, S., Niederländer, U., and Stabauer, M. (2021). "The new normal? Motivators for and hindrances to telework". In *International Conference on Human-Computer Interaction* (pp. 327-346). Springer, Cham.

Galvez, A., Tirado, F., and Alcaraz, J.M. (2020), "'Oh! Teleworking!' Regimes of engagement and the lived experience of female Spanish teleworkers", *Business Ethics: A European Review*, Vol. 29, No. 1, pp. 180-192.

Gauttier, S. (2019). " 'I've got you under my skin'–The role of ethical consideration in the (non-) acceptance of insideables in the workplace". *Technology in Society*, Vol. 56, pp. 93–108.

Gschwind, L., and Vargas, O. (2019). "Telework and its effects in Europe". In *Telework in the 21st Century*. Edward Elgar Publishing.

Harris, L. (2003). "Home-based teleworking and the employment relationship: Managerial challenges and dilemmas". *Personnel Review*, Vol. 32, No. 4, pp. 422-437.

Hopkins, J.L., and McKay, J. (2019). "Investigating `anywhere working' as a mechanism for alleviating traffic congestion in smart cities". *Technological Forecasting and Social Change*, Vol. 142, pp. 258-272.

Houghton, K.R., Foth, M., and Hearn, G. (2018). “Working from the other office: Trialling coworking spaces for public servants”. *Australian Journal of Public Administration*, Vol. 77, No. 4, pp. 757-778.

Illegems, V., Verbeke, A., and S'Jegers, R. (2001). “The organizational context of teleworking implementation”. *Technological forecasting and social change*, Vol. 68, No. 3, pp. 275-291.

Jaiswal, A., Sengupta, S., Panda, M., Hati, L., Prikshat, V., Patel, P. and Mohyuddin, S. (2022), "Teleworking: role of psychological well-being and technostress in the relationship between trust in management and employee performance", International Journal of Manpower, Vol. ahead-of-print No. ahead-of-print.

Kitagawa R., Kuroda S., Okudaira H., and Owan H. (2021). “Working from home and productivity under the COVID-19 pandemic: Using survey data of four manufacturing firms”. *PLoS ONE*, Vol. 16, No. 12, pp. e0261761. López-Igual, P., and Rodríguez-Modroño, P. (2020). “Who is teleworking and where from? Exploring the main determinants of telework in Europe”. *Sustainability*, Vol. 12, No. 21, pp. 8797.

Magnier-Watanabe, R., Benton, C., Orsini, P., Uchida, T., and Magnier-Watanabe, K. (2022). “COVID-19 and mandatory teleworking from home in Japan: taking stock to improve satisfaction and job performance”. *International Journal of Organizational Analysis*, Vol. ahead-of-print No. ahead-of-print.

Malik, A., Rosenberger, P.J., Fitzgerald, M., and Houlcroft, L. (2016). “Factors affecting smart working: evidence from Australia”. *International Journal of Manpower*, Vol. 37, No. 6, pp. 1042-1066.

Martínez-Sánchez, A., Pérez-Pérez, M., De-Luis-Carnicer, P., and Vela-Jiménez, M. J. (2007). “Telework, human resource flexibility and firm performance”. *New Technology, Work and Employment*, Vol. 22, No. 3, pp. 208-223.

Moens, E., Lippens, L., Sterkens, P., Weytjens J., and Stijn, B. (2022). “The COVID-19 crisis and telework: a research survey on experiences, expectations and hopes”. *European Journal of Health Economics,* Vol. 23, pp. 729–753.

Nguyen, M. H. (2021). “Factors influencing home-based telework in Hanoi (Vietnam) during and after the COVID-19 era”. *Transportation*, Vol. 48, No. 6, pp. 3207-3238.

Nguyen, M.H., and Armoogum, J. (2021). “Perception and Preference for Home-Based Telework in the COVID-19 Era: A Gender-Based Analysis in Hanoi, Vietnam”. *Sustainability*, Vol. 13, pp. 3179.

Ollo-López, A., Goñi-Legaz, S., and Erro-Garcés, A. (2021). “Home-based telework: usefulness and facilitators”. *International Journal of Manpower*, Vol. 42, No. 4, pp. 644-660.

Park, S., and Cho, Y. J. (2022). “Does telework status affect the behavior and perception of supervisors? Examining task behavior and perception in the telework context”. *The International Journal of Human Resource Management*, Vol. 33, No. 7, pp. 1326-1351.

