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# Home-based Telework and the Role of Gender – Results of a Study in Austria

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## *Abstract:*

Telework describes a work arrangement in which employees work outside the company premises, but remain in touch with employers and co-workers by using modern ICT. The variety of different opinions on this subject makes it an interesting topic to investigate. Work from home originated in the US in the 1970s. Three decades (Home, Mobile and Virtual Office) and so-called modern ICTs (smartphones, tablets) enable employees to work from anywhere at any time. The aim of this paper is to identify the factors that affect teleworkers' attitudes while keeping a focus on gender differences. A literature review of previous research was conducted. Sixteen studies show significant results, which suggest that males have more favourable attitudes toward teleworking than females. In reference to our survey results, 41% of Austrian employees worked remotely. The data show that the gender and age stereotypes of Generations X and Y and baby boomers have no effect. Three of four flex workers are men (three-quarters), and women are more likely to work in open space offices or cubicles. Telework is therefore a male-dominated working method. Further, the results indicate that 53% are independent teleworkers, while 3% work in telecentres or telecottages.

## *Keywords:*

Home-based telework, Gender, Meta-analysis, Austria.

## **1. Introduction**

It is clear that we are living in a world that is undergoing a fundamental transformation with regard to the way people work. Work is not only an integral part of our lives, but also one of the most important matters that humans are concerned about throughout the world (Burgmann, 1991; Irving, 1994; Moody, 1989; Van der Linden, 1993).

We are currently in the Fourth Industrial Revolution (FIR), also called Industry 4.0. Looking back over history, we note that the FIR differs in nature from the three industrial revolutions that introduced steam and water power, innovations, steel and computerisation. Schwab (2016) explains the colossal potential for the technologies of the FIR as well as the possible risks. He says, "The changes are so profound, that from the perspective of human history, there has never been a time of greater promise or potential peril. My concern, however, is that decision-makers are too often caught in traditional, linear (and non-disruptive) thinking or too absorbed by immediate concerns to think strategically about the forces of disruption and innovation shaping our future."

We believe that the FIR helps to improve the quality of life and raise income levels globally. In today's workplaces and organisations, we identify collaboration between humans and machines. This means that we are becoming smarter, more productive and more competent. Globalisation, digitisation, growth of ICT (information and communication technology), demographic growth and environment have brought about fundamental changes in the nature of work, with economic and social consequences. Different demographic groups, e.g. in age, education, nationality and gender, differ in the changing labour market situation. In most countries, jobs marked as male, female or neutral reflect traditional gender roles and

perceptions. Men's jobs are usually technical and physical. In many countries, highly-skilled jobs are also considered to be for males. In contrast, female jobs include retail, personal and domestic service (WorldBank, 2011).

In 1962, Dame Stephanie Steve Shirley founded Freelance Programmers with mainly women employees (Shirley, 2018). She was, confusingly, called the "grand-daddy" of computer services and training, and pioneered concepts such as telecommuting (Thackray, 2011). Messenger and Gschwind (2016) define three generations of telework: the first generation is the "Home Office", the second generation the "Mobile Office", and the third the "Virtual Office", which includes all work performed by workers using ICT outside the employer's premises. eWork (today's term for telework) is becoming popular because of the universal utilisation of ICT. Further advantages are that mobile job opportunities combined at any time anywhere allow people to work 24 hours a day 7 days a week, time can be arranged so that family and work life can be combined in a suitable way, it is possible to outsource customer care in remote countries, and it offers better wages. The worker who progresses along the path of globalisation in this way becomes less and less dependent on time and place.

In Austria, unlike other countries, there has until recently been no official policy to target the level of telework (Georg, 2007). The Netherlands, for example, has the Flexible Working Act (Overheid, 2016). The latest data, for 2015, (Statista, 2015) on the percentage of employees in different European Union countries who can do telework or perform ICT mobile work, either on a regular basis or occasionally, show that 20% of Austrian workers are able to work from home on occasion. As reported by the Sixth European Working Conditions Survey (Eurofound, 2016), the number of workers using ICT has increased, e.g. the highest level rose from 13% to 37% between 2010 and 2015. Around 3% of employees work mainly from home, while 8% are exclusively ICT mobile workers (external locations).

To understand telework in Austria, it is essential to examine the different situations of Austrian citizens. This paper is intended to provide a concise survey of some recent theoretical and empirical research on the role and value of teleworkers in Austria, including the gender divisions in the telework market. This evidence gives an insight into the functions that teleworkers serve in the modern economy. Our aim is to gain a better understanding of the dynamics of telework in a selected country and the generation and gender differences of those working at home – and to determine whether it is still a "boys' club" or not. According to data from the World Bank (2018a), the labour force participation rate of females has decreased continually since 2006 to reach 48.69% in 2017. In Austria, however, this rate increased from 43% in 1990 to 55% in 2017. In the rate for males, on the other hand, the data show a constant decline from 80.04% in 1990 to 75.20% in 2017 (World Bank, 2018b). The number of women is more than half of that of the male workforce. Generally, home-based telework is on the rise (Brocklenhurst, 2001; ILO, 2016; Siha & Monroe, 2006), and we noted the debate on whether the growing trend for home-based telework will challenge or support gendered work and family roles (Greenhill & Watson, 2006; Huws et al., 1996; Sullivan & Lewis, 2001).

