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THE PARADOX OF FLEXIBILITY: UNRAVELING THE IMPACT OF FLEXIBLE WORK ARRANGEMENTS ON AFFECTIVE COMMITMENT DURING THE COVID-19 PANDEMIC

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ABSTRACT Due to technological progress and the COVID-19 pandemic, flexible work arrangements (FWA) have spread enormously. Thus, many companies offer different forms of flexible work now. The aim of the study is to analyze the consequences for employees' affective commitment brought on by FWA. In order to effectively establish FWA, support is needed from the manager. Transformational leadership can be seen as a supportive and facilitating leadership style in this context. In addition, FWA change the way people work together, especially in terms of informal communication. Therefore, informal communication and transformational leadership were analyzed as possible mediators or moderators. Partial least squares structural equation modeling (PLS-SEM) was used on a sample of 224 German employees. The study results indicated that FWA are statistically significantly negatively associated with affective commitment. The role of informal communication as a mediator as well as the role of transformational leadership as a moderator were not confirmed. This study examined the impact of FWA on affective commitment during the COVID-19 pandemic, as existing research findings had been inconsistent regarding the direction of that relationship to date. Moreover, this is the first study examining the effects of informal communication and transformational leadership in this research stream.

Keywords: Flexible work arrangements, affective commitment, transformational leadership, informal communication, PLS-SEM, Germany

Introduction

Technological progress and rapid development of information and communication technologies enable more flexible work arrangements (FWA) (Chatterjee et al., 2022; Praeg & Bauer, 2017). FWA include a variety of different work practices that enable employees to decide when, where, and in what time period they conduct their work (Hill et al., 2008). The COVID-19 pandemic has brought a new momentum to the flexibilization of work (Umbs, 2020). Recent studies in Germany stated that 25% of employees currently work flexibly in terms of location (ifo Institut, 2022) and 21% can arrange their working time in a completely flexible manner (Statistisches Bundesamt, 2021).

Many companies have introduced flexible work policies as they offer the advantages of being able to react more flexibly to unforeseen situations (Chatterjee et al., 2022). At the same time, FWA offer many benefits to employees, such as greater autonomy, savings in travel time (Heitmann et al., 2020), or improved work-life balance (Hill et al., 2010; John et al., 2024). Nevertheless, FWA may have several financial, social, private, and work-related disadvantages (Tirrel et al., 2021), as employees no longer work at the premises of the employer and are therefore no longer in direct contact with each other (Fay & Kline, 2012).

In times of a shortage of skilled workers, it is particularly important for companies to retain employees in the long run (Brademann & Piorr, 2018). To date, research findings on the effects of FWA on affective commitment (AC) have been inconsistent. Some studies have shown that FWA increase AC (Bender et al., 2021; Cranfield School of Management, 2008; Mee Choo et al., 2015), others revealed no relationship existing (Eaton, 2003; Omar, 2013). This suggests that the effect of FWA depends on the framework of work design, such as leadership style and communication forms (Daum & Zanker, 2020). Due to how diverse the results of previous studies have been, there is still no definitive answer to how FWA affect AC. Thus, this will be the focus of our study as there is a call for analyzing FWA in specific socioeconomic situations (Soga et al., 2022), in this case the COVID-19 pandemic with its impact in Germany.

It is assumed that the implementation of FWA leads to positive outcomes for organizations if there is support from top management in addition to flexible work policies (Carnevale & Hatak, 2020). Transformational leadership has been highlighted in various studies as an effective and supportive leadership style (Felfe, 2006; Heinitz & Rowold, 2007; Meiryani et al., 2022) that has a positive impact on affective commitment (Almaududi Ausat et al., 2022; Westphal & Gmür, 2009). Therefore, the influence of transformational leadership on the nexus between flexible work and affective commitment will be analyzed in this paper.

Moreover, communication was identified as a strong influencing factor for AC (Matthieu & Zajac, 1990). FWA change the communication and interaction among employees, as they no longer work regularly in each other's presence (Akkirman & Harris, 2005; Stöckl & Struck, 2022). Due to the distance in time and place, spontaneous encounters in the office or informal meetings are less frequent and informal communication decreases. To our knowledge, no study has examined the impact of transformational leadership, informal communication and flexible work arrangements on affective commitment during the COVID-19 pandemic, underlining the knowledge gap and the need for research as informal communication improves decision-making and encourages innovation (Fay, 2011). This is not only of interest from a theoretical but also from a managerial perspective. Thus, Viererbl et al. (2022) call for a quantitative analysis of the effect of informal communication on AC. Thus, the following research questions are raised:

RQ1: How do flexible work arrangements affect affective commitment?