Pérez-Morote, R. Pontones-Rosa, C. Núñez-Chicharro, M., and Merino-Madrid, E. (2021). “Determinant factors of individuals’ decision to emigrate in rural Spain: The role of ICT-based public policies”. *Technology in Society*, Vol. 67, pp. 101777.

Pérez Pérez, M., Martínez Sánchez, A., de Luis Carnicer, P., and José Vela Jiménez, M. (2004). “A technology acceptance model of innovation adoption: the case of teleworking”. *European Journal of Innovation Management*, Vol. 7, No. 4, pp. 280-291.

Pérez, M. P., Sánchez, A. M., and de Luis Carnicer, M. P. (2002). “Benefits and barriers of telework: perception differences of human resources managers according to company's operations strategy”. *Technovation*, Vol. 22, No. 12, pp. 775-783.

Raišienė, A.G., Rapuano, V., Varkulevičiūtė, K., and Stachová, K. (2020). “Working from Home—Who Is Happy? A Survey of Lithuania’s Employees during the COVID-19 Quarantine Period”. *Sustainability*, Vol. 12, pp. 5332.

Sener, I.N., and Bhat, C.R. (2011). “A copula-based sample selection model of telecommuting choice and frequency”. *Environment and Planning A: Economy and Space*, Vol. 43, No. 1.

Silva-C, A., Montoya-R, I.A., and Valencia-A. J.A. (2019). “The attitude of managers toward telework, why is it so difficult to adopt it in organizations?”. *Technology in Society*, Vol. 59, pp. 101133.

Tavares, F., Santos, E., Diogo, A., and Ratten, V. (2021). "Teleworking in Portuguese communities during the COVID-19 pandemic". *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. 15, No. 3, pp. 334-349.

Tokarchuk, O., Gabriele, R., and Neglia, G. (2021). "Teleworking during the Covid-19 Crisis in Italy: Evidence and Tentative Interpretations". *Sustainability*, Vol. 13, pp. 2147.

Ton, D., Arendsen, K., De Bruyn, M., Severens, V., Van Hagen, M., Van Oort, N., and Duives, D. (2022). "Teleworking during COVID-19 in the Netherlands: Understanding behaviour, attitudes, and future intentions of train travellers". *Transportation Research Part A: Policy and Practice*, Vol. 159, pp. 55-73.

Vargas Llave, O., Rodriguez Contreras, R., Sanz de Miguel, P., Voss, E., and Benning, C. (2022). *Telework in the EU: Regulatory frameworks and recent updates*. Publications Office of the European Union, Luxembourg. https://www.eurofound.europa.eu/publications/report/2022/telework-in-the-eu-regulatory-frameworks-and-recent-updates.

Wilton, R.D., Paez, A., and Scott, D.M. (2011). "Why do you care what other people think? a qualitative investigation of social inuence and telecommuting". *Transportation Research Part A: Policy and Practice,* Vol. 45, No. 4, pp. 269-282

Table 1. Gender and working situation in the sample and subsample used in this paper

	Whole sample (N=3,014)		**Only active working population (N=1,739)**	
	Size	*Proportion*	*Size*	*Proportion*
Female	1,557	51.66%	845	48.59%
Male	1,457	48.34%	894	51.41%

Labour Situation	*Size*	*Proportion*	*Size*	*Proportion*
Worker (private)	956	31.72%	956	54.97%
Worker (public)	199	6.60%	199	11.44%
Employer/Entrepreneur	250	8.29%	250	14.38%
Record of temporary Employment Regulation	50	1.66%	50	2.88%
Unemployed	281	9.32%	281	16.16%
Sick leave	43	1.43%	43	2.47%
Student	114	3.78%	114	---
Retiree	567	18.81%	567	---
Domestic Work	115	3.82%	115	---
Others/NA	434	14.40%	434	---

Source: Own elaboration from data from CIS (2021)

Table 2a. Questions and responses on explanatory factors by active labour people in the survey used in this paper

Personal factors

IQ1=Gender	**IQ2=Age**	**IQ3=Perception of social class**
Female (48.59%)	>=55 [Boomer] (20.36%)	High and upper-middle (6.40%)
Male (51.41%)	>=35-55 [GenX] (57.39%)	Middle-middle (54.22%)
	<35 [Others] (22.25%)	Low-middle (13.56%)
		Low-proletariat (8.39)
		Poor/exclusion risk (4.63%)
		Other (6.35%)