In the following section, we give a short overview of the concept of telework. The third section gives a brief outline of the methodology used in our research. The meta-analysis of 16 studies examining the influence of gender in the attitude to telework is described in the fourth section. In the fifth section, a case study is presented to analyse the results of an e-mail questionnaire survey. The paper closes with a discussion and our conclusions.

## **2. What is telework?**

Scientific sources give a variety of definitions for this concept, but its etymological roots can be found in the Greek word "tele", meaning "far off, afar, at or to a distance" (Tele, 2018). Basically, telework describes working at a distance. The idea of working remotely arose in the 1970s (Nilles et al., 1976) during the oil crises (Scholefield & Peel, 2009). A major

characteristic of telework is freedom from some of the time and space restrictions that were associated with work in the past, but are now being integrated into many kinds of work in practice (ECaTT, 2000).

At present, workplace innovation refers to a number of specific actions, such as teleworking, telecommuting, remote-work, networking, digital nomadic work, flexi-place, networking and many other variants (Bates et al., 2002; Huws, 2001). During our review of telework, it became clear that there is no standard definition. Some agree that most definitions rely on information and communication technology (ICT) (Jala, 2018; Di Martino & Wirth, 1990; Nilles, 1998) some require regularity of the telework and a specific location (ATAC, 2016; Scholefield & Peel, 2009), while yet others specify a variety of locations (ATAC, 2016; ILO, 2016; Meyers & Hearn, 2000). The European Union requires a certain amount of formality (Eurofound, 2010). We understand telework to be an agreement relating to regular work performed at a location spatially removed from the employer's main workplace, and making use of modern ICT. This means work is not a place you have to go to, but what you do. The possibility of working anywhere at any time is no longer something to be desired for the future, but a reality. To understand this phenomenon, however, it is necessary to distinguish what is not telework. Telework does not mean work at home that involves assembling pens, filling envelopes, mailing letters and so on. Telework is decentralised work that is done using ICT to collect the instructions and submit the results of the work. We believe that ICT can be applied to bring work to the home and also to bring the home to work.

Workplace flexibility provides a means of responding to rapidly changing factors that are impacting on today's workforce, and it has proved to be effective in increasing worker productivity, reducing employee turnover and absenteeism, and responding to sociological and environmental issues. Telework programmes already exist in both the public and private sectors and show positive as well as negative results (Beno, 2018). This kind of work is not an employee's right or entitlement, but an alternative work arrangement or work option that is mutually agreed upon by the employer and the employee. The arrangement can be resorted to at any time for any reason by any of the parties involved.

Generally, there are several ways in which telework can be practised, e.g. home-based telework, satellite offices and mobile working (Pérez et al., 2002). We would also mention routine, regular, recruiting (1, 2 days per week) and situational or ad hoc telework schedules. Besides consideration of the time dimension, there is also the local dimension (related to the place where the telework is done), which includes telecentres and on-site telework. As highlighted in the introduction, there are three generations of telework. According to the latest data from Eurofound (2015), new forms of employment for both employees and the self-employed have emerged in several central and northern European countries. For Austria there are, for example, strategic employee-sharing, collective workforce and voucher-based work (a form of employment where an employer obtains a voucher from a third party, generally a government authority, to be used as payment for services by a worker, rather than cash).

Telework is popular in Austria, but there are no current figures to show how many Austrians actually work regularly from home. However, the demand is continually increasing (News, 2015; Orf, 2018; Statista, 2015). Our study points out that flexible working is an important tool for the future of work, especially in Austria. This is confirmed by the latest data from Deloitte (Flexible Working Studie, 2017), "flexible working frequently, but only occasionally". The intention of this paper was to look at the generally accepted but unexamined "myth" of the telework gender gap in Austria. The illusion of telework being exclusively the province of women with small children has been refuted by many studies (Telework 2011; USOoPM, 2013).

Mokhtarian (1991) classifies teleworkers into the following types: "running a home-based business as one's only job" and "moonlighting from home (a secondary home-based business, in addition to holding another job)", "a salaried employee working at home after hours" and

“a salaried employee working at home in lieu of in-office work (one of the ‘classical’ forms of telecommuting)”. In our study, we have examined the last type, the classical form of telework. Further, based on our survey results, we identify these categories of teleworkers as follows: distance employee, parental leave employee, carrying employee of family members, disability employee and e-employee (who generally prefer to work from home).

### **3. Methodology**

We carried out a three-step research project to study home-based telework in Austria. The first step was a literature review of the extent and nature of telework. In addition, we carried out a meta-analysis of 16 studies on whether there is a gender influence in physical attendance by teleworkers. The third step was a questionnaire survey consisting of quantitative research of teleworkers in Austrian companies. The data used in this study were collected from 15 August to 30 September 2018, with a probability sample of 614 full-time employees (362 cubicle workers and 252 e-workers), after a response rate of 61.4%. In terms of gender, the interviewees were found to be almost equally distributed, with the proportion of males being 75% and females 25% in the e-work group, and 40% and 60% respectively in the cubicle group. This is worth noting, because there is usually a gender bias in response rates in favour of men. It is possible that the male population is more at ease with the idea of e-mail interviewing compared with women. In general, men are perhaps more comfortable with providing written records of their experiences. In Austrian society, however, there is a clear gender equality. In any event, we are of the opinion that the topic made men more likely to participate than women. We decided to survey both groups because, as reported by the Flexible Working Studie (2017), home office and mobile working mostly occur as individual cases in Austrian business society. Only 20% of Austrian employers provide employees with a mobile teleworking option.