RQ2: Does informal communication affect the relationship between FWA and AC?

RQ3: Does transformational leadership affect the relationship between FWA and AC

We conceptually developed our model based on a literature review, flexibility firm theory (Chatterjee et al., 2022; Rodgers, 1992) and perceived organizational support theory (Eisenberger et al., 1986). To test our underlying hypotheses, we conducted an online survey with 224 employees from German companies during the COVID-19 pandemic and analyzed the data using partial least squares structural equation modeling (PLS-SEM).

1. Literature review: Flexible work arrangements

Flexible working arrangements include a range of working practices that enable employees to organize their work autonomously (Allen & Shockley, 2009; Kattenbach et al., 2010). Employees can decide when, where, and for how long they work (Hill et al., 2008, p. 152). Work flexibility is concerned with the concept of organizations' flexible work policies (Kingma, 2016). These are typically distinguished between temporal and spatial flexibility (Hill et al., 2008; Shockley & Allen, 2007). Temporal flexibility refers to working hours that can be varied in duration or scope. This includes the use of flextime, part-time, or job sharing (Austin-Egole et al., 2020). Flexible work locations offer the possibility to pursue work at any location outside the office (Kingma, 2016). Therefore, employees can, for instance, work at home, in a café, on a train, or at an airport (Bender et al., 2021; Dilmaghani, 2021). Due to the COVID-19 pandemic, FWA, in particular working from home, increased (Galanti et al., 2021) as employees were separated so that they do not infect each other.

By working outside the office, FWA can have the disadvantage of making employees less visible and making them feel isolated (Galanti et al., 2021; Maruyama & Tietze, 2012; Tietze, 2002). Often, flexibility makes communication and interaction between workers more difficult (Illegems et al., 2001; Maruyama & Tietze, 2012) as they did not meet at the premises of the company due to the pandemic. In addition, family, work and role conflicts can increase (Allen et al., 2015; Kingma, 2016; Kossek & Michel, 2017; Maruyama & Tietze, 2012). In summary, FWA may lead to financial, social, private or work-related disadvantages (Tirrel et al., 2021). This was of paramount importance during the COVID-19 pandemic since employees were forced to work flexibly, regardless of whether this meets their needs (in particular the need for affiliation) (McClelland, 1985). This can lead to stress and affect employee performance (Tirrel and Winnen, 2018) due to the changes in motivation and other peculiarities of economic behaviour (Mishchuk et al., 2023).

At the same time, FWA enable greater autonomy of work for employees (Heitmann et al., 2020). This promotes a better work-life balance (Fay & Kline, 2012; Hill et al., 2010; McNall et al., 2010). Moreover, FWA increase well-being and job satisfaction while reducing work stress (Idowu, 2020; Redman et al., 2009; Skýpalová, 2022). Spatial and temporal flexibility reduce absenteeism as well as the motivation to leave (Kröll & Nüesch, 2019; Menezes & Kelliher, 2011). In addition, a positive correlation between FWA and employee retention has been demonstrated (Menezes & Kelliher, 2011). By the end of 2022 approximately 46 million people were working in Germany (Statistisches Bundesamt, 2024). Moreover, 25% of employees in Germany can use a flexible work location (ifo Institut, 2022). Especially in the service sector, about 39% can currently work flexibly in terms of location (ifo Institut, 2022). 21% can arrange their working hours in a completely flexible manner (Statistisches Bundesamt, 2021). In general, German employees wish to have FWA; 17% would like to work exclusively at home and 67% would like to be able to switch between office and other locations (Appinio, 2021).

2. Theoretical background and development of hypotheses

2.1. Flexibility firm theory and Perceived organizational support

Since employees have numerous private obligations, such as child care or caring for relatives in addition to their professional duties, they cannot perform their full work capacity if the work structure is rigid (Rodgers, 1992). The flexibility firm theory postulates that flexible working conditions increase the efficiency of employees, as they can perform their work more effectively due to greater autonomy (Rodgers, 1992). Building on this, Chatterjee et al. (2022) verified that the workplace, work time and infrastructural flexibility increase satisfaction and efficiency of employees. They enhanced the flexibility firm theory by adding all other possible workplaces besides working from home (Chatterjee et al., 2022).

When FWA are implemented for the well-being of employees and are specifically supported by leaders as centrally perceived representatives of the organization (Rhoades & Eisenberger, 2002; Carnevale & Hatak, 2020; Deschênes, 2023), the described positive effects of FWA are more likely to be realized (Carnevale & Hatak, 2020, Chatterjee et al., 2022; Lott & Abendroth, 2023). This can be explained in the context of perceived organizational support theory (POS, Eisenberger et al., 1986), which states that employees who perceive their organization's commitment to their increased well-being are more likely to exhibit positive attitudes and behaviors. Specifically, this means that employees who experience positive organizational commitment in the form of managerial adoption and support of FWA not only show higher affective commitment (Eisenberger et al., 1990; Deschênes, 2023), but also work harder to achieve organizational goals (Eisenberger et al., 1986).