IQ4=Before the lock-down I bought/did by using internet

Fresh food (9.95%)	Electronic devices (47.01%)
Cooked food (21.89%)	Home appliances (25.82%)
Drinks (8.18%)	Services (36.36%)
Dress/shoes (52.82%)	Tickets for entertainment activities (64.87%)
Furniture (18.83%)	Paying taxes (53.74%)
Books (44.86%)	Procedures with public administrations (64.39%)
Travelling tickets (65.95%)	Bank transactions (78.21%)
Press (7.32%)	
At least one action (**93.60%**)	

Family factors

IQ5=Quality of internet was a problem during the	**IQ6=Number of child**	**IQ7=Living in a capital of**

lock-down		**province**
Yes (27.49%)	None (64.01%)	Yes (32.97%)
No (72.51%)	One (16.89%)	No (67.03%)
	>=Two (19.10%)	

IQ8=Electronic devices	**IQ9=Users in home**
One (13.97%)	One (15.41%)
Two (26.74%)	Two (39.56%)
Three (22.20%)	Three (20.87%)
>=Four (32.61%)	>=Four (19.79%)
NA/others (4.49%)	NA/others (4.37%)

Organizational factors

IQ10=Teleworking before the lock-down	**IQ11=Technological equipment/help by the employer**
Habitually (4.14%)	Had already equipped you with a laptop (15.71%)
2/3 days a week (4.14%)	Gave you a portable computer (9.25%)
Occasionally (11.46%)	You used an own computer until he/she provided one laptop (8.77%)
Never (85.80%)	Compensated you of hiring more internet capacity (1.02%)
	Organized technical support (23.99%)
	At least one item (**38.52%)**

Job factors

IQ12=Performance with TW during the pandemic:	**IQ13=Academic degree**	**IQ14= Job Status**
Better (4.142%)	Primary or less (2.47%)	Public Administration (11.44%)
Equal/non-comparable (84.4%)	Secondary (47.77%)	Manager (11.27%)
Worse (11.458%)	Graduate (49.17%)	Employer/entrepreneur (14.38%)
	Other (0.59%)	

Table 2b. Questions and responses on explained factors by active labour people in the survey used in this paper

OQ1=Overall evaluation of telework for firms	**OQ2=Overall evaluation of telecommuting for employees**
Good (67.78%)	Good (54.49%)
Neutral/no evaluation (22.70%)	Neutral/no evaluation (27.06%)
Bad (9.52%)	Bad (18.45%)

OQ3=Positive effects of teleworking for firms	**OQ4=Detrimental effects of teleworking for firms**
Increases productivity (35.02%)	Harms teamwork (4.25%)
Reduces costs (45.99%)	Harms the firms' internal cohesion (3.17%)
Avoids displacement (41.64%)	Nullifies the pride of belonging to the company (1.67%)
Facilitates family conciliation (5.43%)	Very difficult to control (4.25%)
Avoids infections and absenteeism (1.72%)	Isolates people (5.81%)
Allows companies to continue working (2.31%)	Jobs are lost (0.48%)
What is good for the worker is good for the company (3.77%)	Loss of quality in the service (1.34%)
Other (1.08%)	Other (1.94%)

At least one item (67.08%)	At least one item (9.47%)
OQ5=Positive effects of teleworking for employees	**OQ6=Detrimental effects of teleworking on employees**
The employees are the owners of their time (35.66%)	Encourages isolation (9.84%)
It avoids commuting (42.93%)	Increases stress (11.57%)
It favours family conciliation (42.07%)	Difficult to disconnect from work during break times (12.48%)
It increases productivity (1.34%)	More work volume (0.48%)
Costs are saved (0.75%)	It leads to health problems (0.70%)
For convenience (1.45%)	Decreases productivity (0.70%)
There is more flexibility (0.75%)	Job losses, wage cuts (0.48%)
For health safety (0.65%)	More expenses (0.43%)
For being a different way of working (0.65%)	It makes it difficult to reconcile family (0.65%)
There is no loss of work (0.38%)	Other (0.16%)
Other (0.32%)	At least one item (18.07%)
At least one item (54.49%)	

Table 3. Results of ordinal logistic regressions on the overall evaluation of telework for firms and employees