Electronic surveys offer the means to carry out large-scale data collection other than through organisations at the centre of power in society (Couper, 2000). Technology provides an inexpensive mechanism for conducting surveys online, instead of through the postal service (Sheehan & Hoy, 1999; Weible & Wallace, 1998) and one in which costs per response decrease instead of increasing significantly as sample size increases (Watt, 1999). Electronic surveys are becoming increasingly common (Lazar & Preece, 1999), and research comparing electronic and postal surveys is starting to confirm that electronic survey results may be no different from postal survey results, yet provide the distinct advantages of speedy distribution and response cycles (Swoboda et al., 1997; Yun & Trumbo, 2006).

One can divide the collection of survey data via computers into three main categories, based upon the type of technology used for distribution and for collecting the data, namely point of contact, e-mail-based and web-based. In this paper, we use the second option.

The e-mail questionnaire contained several types of questions. Some questions were also open-ended, which allowed respondents to submit their own answers.

### **4. Meta-analysis of 16 studies related to the influence of gender and attendance in telework**

We found more than 2250 scientific papers related to the topic of telework, of which 281 were available. After eliminating the duplicate studies and taking into account the inclusion and exclusion criteria, 16 studies were selected for our study. Studies using interviews of self-employed people or limited to flexible working hours were excluded. Most of the research papers come from the USA, Europe and countries like Canada, Singapore and Japan.

For our meta-analysis, 16 studies were included. The sample consists of a total of 8117 people with a male share of 64% (5195) and 36% females (2922) over the period 1991 to 2016. Most of the surveys were peer-reviewed; 15 studies were excluded due to missing data or no suitable questionnaire.

The confidence intervals (using a 95% level of confidence) in relation to the input data are shown in Table 1.

Author and Study	Effects on gender	Confidence intervals		
<b>Beasley et al. (2001)</b> , Telework and gender: implications for the management of information technology professionals	No	0.69	<b>0.07</b>	<b>0.93</b>
<b>Bélanger (1999)</b> , Workers' propensity to telecommute: An empirical study	Yes	0.45	<b>0.28</b>	<b>0.72</b>
<b>Blakemore (2003)</b> , Impact of gender and race on attitude toward telework	Yes	0.48	<b>0.36</b>	<b>0.64</b>
<b>Giannikis &amp; Mihail (2011)</b> , Flexible work arrangements in Greece: A study of employee perceptions	Yes	0.57	<b>0.25</b>	<b>0.76</b>
<b>Grippaldi (2002)</b> , An empirical study of attitudes towards telecommuting among government finance professionals	No	0.50	<b>0.48</b>	<b>0.52</b>
<b>Gunawardana (2013)</b> , A study of attitudes towards telecommuting of Srilankan information technology sector employees	Yes	0.64	<b>0.13</b>	<b>0.87</b>
<b>Hartman et al. (1991)</b> , An investigation of selected variables affecting telecommuting productivity and satisfaction	No	0.51	<b>0.42</b>	<b>0.58</b>
<b>Huws et al. (1996)</b> , Teleworking and gender	Yes	0.50	<b>0.44</b>	<b>0.56</b>
<b>Iscan &amp; Naktiyok (2004)</b> , Attitudes towards telecommuting: The Turkish case	Yes	0.76	<b>-0.01</b>	<b>1.01</b>
<b>Maruyama &amp; Tietze (2012)</b> , From anxiety to assurance: Concerns and outcomes of telework	Yes	0.49	<b>0.40</b>	<b>0.60</b>
<b>Mokhatarian &amp; Salomon (1996)</b> , Modeling the choice of telecommuting 2: A case of the preferred impossible alternative	Yes	0.50	<b>0.44</b>	<b>0.56</b>
<b>Mokhatarian et al. (1998)</b> , The impact of gender, occupation, and presence of children on telecommuting motivations and constraints	Yes	0.50	<b>0.44</b>	<b>0.56</b>
<b>Shockley &amp; Allen (2012)</b> , Motives for flexible work arrangement use	No	0.49	<b>0.40</b>	<b>0.60</b>
<b>Teo &amp; Lim (1998)</b> , Factorial dimensions and differential effect of gender on perceptions of teleworking	Yes	0.50	<b>0.50</b>	<b>0.50</b>
<b>Tremblay &amp; Thomsin (2012)</b> , Telework and mobile working: Analysis of its benefits and drawbacks	Yes	1.16	<b>-0.05</b>	<b>1.50</b>
<b>Walls et al. (2007)</b> , What drives telecommuting? Relative impact of worker demographics, employer characteristics, and job types	No	0.75	<b>0.01</b>	<b>0.99</b>