2.2. Development of hypotheses

2.2.1. Flexible work arrangements and affective commitment

Affective commitment (AC) is defined as the emotional attachment, identification and involvement of employees with the organization (Meyer & Allen, 1991). This form of commitment arises by matching the value orientation between the employee and the organization (Brademann & Piorr, 2018). It represents the highest form of organizational commitment, as it reduces the motivation to leave (Westphal & Gmür, 2009). Moreover, it also increases job satisfaction as well as employee health and well-being (Matthieu & Zajac, 1990; Meyer et al., 2002). Furthermore, it has been demonstrated that employees who are strongly affected by a company perform better at work (Matthieu & Zajac, 1990; Mishchuk et al., 2021).

According to the flexibility firm theory, FWA increase job satisfaction and lead to greater commitment (Westphal & Gmür, 2009). Following the POS theory, it is assumed that FWA are perceived as positive organizational support because the company allows for more FWA (Kurtessis et al., 2017). This leads to a higher level of involvement in work and a stronger emotional bond with the organization (Dilmaghani, 2021; Lott & Abendroth, 2023; Menezes & Kelliher, 2011). Employees who were able to flexibly schedule their working hours have a higher commitment than those who had fixed working hours (Mee Choo et al., 2015; Menezes & Kelliher, 2011; Scandura & Lankau, 1997). Moreover, during the COVID-19 pandemic employees were forced to work from home, leading to isolation (Deschênes, 2023). However, it does not affect commitment (Deschênes, 2023). Furthermore, flexible work location positively affects AC (Ongaki, 2019). In line with these findings, other studies also confirmed

a positive relationship between FWA and AC (Allen, 2001; Dilmaghani, 2021; Sivatte & Guadamillas, 2013; Thompson et al., 1999). Accordingly, it is hypothesized as follows:

H_1: FWA are positively associated with AC.

2.2.2. The role of informal communication

In their meta-analysis, Mathieu and Zajac (1990) identified communication as a strong influencing factor for AC. Informal communication (IC) is one aspect of communication within a company which usually occurs spontaneously, voluntarily, and unstructured between employees at all hierarchical levels (Carr & Zube, 2015; Fay, 2011). IC refers to current work-related as well as personal topics, such as private issues (Turk et al., 2021). Communication is used to share commonalities and build up relationships (Fay, 2011). Informally, employees share their problems, frustrations, observations, attitudes and values (Kandlousi et al., 2010). In this way, employees get to know each other, build person-centered knowledge and trust each other (Fay & Kline, 2012). Through IC, individuals develop higher identification and commitment with the company (Campbell & Campbell, 1988; Fay & Kline, 2011; Raisiene, 2012; Rybnicek et al., 2019; Wiesenfeld et al., 2001). Accordingly, it is hypothesized as follows:

H_2: IC is positively associated with AC.

Since informal talks are mostly unplanned and spontaneous, they often take place between people who are spatially close to each other (Kraut et al., 2002) The more spontaneous and informal the communication, the less communication tools are used, such as telephones, video calls or emails (Kraut et al., 2002). Therefore, flexibility in time and space is interpreted as a major barrier to IC. Fonner and Roloff (2010) state that employees who work from home share less information with their colleagues than those who work in the office. Distance in space and time decreases the frequency of communication. As a result, employees cannot classify information in the appropriate context (Akkirman & Harris, 2005). Accordingly, it is hypothesized as follows:

H_3: FWA are negatively associated with IC.

Employees who take advantage of FWA report that they lack face-to-face communication and miss spontaneous exchanges (Fay, 2011). In addition, employees who work outside the company develop fewer relationships with new employees (Fay & Kline, 2012). As a result, employees feel isolated and invisible (Fay & Kline, 2011; Tietze & Musson, 2010; Wiesenfeld et al., 2001). By meeting informally less frequently, they also do not build loyalty and commitment to their organization (Fay & Kline, 2012). Accordingly, it is hypothesized as follows:

H_4: The relationship between FWA and AC is negatively mediated by IC.