Explained variable	**F_OVER**		**E_OVER**	
Variables	*Marginal effect*	*p-value*	*Marginal effect*	*p-value*
Individual				
GENDER (male=0)	-0.111*	**0.085**	-0.146**	**0.015**
GENX	0.085	0.303	0.125*	0.100
B_BOOMER	0.007	0.942	0.001	0.988
H_SOC_CLASS	0.122	0.382	0.225*	**0.074**
TC_ACT	0.053***	**<0.0001**	0.033***	**0.001**
Family				
BAD_CONNECT	0.065	0.348	-0.055	0.385
E_DEV	-0.016	0.717	-0.021	0.600
N_CAP_PROV	0.006	0.925	0.168***	**0.006**
ONE_CH	-0.088	0.305	-0.090	0.260
TWO_M_CH	-0.146*	**0.084**	-0.243	**0.002**
Organizational				
EMPLOYER	-0.200**	**0.048**	-0.024	0.802
TW_USU	0.236*	**0.070**	0.152	0.181
TW_OCC	0.156	0.173	0.176*	**0.081**
SUPPORT	0.125***	**0.002**	0.081**	**0.024**
Job				
TW_PROD	0.618***	**<0.0001**	0.623***	**<0.0001**
GRADUATE	0.181**	**0.014**	0.054	0.425
MANAGERS	-0.118	0.295	0.000	0.999
PUB_WORKER	-0.036	0.732	0.158	0.105
L-R test ratio	191.55***	<0.0001	185.49***	<0.0001
McFadden pseudo R2	6.79%		5.38%	

Cases correctly classified	68.90%	56.90%

Note: "*","**" and "***" denote statistical significance at the 10%, 5%, and 1% levels, respectively.
Source: Own elaboration from data from CIS (2021)

Table 4. Results of binomial negative regressions on the number of positive and negative reasons of teleworking for enterprises and workers

	FIRMS				**EMPLOYEES**			
	F_POS		**F_NEG**		**E_POS**		**E_NEG**	
Variables	*Marginal effect*	*p-value*	*Marginal effect*	*p-value*	*Marginal effect*	*p-value*	*Marginal effect*	*p-value*
Intercept	-0.583***	**<0.0001**	1.837***	**<0.0001**	-0.778***	<0.0001	1.916***	<0.0001
Individual								
GENDER (male=0)	-0.073*	**0.092**	-0.020	0.901	-0.122**	**0.026**	0.147	0.207
GENX	0.042	0.441	-0.46**	**0.021**	-0.011	0.873	-0.342**	**0.015**
B_BOOMER	-0.004	0.955	-0.269	0.244	-0.135	0.115	-0.32*	**0.062**
H_SOC_CLASS	0.122	0.109	0.242	0.456	0.232**	**0.012**	0.051	0.841
TC_ACT	0.039***	**<0.0001**	-0.09***	**0.001**	0.037***	**<0.0001**	-0.036*	**0.063**
Family								
BAD_CONNECT	0.038	0.413	0.058	0.732	-0.077	0.195	0.040	0.741
E_DEV	-0.011	0.701	-0.026	0.819	-0.009	0.801	-0.017	0.832
N_CAP_PROV	0.032	0.463	0.067	0.692	0.172***	**0.003**	-0.284**	**0.015**
ONE_CH	0.008	0.895	0.36*	**0.082**	-0.002	0.973	0.216	0.155
TWO_M_CH	-0.078	0.178	0.486**	**0.016**	-0.225***	**0.003**	0.323**	**0.028**
Organizational								
EMPLOYER	-0.129*	**0.075**	0.337	0.157	0.018	0.837	-0.001	0.994
TW_USU	0.131*	**0.073**	-0.76*	**0.059**	0.078	0.404	-0.367	0.151
TW_OCC	0.093	0.151	-0.55*	**0.086**	0.102	0.217	-0.549**	**0.015**
SUPPORT	0.069***	**0.004**	-0.168	0.147	0.038	0.216	-0.151**	**0.050**
Job								
TW_PROD	0.293***	**<0.0001**	-1.306***	**<0.0001**	0.445***	**<0.0001**	-1.173***	**<0.0001**
GRADUATE	0.096**	**0.047**	-0.202	0.283	0.041	0.500	-0.133	0.324
MANAGERS	-0.089	0.224	0.226	0.405	-0.058	0.525	-0.206	0.373
PUB_WORKER	-0.014	0.834	-0.180	0.520	0.158*	**0.054**	-0.066	0.719
L-R test	195.84***	**<0.0001**	86.20***	**<0.0001**	185.7382	**<0.0001**	124.41***	**<0.0001**
R2	9.19%		1.215%		7.97%		5.20%	

Note: "*","**" and "***" denote statistical significance at the 10%, 5%, and 1% levels, respectively.
Source: Own elaboration from data from CIS (2021)