**Table 1. Teleworking gender attitude (meta-analysis).**

Using the data of Table 1, the following forest plot was constructed:

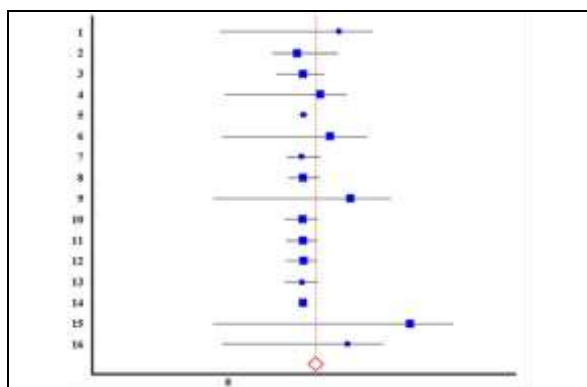


Fig 1.: Forest Plot

Overall, the aggregate positive effect on gender in relation to the studies was significantly higher in the case of the men, in comparison with the women. According to the results, we observe that the willingness to do telework is different between males and females. All in all, our meta-analysis points to a tempered but positive view of gender effects with 11 studies as highlighted in the Table 1.

## 5. Results

Teleworking is not very popular in Austria (Karriere, 2015, Tichler et al., 2016). Many studies emphasise that a flexible work option makes companies more attractive to prospective job candidates. It can also contribute to a more productive workplace (Plantronics, 2013, SHRM, 2018).

Our data show that gender and age stereotypes have no particular effect in Generation X (38-53), Generation Y (18-37) and baby boomers (54 plus). We summarised the data more specifically in reference to our results. A total of 35% of teleworkers are Generation X, 42% are Generation Y and 23% are baby boomers. More than 27% are parents, 38% do not have any children. Three out of four e-workers are men (189 men and 63 women). Our collected statistics show that women are more likely to work in open office spaces and cubicles than men. A total of 38% of males say they do most of their work remotely, compared with 21% of the women. On the other hand, 44% of women complete most of their work in the office, compared with 25% of men. Interestingly, more than half the home-based office workers (201) take their work home. Further, we note that there is a large demand by cubicle workers to work at home. Only 15% of respondents did not choose the possibility of working at home, compared with 85% who did. Millennial employees today were 58% more likely to leave their jobs because they do not believe it is a sound place to work. In addition, the results indicate that 53% are independent teleworkers, while only 3% work in telecentres or telecottages.

Working from home in Austria is tempting, especially for Generation Y and mothers/fathers on parental leave. But this work option is still far from the norm for Austrian workers. From a gender perspective and on the basis of our data, this remains very much a “boys’ club” in Austrian society. Our results show that men (75%) vastly outnumber women (25%) in telework, regardless of whether the work is done from home or away from the home. The profile of the average Austrian teleworker is male, 39 years old and college educated. Curiously, we have found that telework is favoured more by childless employees than by parents. As a rule, we know that flexibility is gender neutral, but we have noticed that the primary telework person is very much more likely to be a male. One reason for this may be the relative scarcity of women in management positions, but the fact that attendance is required is also important for our female interviewees (67%), as well as a lack of flexibility (55%). As reported by Miller & Perlman (Miller & Perlman, 2009), women are naturally more capable of comprehending nonverbal cues; women show more emotion and are more

sensitive, therefore women have a higher capacity for subconsciously and accurately interpreting nonverbal communication. Pavlova et al. (2010) emphasise that women have a higher perception level for decision making. Our respondents choose e-work for work-related reasons (more productive and better concentration at home) as well as personal reasons, including saving time on commuting (70%), better balance between work and other activities (64%), better quality of workplace (58%). The same combination of work-related and personal reasons for preferring telework applies to both genders. But it is clear from our results that there is pay inequality in the workplace for female employees (87%) and e-workers (76%). This means that Austrian women earn less than men. According to Eurostat data on the gender pay gap (Eurostat, 2016), Austria had the fifth-highest gender pay gap (20.1%) in EU28 countries in 2016.

## **6. Discussion and Conclusion**

How people manage the process of going to work, doing their work, and then leaving work again was defined by 1870, perfected by 1930, and has changed little since (Kugelmass, 1995). The teleworker's workday is more flexible compared with the situation in the past; there are some benefits and some risks. The workday is much more fluid and more outcome-focused rather than time-focused. The tasks and devices operate independently of the location. In our opinion, ICT has been implementing tools that make people more efficient, but of course the workday is no shorter, though modern technologies make it more flexible.

Women especially have welcomed the opportunities of employment outside the home afforded by call centres (Weber, 2001). But ICT generally excludes older workers and women from the modern labour market.