2.2.3. Transformational leadership

Leadership is identified as a particularly influencing factor in the interplay of FWA and AC (Meyer et al., 2002). FWA can only develop effectively if management supports its implementation (Deschênes, 2023; Lott & Abendroth, 2023; Wang & Walumbwa, 2007) Transformational leadership (TFL) is characterized as a supportive leadership style as leaders take care of individuals but also foster group work, which is divided into six dimensions from Podsakoff et al. (1990). Therefore several studies have highlighted that TFL has a positive effect on AC (Bono & Anderson, 2005; Felfe, 2006; Heinitz & Rowold, 2007; Meyer et al., 2002). Accordingly, it is hypothesized as follows:

H_5: TFL is positively associated with IC.

TFL consists of six key leadership behaviors. They are relevant when leading flexibly working employees because transformational leaders promote the autonomy and self-determination of employees by providing individualized support and intellectual stimulation (Pattnaik & Sahoo, 2021). Employees need this characteristic to be able to work flexibly successfully (Mayo et al., 2009; Knezevic, 2023) as they serve as a guidance when employees and leaders are not meeting at the premises of the company due to the COVID-19 pandemic (Tirrel, 2023). Thus, it is necessary to include technology in leadership (Tirrel et al., 2022). In addition, transformational leaders consider individual needs of their employees, care about their well-being and respond to individual wishes, making employees feel supported and valued (Heinitz & Rowold, 2007; Kuráth et al., 2023). This promotes high POS (Bass & Avolio, 1990; Felfe, 2006). Accordingly, it is hypothesized as follows:

H_6: The relationship between FWA and AC is positively moderated by TFL.

Leadership also influences communication (Men, 2014b). Compared to other leadership styles, such as transactional leadership, TFL is more strongly based on communication (Men, 2014a). Transformational leaders encourage their employees to question current problems and identify new perspectives (Heinitz & Rowold, 2007; Łucjan et al., 2023). They promote exchange and collaboration within the team (Heinitz & Rowold, 2007; Lee & Chon, 2021). This increases the frequency of communication and informal exchange between employees (Lee & Chon, 2021; Wang & Walumbwa, 2007). In addition, employees report intense communication within the team and with their transformational leader (Bono & Anderson, 2005). Accordingly, it is hypothesized as follows:

H_7: TFL is positively associated with IC.

3. Research methodology

Partial least squares structural equation modeling (PLS-SEM) was used for analyzing the hypotheses since complex relationships of latent variables are in the focus of our analysis (Hair et al., 2017). Using SmartPLS 4 (Ringle et al., 2022) the inner weightings are estimated by the PLS path method. The stability of the model is assessed by bootstrapping with 5,000 subsamples as recommended by Hair et al. (2019). To analyze the conceptual framework, a reflective hierarchical component model (HCM) was established; TFL was included in the analysis as a higher-order construct (HOC) with six lower-order constructs (LOCs) (Hair et al., 2019). The HOC was evaluated using the repeated-indicator approach (Hair et al., 2017). A significance level of 10% was used.

All constructs were measured using a five-point Likert scale with a cannot answer option. When a German version of a scale was available, it was used. Otherwise, the scales were translated into German by using Brislin's back-translation procedure (1986). FWA was measured by Poethke et al.'s (2019) scale Arbeit 4.0 ($\alpha = .779$). IC was measured via the internal communication satisfaction questionnaire ($\alpha = .695$) from Tkalac Verčič et al. (2021). The German version of the transformational leadership inventory was used for measuring TFL ($\alpha = .811$-$.901$, Heinitz und Rowold (2007). Finally, AC was measure by the German version of Allen and Meyer's (1996) commitment scales ($\alpha = .872$, Felfe et al., 2014).

3.1. Data generation and sampling

An online questionnaire was sent out via email, Instagram, Facebook and WhatsApp from November to December 2021, applying snowball and cluster sampling. Thus, a cross-

industry sample was desired in order not to be biased by certain effects which occur in specific industries only. This led to 224 usable data sets. According to the requirements of PLS-SEM, a significance level of 5% and a statistical power of 80%, a minimum sample size of 103 is required for detecting R^2 values of at least .25 (Cohen, 1992) which is in line with prior study results in the context of FWA. A power of 80% with an alpha error of 5% is widely used in scientific research as a conventional level and reference value (Kraemer & Blasey, 2016) and therefore represents a good balance between sensitivity and specificity of the statistical test for the authors, especially considering the challenge of generating large sample sizes. 133 women and 91 men participated in this survey. The average age of the participants was 37.4 years (SD = 11.74). On average, the participants have been employed in their company for 8.47 years (SD = 9.48). The educational attainment, company size and industry of the generated sample are summarized in table 1.

Table 1. Characteristics of the generated sample

Educational attainment	**%**
No degree	0.00
Secondary school diploma	0.45
Secondary school leaving certificate	4.46
Advanced technical college certificate	8.93
General higher education entrance qualification	12.95
Bachelor's degree or comparable	28.13
Master's degree or comparable	39.73
Doctorate	5.36
Company size	%
Up to 9 employees	4.91
Up to 49 employees	20.09
Up to 249 employees	9.38
More than 249 employees	65.63
Industry	%
Agriculture, forestry and horticulture	0.45
Manufacturing	4.91
Manufacturing technology (e.g., machine technology, mechatronics, electrics)	4.46
Construction and finishing	3.57
Food and hospitality	0.89
Medical and health (e.g., personal care, wellness)	7.14
Social, cultural services (e.g., education, teaching, entertainment)	21.88
Trade	1.79
Business management and organization	3.13
Business-related services (e.g., finance, law, administration)	42.86
IT and scientific services	4.91
Security	2.68
Transport and logistics	1.34
Cleaning	0.00

Source*: Own table*

4. Results

The data do not show any patterns or inconsistent responses (Hair et al., 2017). A review of the missing data revealed that six indicators had the proportion of missing data above 5%.

These missing data were replaced using Multivariate Imputation by Chained Equations (MICE) (Azur et al., 2011; Buuren & Groothuis-Oudshoorn, 2011). According to the Shapiro-Wilks test, data is not normally distributed (Shaprio & Wilk, 1965) but as PLS-SEM is capable of dealing with such data, this does not cause any further problems. The Harman single-factor method was used to evaluate the common method bias (Podsakoff et al., 2003). The analysis uncovers that there is no common method bias as 29.39% variance is explained in a single factor which is below the threshold of 50% (Podsakoff et al., 2003). The correlation analysis indicates positive associations between IC and TFL as well as AC. Moreover, TFL and AC are positively related. Surprisingly, there is no significant correlation between FWA and any other factor. The PLS-SEM analysis is expected to provide a more detailed analysis on the construct's interrelations.

Table 2. Correlation analysis

	FWA	IC	TFL	AC
FWA	1			
IC	- .057	1		
TFL	.100	.272*	1	
AC	- .094	.266*	.524*	1

Note: p < .1 *
Source: *own table*

4.1. Measurement model analysis

According to Hair et al. (2019), the quality of the measurement model was determined using the following criteria: Internal consistency, convergent validity, and discriminant validity. Internal consistency is assessed using Cronbach's alpha (α) and composite reliability (CR). As shown in table 3, all constructs achieve satisfactory values since Cronbach's alpha should be above .7, and CR should be between 0.7 and 0.95. Item loadings were recorded to analyze convergent validity. Four items with loadings below 0.4 were deleted. To measure the convergent validity of the constructs, average variance extracted (AVE) for all the constructs were estimated. Since the AVE for all constructs is higher than .5 (the AVE threshold), convergent validity can be considered as sufficient. Discriminant validity was checked using the heterotrait-monotrait ratio of correlations (HTMT) values. Since all HTMT values are below 0.85, discriminant validity is achieved (Hair et al., 2019). Finally, the bootstrapping procedure was used to analyze the level of significance regarding the HTMT as an additional measure for discriminant validity (cf. table 2). All in all, a reliable and valid measurement model was established.

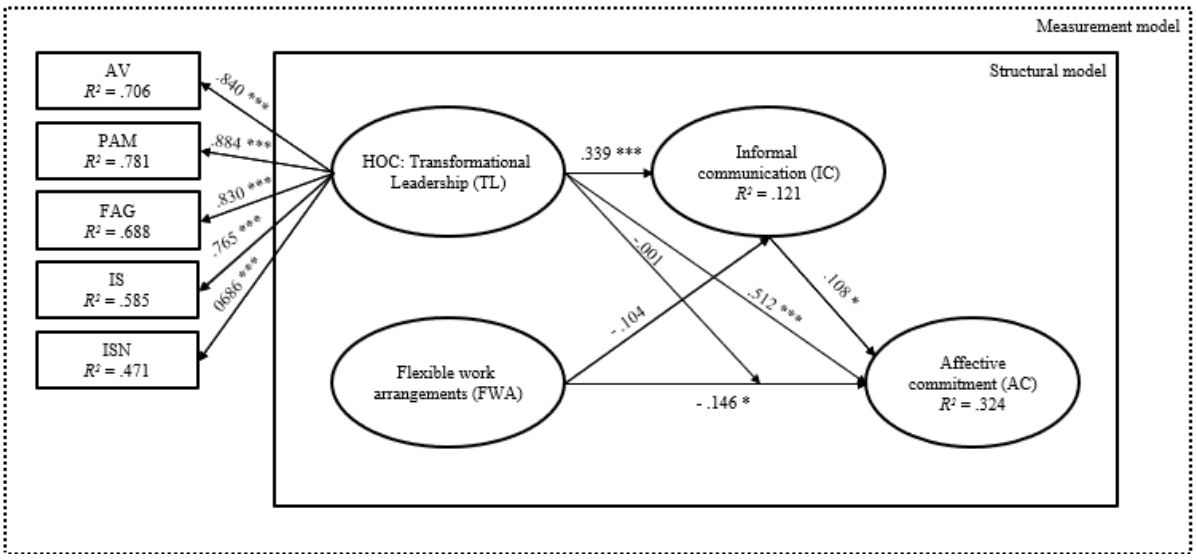
Table 3. Assessing the measurement model