As stated by Global Workplace Analytics research, Fortune 1000 companies around the globe are entirely revamping their space because employees are already mobile. Studies repeatedly show the employee is not at his/her desk 50%-60% of the time (GWA, 2018). Based on the recent Strategy Analytics Global Mobile Workforce Forecast (Luk & Brown, 2016), the global mobile workforce is set to increase to 1.87 billion people in 2022, accounting for 42.5% of the global workforce. According to the Sixth European Working Conditions Survey (Eurofound, 2016), most workers (62% of men and 78% of women) have a single main place of work almost all the time. Nearly a third of workers (30%) divide their working time across multiple locations. Despite the popular image of mobile workers as young knowledge workers typing away on their laptops in a park or a café, it is more common in the construction (57%), transport (49%) and agriculture (50%) sectors to have more than one regular place of work. Among the 28 EU member states, 60.4% of employees in Austria work on computers. Of these, 35% work on computers at the employer's premises, while 25.4% of them work on computers away from the employer's premises (Eurofound, 2016).

Can telework work in developing economies? As emphasised by Leung (2004), we have to find out whether the adoption of teleworking in the developing world follows the trend of the adoption of new media technology, such as computers and the Internet. Should employees go back to the way we were, with more time spent commuting and in the office, or do something else? Some studies show that, in developing countries, using ICTs can reduce distance (Abraham, 2007; Aker & Mbiti, 2010). As stated in Network (2019), South African companies are increasingly offering remote work, and those not offering this option are losing the opportunity of obtaining the best talent. We are of the opinion that this kind of work does work, as stated in our paper.

The phenomenon of remote work, especially as outlined in our paper, is expanding dynamically and is on the rise everywhere. This form of work has many advantages, some of which we have presented in our study. On the other hand, it also includes disadvantages and obstacles, probably as a result of fears and prejudices. This kind of work has become an integral aspect of the workforce. Naidoo emphasises that "managing and leading remote



teams is a new skill that needs to be developed and taught in business schools” (Network, 2019).

Workplace flexibility is supposed to act as equalising or balancing careers and duties at home. However, our study claims that telework in Austria is raising inequality in the gender and pay gaps. As stated in the World Economic Forum’s Global Gender Gap Report (Cann, 2016), it could take 170 years to reach economic parity between the sexes.

Based on the meta-analysis results, we conclude that the prevailing situation in this regard favours males: The ratio of males remains higher than that of females. This factor, also known as the “boys’ club”, has been established and is implemented in our society. This may be a factor that perpetuates the gender stereotypes in the workplace. As declared by Deaux & LaFrance (1998), this attitude covers a wide range of beliefs concerning physical characteristics, personality traits, role-related behaviour, occupational preferences, specific competencies and emotional dispositions. The general stereotypes are that men are technically competent, competitive, aggressive, rational and more committed to their careers, while women are emotional, nurturing, passive, relationship oriented, less committed to work and less motivated for success (Nelson & Burke, 2002). Overall, our meta-analysis points to a tempered but positive view of gender effects in the 11 studies related to telework.

With the popularity and efficiency of telework on the rise, one of the biggest shifts shown by our research concerns the perception of who does telework. The myth that this form of work is nearly always the province of women in Austria has not been confirmed. Our results found that Austrian men (three-quarters) tend to be more favoured for working from home compared with women. The average Austrian teleworker profile is male, 39 years old and college educated. Generally, the findings suggest that most teleworkers are knowledge workers. We believe that telework in itself does not create gender equality in the workplace, but there are other factors that might do so. The boys’ club culture, probably the scarcity of women in management positions, the importance of physical attendance when required and the lack of flexibility for women are the main reasons for gender inequality, according to our findings. Another possible factor could be aspects of nonverbal communication between genders (Miller & Perlman, 2009; Pavlova et al., 2010). Interestingly, our results show a high demand for telework by cubicle employees. It seems that the working culture in the office could soon change because of the flexibility options.

Telework is, in our opinion, a very strong and productive tool in the equation for worldwide balance. Schwab (2016) calls for leaders and citizens to join together to shape a future that works for all by putting people first, empowering them and constantly reminding ourselves that all these new technologies are first and foremost tools made by people for people. The successful implementation of this tool in our society requires further mutual global cooperation.

## References

- Abraham, R. (2007). Mobile Phones and Economic Development: Evidence from the Fishing Industry in India. *MIT Information Technologies and International Development Journal*, Vol. 4 (1), 5-17.
- Aker, J. C. & Mbiti, I. M. (2010). Mobile Phones and Economic Development in Africa. *Journal of Economic Perspectives*, Vol. 24(3), 207-232.
- Australian Telework Advisory Committee (ATAC). (2006). *Telework for Australian employees and businesses: Maximising the economic and social benefits of flexible working practices, Report of the Australian Telework Advisory Committee to the Australian Government*, at [https://telecommunities.files.wordpress.com/2012/01/atac\\_report1.pdf](https://telecommunities.files.wordpress.com/2012/01/atac_report1.pdf), last accessed 2018/11/03.
- Bates, P., Bertin, I. & Huws, U. (2002). *E-Work in Ireland*. Brighton: IES Report 394, 72.