	Items	M	SD	IL min	IL max	HOC on LOC	CR	α	AVE	DV
FWA	4	3.491	1.159	.592	.946	n/a	.838	.779	.573	yes
IC	4	3.541	.659	.685	.790	n/a	.812	.695	.519	yes
HOC: TLI	19	3.504	.679	.701	.898	n/a	.901	.936	.648	yes
AV	5	3.315	.865	.739	.884	.860	.904	.865	.654	yes
PAM	3	3.553	.815	.727	.911	.877	.889	.811	.729	yes
FAG	4	3.685	.868	.834	.895	.780	.922	.887	.747	yes
IS	4	3.954	.828	.854	.909	.749	.931	.901	.772	yes
ISN	3	3.013	.873	.840	.886	.705	.898	.830	.746	yes
AC	5	3.756	.915	.763	.859	n/a	.907	.872	.662	yes

Note: IL min = item loading minimum; IL max= item loading maximum; LOC on HOC = Path coefficient from higher-order construct to lower-order construct; AVE = average variance extracted; CA = Cronbach's alpha; CR = composite reliability; M = mean; n/a = not applicable; SD =standard deviation, DV = discriminant validity assessment based on HTMT criterion, cf. appendix.
Source: *own table*

4.2. Structural model analysis – hypothesis testing

The next step was the structural model assessment, which is depicted in figure 1.



Note: p < .1 *, p < .05 **, p < .01 ***

Figure 1. Results of the structural model
Own depiction

First, the multicollinearity is checked using the variance inflation factor (VIF) (Hair et al., 2017). Since all values are below the threshold of five, there is no critical level of collinearity in the structural model. Secondly, R^2 values were assessed for analyzing the accuracy of the predictive power of the structural model. According to Henseler et al. (2009), R^2 values of .67, .33, or .19 for endogenous latent variables in the structural model are understood to be

substantial, moderate, or weak. As shown in figure 1, all explained substantive constructs showed weak R^2 values.

The analysis of the path coefficients was used to verify our hypotheses. To calculate p-values, bootstrapping was used as recommended (Hair et al., 2022).

The analysis shows that FWA is statistically negatively associated with AC (β = -.146; p = .063). Thus, we find no support for H_1, which was formulated in the opposite way. Furthermore, IC is positively related to AC, providing support for H_2 (β = .108; p = .100). Here, TFL statistically explains the existence of AC (β = .512; p < .001) supporting H_5 and the existence of IC (β = .339; p < .001) supporting H_7. Due to a very high p-value, we find no support for H_3, which postulated a negative relationship between FWA and IC (β = - .104; p = .206).

In order to assess the predictive power, the $PLS_{predict}$ procedure was applied (Sarstedt et al., 2022; Shmueli et al., 2016). It divides the data set into several training and a holdout sample(s) and evaluates the different predications of the dependent construct's indicators (Danks et al., 2017; Sarstedt et al., 2022). Thus, the root mean square error (RMSE) for the PLS-SEM was compared with the linear regression model (LM) (Sarstedt et al., 2022). The predictive power of this model is high since all RMSE values of the key target construct (AC) in the PLS-SEM analysis are smaller than in the LM (Hair et al., 2022).

Even though PLS-SEM does not provide an overall fit index (Hair et al., 2017), each of the evaluation criteria indicated a sufficient model quality, resulting in interpretable results and a high predictive power.

4.3. Mediation and moderation analysis

Hypotheses H_4 and H_6 were tested separately, as recommended by Hair et al. (2019). Significance was determined using the bootstrapping procedure (Hair et al., 2019). In contrast to the Sobel test (Sobel, 1982), this method offers the possibility of analyzing data that are not normally distributed. Testing H_4, first, the direct effect between FWA and AC was calculated. Second, the indirect effect was calculated by inserting IC into the model as a mediator. The results show that there is no significant moderating effect from IC on the nexus between FWA and AC (β = -.011, *p* = .371). Thus, H_4 was rejected as there is no mediating effect.