- Beasley, R. E., Lomo-David, E., and Seubert, V. R. (2001). Telework and gender: implications for the management of information technology professionals. *Industrial Management & Data Systems* (101:9), 477–482.
- Bélanger, F. (1999). Workers propensity to telecommute: An empirical study. *Information & Management* (35:3), 139–153.
- Beno, M. (2018). Managing Telework from an Austrian Manager’s Perspective. *Trends and Advances in Information Systems and Technologies*, WorldCISTS’18, AISC745, Vol. 1, 16-29.
- Blakemore, D. (2003). *Impact of gender and race on attitude toward telework*. Minneapolis: Capella University.
- Brocklehurst, M. (2001). Power, Identity and New Technology Homework: Implications for New Forms of Organizing. *Organization Studies* (22:3), 445–466.
- Burgmann, V. (1991). *The Strange Death of Labour History*, Bede Nairn and Labor History, Sydney: Pluto Press, 69-81.
- Cann, O. (2016). *Beyond our Lifetimes: Prospects for Workplace Gender Equality Slip to 2186*. World Economic Forum, <https://www.weforum.org/press/2016/10/beyond-our-lifetimes-prospects-for-workplace-gender-equality-slip-to-2186>, last accessed 2018/11/03.
- Couper, M. P. (2000). Web-based surveys: A Review of Issues and Approaches. *Public Opinion Quarterly* 64, 464-494.
- Deaux, K. & Lafrance, M. (1998). Gender. D.T. Gilbert, S.T. Fiske & G. Lindzey (Eds), *Handbook of social psychology*, Vol. 1, 4th ed. New York: McGraw-Hill, 788–827.
- Di Martino, V. & Wirth, L. (1990). Telework: A new way of working and living. *International Labour Review*, vol. 129, No. 5, 529-554.
- ECaTT Final Report. (2000). <https://web.fhnw.ch/personenseiten/najib.harabi/publications/books/benchmarking-progress-of-telework-and-electronic-commerce-in-europe>, last accessed 2019/03/09.
- Eurofound. (2010). *Telework in the European Union*, available at [https://www.eurofound.europa.eu/sites/default/files/ef\\_files/docs/eiro/tn0910050s/tn0910050s.pdf](https://www.eurofound.europa.eu/sites/default/files/ef_files/docs/eiro/tn0910050s/tn0910050s.pdf), last accessed 2018/11/03.
- Eurofound. (2015). *New forms of employment*, Publications Office of the European Union, [https://www.eurofound.europa.eu/sites/default/files/ef\\_publication/field\\_ef\\_document/ef1461en\\_3.pdf](https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1461en_3.pdf), last accessed 2018/11/03.
- Eurofound. (2016). *Sixth European Working Conditions Survey*, [https://www.eurofound.europa.eu/sites/default/files/ef\\_publication/field\\_ef\\_document/ef1634en.pdf](https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1634en.pdf), last accessed 2019/03/09.
- Eurostat. (2016). *Gender pay gap statistics*, [https://ec.europa.eu/eurostat/statistics-explained/index.php/Gender\\_pay\\_gap\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php/Gender_pay_gap_statistics), last accessed 2018/11/03.
- Flexible Working Studie 2017. (2017). *Vertrauensarbeitszeit, Home Office, Desksharing-Wie flexibel arbeitet Österreich?*, <https://www2.deloitte.com/content/dam/Deloitte/at/Documents/human-capital/deloitte-oesterreich-studie-flexible-working-2017.pdf>, last accessed 2019/03/09.
- Georg, A. (2007). *Telework in Austria*, Telework in Austria | Eurofound, <https://www.eurofound.europa.eu/publications/article/2007/telework-in-austria>, last accessed 2018/11/03.
- Giannikis, S. K., & Mihail, D. M. (2011). Flexible work arrangements in Greece: a study of employee perceptions. *The International Journal of Human Resource Management* (22:2), 417–432.
- GlobalWorkplaceAnalytics.com. (2018). *Telecommuting Trend Data, 2018*, <https://globalworkplaceanalytics.com/telecommuting-statistics>, last accessed 2019/03/09.