To test H_6, a moderation analysis was conducted using Chin et al.'s (2013) two-step approach (Chin et al., 2013). The path coefficients of the moderator (β = - .001, p = .980) was not significant. Thus, H_5 was rejected, i.e., there is no moderating effect.

5. Discussion

This study has aimed to analyze the consequences of FWA on affective commitment. Contrary to expectations, no positive relationship between FWA and AC was established. The data shows that FWA negatively and statistically significantly affect AC. This is contrary to the flexibility firm theory (Chatterjee et al., 2022; Rodgers, 1992). In this context, prior research did not only highlight positive, but also many negative effects. Many employees who work flexibly (in terms of place and time) often feel isolated and excluded (Allen et al., 2015) and become distant from the company (Cooper & Kurland, 2002) If employees work outside the company's premises, they lack identification with the values of the organization (Illegems et al., 2001; Weideman & Hofmeyr, 2021). As a result, emotional attachment decreases (Meyer & Allen, 1991). During the COVID-19 pandemic in particular, government restrictions led to employees isolating themselves in their homes in repeated intervals (lockdowns) to reduce the

risk of contagion. This may have intensified the feeling of isolation and loneliness, affecting business relationships as well. Since employees often worked completely remotely, they did not build a close relationship with the company and did not get to know the values and corporate culture. This reduces AC (Illegems et al., 2001; Weideman & Hofmeyr, 2021). In summary, our results show that apparently in the context of the Covid-19 pandemic, a high proportion of FWA tended to result in negative commitment. Although there are both positive and negative aspects of FWA in the research, the negative aspects seem to predominate here. In principle, therefore, it must also be questioned whether a linear relationship between FWA and AC can sufficiently well represent the complex negative as well as positive relationships. It is also conceivable that an excessively high proportion of FWA tends to have negative results, while a balanced proportion, in particular depending on the employees' personal attitudes and life circumstances, is in turn viewed more positively than if there are no flexible working opportunities.

Our study has highlighted that IC positively impacts AC ($\beta = .108$, $p = .099$), constituting a significant relationship with a small effect. This is in line with the analysis from Turk et al. (2021). Employees are more likely to exchange information informally with colleagues, leading to a stronger bond among them (Postmes et al., 2001). However, since colleagues do not necessarily represent the company's values and ideas, IC would be more likely to positively impact the commitment to the team than to the company (Postmes et al., 2001). Therefore, communication with managers could play a superior role by analyzing the organizational commitment (Postmes et al., 2001). However, the significant relationship uncovered that in our study, IC positively impacts AC, underlining its relevance.

Contrary to expectations, no significant relationship between FWA and IC and thus no mediation was identified. However, the relationship is negative, implying that FWA may reduce IC, although information and communication technologies are implemented in companies, serving as platforms where employees can get in contact with each other and exchange information informally (Weideman & Hofmeyr, 2021). The negative relationship highlights that informal communication tends to decline in FWA.

Besides informal communication, transformational leadership was analyzed as an influencing factor. As already proven in other studies (Bono & Anderson, 2005; Felfe, 2006; Heinitz & Rowold, 2007; Meyer et al., 2002), TFL positively impacts employees' AC. However, TFL has not moderated the nexus between FWA and AC. These findings do not confirm with Eisenberger et al.'s (1986) POS theory, which argues that transformational leadership support has a considerable impact on the employees of organizations, motivating them to be more engaged in their jobs to achieve the goal. De Leede and Heuve (2016) also highlighted that there is no significant effect of TFL on the relationship between new forms of work and organizational commitment. Thus, it can be assumed, as a result of FWA, managers and employees no longer interact directly on a daily basis (Gerards et al., 2021). The frequency of direct interaction between manager and employee has an impact on the effectiveness of TFL, as it is partly expressed through nonverbal behaviors, such as facial expressions or gestures (Schyns & Mohr, 2004, p. 301), which seem to be lacking.

Nevertheless, TFL is positively associated with informal communication. Transformational leaders promote exchange among employees and stimulate informal communication (Lee & Chon, 2021; Men, 2014a). In addition, informal networks are of great importance in transformational leadership, which gives informal communication a different status (Felfe, 2006).

5.1. Theoretical contributions

The study has provided several theoretical contributions to the extant literature. This study has highlighted that FWA negatively impact AC. Since prior results on this issue have been inconsistent so far, these results were generated using a German sample. This implies a theoretical contribution as it is in contrast to the flexibility firm theory (Chatterjee et al., 2022; Eisenberger et al., 1986). This highlights that FWA do not only have positive effects. It is necessary to say that the fact that workers are free to decide when and where they work reduces their contact with the company. As a consequence, the flexibility firm theory must be adapted and supplemented with this study's results.