- Grippaldi, J. J. (2002). *An Empirical study of attitudes towards telecommuting among government finance professionals*. Las Vegas: University of Nevada.
- Greenhill, A., & Wilson, M. (2006). Haven or hell? Telework, flexibility and family in the e-society: a Marxist analysis. *European Journal of Information Systems* (15:4), 379–388.
- Gunawardana, K. D. (2013). A Study of Attitudes Towards Telecommuting of Srilankan Information Technology Sector Employees. *Proceedings 8th International Information Technology Conference at BMICH-Colombo*.
- Hartman, R. I., Stoner, C. R., & Arora, R. (1991). An investigation of selected variables affecting telecommuting productivity and satisfaction. *Journal of Business and Psychology* (6:2), 207–225.
- Huws et al. (1996). *Teleworking and Gender*, <https://www.employment-studies.co.uk/system/files/resources/files/317.pdf>, last accessed 2018/11/03.
- Huws, U. (2001). *Statistical indicators of eWork*, A Discussion paper. Brighton: IES, Report 385.
- Huws, U., Podro, S., Gunnarsson, E., Weijers, T., Arvanitaki, K., & Trova, V. (1997). Teleworking and gender. *Long Range Planning* (30:4).
- ILO. (2016). *Challenges and Opportunities of Teleworking for Workers and Employers in the ICTS and Financial Services Sectors*, [https://www.ilo.org/wcmsp5/groups/public/---ed\\_dialogue/---sector/documents/publication/wcms\\_531111.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/publication/wcms_531111.pdf), last accessed 2018/11/03.
- Irving, T. (1994). *Challenges to Labour History*, Sydney: University of New South Wales Press.
- Iscan, O. F., & Naktiyok, A. (2004). Attitudes towards telecommuting: the Turkish case. *Journal of Information Technology* (20:1), 52–63.
- Jala, *What's Telework?*. JALA International: Telework and telecommuting definitions, <http://www.jala.com/definitions.php>, last accessed 2018/11/03.
- Karriere. (2015). *Home-Office: Der Streit um das Arbeiten von Zuhause*, <https://www.karriere.at/blog/home-office.html>, last accessed 2018/11/03.
- Kugelmass, J. (1995). *Telecommuting: A Manager's Guide to Flexible Work Arrangements*. Jossey-Bass Inc., US.
- Lazar, J. & Preece, J. (1999). Designing and implementing web-based surveys. *Journal of Computer Information Systems*, xxxix(4), 63-67.
- Leung, L. (2004). *Chapter 8, Societal, Organizational and Individual Factors in the Adoption of Telework*, <http://www.com.cuhk.edu.hk/ccpos/b5/pdf/telecommuting.pdf>, last accessed 2019/03/09.
- Luk, G. & Brown, A. (2016). *The Global Mobile Workforce is Set to Increase to 1.87 Billion People in 2022, Accounting for 42.5% of the Global Workforce*, <https://www.strategyanalytics.com/strategy-analytics/news/strategy-analytics-press-releases/strategy-analytics-press-release/2016/11/09/the-global-mobile-workforce-is-set-to-increase-to-1.87-billion-people-in-2022-accounting-for-42.5-of-the-global-workforce#.WeSldBOCxEM>, last accessed 2019/03/09.
- Messenger, J. C., & Gschwind, L. (2016). Three generations of Telework: New ICTs and the (R)evolution from Home Office to Virtual Office. *New Technology, Work and Employment* (31:3), 195–208.
- Meyers, N. & Hearn, G. (2000). Communication and control: Case studies in Australian telecommuting. *Australian Journal of Communication*, Vol. 27, No. 2, 39-64.
- Mokhtarian, P. L. (1991). Defining telecommuting. *Transportation Research Record* 1305, 273-281.
- Mokhtarian, P. L., & Salomon, I. (1996). Modeling the Choice of Telecommuting: 2. A Case of the Preferred Impossible Alternative. *Environment and Planning A* (28:10), 1859–1876.

- Mokhtarian, P. L., Bagley, M. N., & Salomon, I. (1998). The impact of gender, occupation, and presence of children on telecommuting motivations and constraints. *Journal of the American Society for Information Science* (49:12), 1115–1134.
- Moody, C. J. & Kessler-Harris, A. (1989). *Perspectives on American Labor History – The Problems of Synthesis*. DeKalb, IL: Northern Illinois University Press.
- Maruyama, T., & Tietze, S. (2012). From anxiety to assurance: concerns and outcomes of telework. *Personnel Review* (41:4), 450–469.
- Miller, R. & Perlman, D. (2009). *Intimate relationships*. New York: McGraw-Hill Companies Inc.
- Nelson, D. L. & Burke, R. J. (2002). A framework for examining gender, work stress, and health. D. L. Nelson & R. J. Burke (Eds), *Gender, work stress, and health*. Washington, DC: American Psychological Association, 1–14.
- Network. (2019). *Increase in remote work options*, [https://www.iol.co.za/mercury/network/increase-in-remote-work-options-19859939?utm\\_source=news\\_newsletters&utm\\_medium=email](https://www.iol.co.za/mercury/network/increase-in-remote-work-options-19859939?utm_source=news_newsletters&utm_medium=email), last accessed 2019/03/14.
- News. (2015). *Telearbeit: Flexibilität mit hohen Hürden*, <https://news2.orf.at/stories/2268424/2267669/>, last accessed 2018/11/03.
- Nilles, J. M. (1998). *Managing telework: Strategies for managing the virtual workforce*. New York, John Wiley and Sons.
- Nilles, J. M., Carlson, R. F., Gay, P. & Hanneman, G. J. (1976). *The Telecommunications-Transportation Tradeoff. Options for Tomorrow*. New York, Wiley.
- Orf.at. (2018). *Bei Heimarbeit auf Platz vier in EU*, <https://oesterreich.orf.at/stories/2919988>, last accessed 2018/11/03.
- Overheid. (2016). *Wet flexibel werken*, <http://wetten.overheid.nl/BWBR0011173/2016-01-01>, last accessed 2018/11/03.
- Pavlova, M., Guerreschi, M., Lutzenberge, W., Sokolov, A. N. & Krägeloh-Mann, I. (2010). Cortical response to social interaction is affected by gender. *NeuroImage*, vol. 50, no.3, 1327-1332.
- Pérez, M. P., Sánchez, A. M. & de Luis Carnier, M. P. (2002). Benefits and barriers of telework: perception differences of human resources managers according to company's operations strategy. *Technovation*, vol. 22, 775-783.
- Plantronics. (2013). [www.plantronics.com, https://www.plantronics.com/content/dam/plantronics/documents-and-guides/infographics/workplace-flexibility.pdf](https://www.plantronics.com/content/dam/plantronics/documents-and-guides/infographics/workplace-flexibility.pdf), last accessed 2018/11/03.
- Scholefield G. & Peel S. (2009). Managers' attitudes to teleworking. *New Zealand Journal of Employment Relations*, vol. 34, no. 3, 1-13.
- Schwab, K. (2016). *The Fourth Industrial Revolution*. Cologny/Geneva: World Economic Forum.
- SHRM. (2018). *Leveraging Workplace Flexibility for Engagement and Productivity*, <https://www.shrm.org/hr-today/trends-and-forecasting/special-reports-and-expert-views/Documents/Leveraging-Workplace-Flexibility.pdf>, last accessed 2018/11/03.
- Siha, S. M., & Monroe, R. W. (2006). Telecommuting past and future: a literature review and research agenda. *Business Process Management Journal* (12:4), 455–482.
- Sheehan, K. B., & Hoy, M. G. (1999). Using E-mail To Survey Internet Users In The United States: Methodology And Assessment. *Journal of Computer-Mediated Communication* (4:3).
- Shirley, D. S. (2018). *Dame Stephanie Shirley*, [https://www.ted.com/speakers/dame\\_stephanie\\_steve\\_shirley](https://www.ted.com/speakers/dame_stephanie_steve_shirley), last accessed 2018/11/03.
- Shockley, K. M., & Allen, T. D. (2012). Motives for flexible work arrangement use. *Community, Work & Family* (15:2), 217–231.

- Statista. (2015). *Employees that can telework in the EU in 2015* | Statistic, <https://www.statista.com/statistics/879251/employees-teleworking-in-the-eu/>, last accessed 2018/11/03.
- Sullivan, C., & Lewis, S. (2001). Home-based Telework, Gender, and the Synchronization of Work and Family: Perspectives of Teleworkers and their Co-residents. *Gender, Work and Organization* (8:2), 123–145.
- Swoboda, W. J., Mühlberger, N., Weitkunat, R., & Schneeweiß, S. (1997). Internet Surveys by Direct Mailing. *Social Science Computer Review* (15:3), 242–255.
- “tele-.” (2018.). Index, <https://www.etymonline.com/word/tele->, last accessed 2018/11/03.
- Telework 2011. (2011). *A WorldatWork Special Report*, <https://www.worldatwork.org/docs/research-and-surveys/telework-2011-final-report.pdf>, last accessed 2019/03/09.
- Teo, T. S., & Lim, V. K. (1998). Factorial dimensions and differential effects of gender on perceptions of teleworking. *Women in Management Review* (13:7), 253–263.
- Thackray, R. (2011). *A-Z of employers; FI GROUP plc, The Independent*, <https://www.independent.co.uk/life-style/a-z-of-employers-fi-group-plc-1156417.html>, last accessed 2018/11/03.
- Tichler, R., Goers, S., Friedl, Ch. & Höfler, L. (2016). *RelTELEWORK - Die Relevanz von Teleworking im aktuellen Umfeld der veränderten Anforderungen an die österreichische Mobilitätsstruktur - Executive Summary*, <http://www.energieinstitut-linz.at/v2/wp-content/uploads/2016/05/RelTELEWORK-Executive-Summary.pdf>, last accessed 2018/11/03.
- Tremblay, D. G., & Thomsin, L. (2012). Telework and mobile working: analysis of its benefits and drawbacks. *International Journal of Work Innovation* (1:1).
- United States Office of Personnel Management December 2013. (2013). <https://www.telework.gov/reports-studies/reports-to-congress/2013reporttocongress.pdf>, last accessed 2019/03/09.
- Van der Linden, M. (1993). *The End of Labour History?* Cambridge: Cambridge University Press.
- Walls, M., Safirova, E., & Jiang, Y. (2007). What Drives Telecommuting? *Transportation Research Record: Journal of the Transportation Research Board* (2010:1), 111–120.
- Watt, J. H. (1999). Internet systems for evaluation research. *New Directions for Evaluation* (1999:84), 23–43.
- Weber, W. L. (2001). *World Employment Report 2001. Life at work in the information economy*, Geneva: ILO, 2001.
- Weible, R. & Wallace, J. (1998). The impact of the Internet on data collection. *Marketing Research*, 10(3), 19-23.
- World Bank. (2011). *Gender Differences in Employment and Why They Matter*, <http://siteresources.worldbank.org/INTWDR2012/Resources/7778105-1299699968583/7786210-1315936222006/chapter-5.pdf>, last accessed 2018/11/03.
- World Bank. (2018a). *Labor force participation rate, female (% of female population ages 15) (modeled ILO estimate), Labor force participation rate*, <https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS>, last accessed 2018/11/03.
- World Bank. (2018b). *Labor force participation rate, male (% of male population ages 15) (modeled ILO estimate)*, <https://data.worldbank.org/indicator/SL.TLF.CACT.MA.ZS>, last accessed 2018/11/03.
- Yun, G. W., & Trumbo, C. W. (2006). “Comparative Response to a Survey Executed by Post, E-mail, & Web Form,” *Journal of Computer-Mediated Communication* (6:1).