By amplifying POS theory (Eisenberger et al., 1986), this study has interpreted that TFL does not support an affective commitment when individuals use FWA. The POS cannot ignite its effect because individuals are no longer in close communication with their leader and thus the support from transformational leaders is not sufficiently perceived. This is a new finding as not only the leadership style seems to be sufficient to be perceived as support by the organization, but also the indirect communication with co-workers.

Obviously, from a theoretical point of view, there are circumstances in the context of flexible working practices that entail positive as well as negative effects. Whether this circumstance is to be sought in the share of FWA alone, or also in the broader work context or the person him-/herself, should be the subject of future theoretical model developments on FWA, in order to take into account the complex character of the phenomenon.

5.2. Managerial contributions

Since many companies offer FWA, this article provides important insights for companies. In summary, FWA are increasingly being used in companies because they offer many advantages for both the organization and the employees. Therefore, employers offer FWA to recruit and retain the best candidates in times of a shortage of skilled workers (Illegems et al., 2001; Kossek et al., 2006).

Besides all their advantages, the results show that FWA negatively impact AC. Thus, companies have to counteract and actively introduce activities to ensure that employees feel connected to the company regardless of where and when they work. Therefore, companies should work harder to communicate the corporate culture, promote team spirit and strengthen commitment, i.e., transformational leaders have to apply the TFL key behaviors so affective commitment of employees increases. Moreover, informal communication must be an integral part of the corporate culture, as it enhances affective commitment, i.e., employees are bound to the company.

5.3. Limitations and avenues for further research

Our study has several limitations that may point to avenues of future research. First, our cross-sectional study cannot proclaim to have presented causal effects, as cross-sectional studies have numerous methodological problems such as endogeneity which cannot be excluded here (Wilms et al., 2021). In order to gain more meaningful results, future researchers should conduct longitudinal studies on the effects of FWA on AC, enabling causal analysis. Second, we generated a non-random sample that does not claim to be representative of the German economy. Third and furthermore, this study did not distinguish between the private and public sectors. Since the TFL is valued more highly in the private sector, the study should

be conducted again for both, private and public sector, in order to evaluate differences or commonalities. In addition, future researchers should evaluate the results in different countries and cultures to generalize the findings. Fourth, as already mentioned above, we examined the relationship between FWA and AC based on a linear relationship only. The results suggest that non-linear relationships may be more appropriate to better analyze different expressions of FWA.

Fifth, the high-performance expectations dimension did not meet the criteria to be a significant indicator of TFL when the data were analyzed. Therefore, it is critically examined whether the evaluated model of TFL is consistent with Podsakoff et al.'s (1990) theoretical construct. Future studies should re-examine these findings with all TFL key behaviors.

In addition, further research should examine other possible intervening constructs on the relationship between FWA and AC, e.g., the impact of IT, organizational culture, or team cohesion (Amlinger-Chatterjee & Wöhrmann, 2017). Similarly, at the individual level, employees' personality traits could influence how flexible work arrangements are perceived (Hill et al., 2008). Finally, future studies should also examine normative and calculative commitment as dependent variables to holistically capture the construct of organizational commitment (Meyer & Allen, 1991).

Conclusion

Technological progress and the rapid development of information and communication technologies enable more FWA. In addition, the COVID-19 pandemic provided a new momentum to the spatial and temporal flexibilization of work. FWA offer a lot of advantages. This is why more and more employees want to work flexibly. In this situation, this study addressed this framework and investigated the impact of FWA on AC during the COVID-19 pandemic in which employees were forced to work outside the company's premises. The results show that FWA negatively impact AC. Moreover, IC and TFL do not affect the relationship between FWA and AC. Therefore, the theoretical model extends the knowledge of existing research and provides new insights into the depicted relationships. For practical implications, it can be concluded that FWA decreases AC. Consequently, companies have to counteract and actively introduce measures to retain employees in times of a shortage of skilled workers. Measures that strengthen informal communication or the transformational management style are not enough. Instead, companies must develop further measures to strengthen employees' sense of belonging and promote the corporate culture and team spirit.

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Appendix 1. Discriminant Validity Assessment by HTMT

	1	2	3	4	5	6	7
AC							
IC	.371 [.235, .504]						
AV	.500 [.403; .590]	.302 [.195; .438]					
PAM	.534 [.427; .633]	.388 [.275; .517]	.761 [.679; .836]				
FAG	.502 [.387; .606]	.360 [.241; .485]	.701 [.612; .780]	.780 [.701; .848]			
IS	.503 [.382; .613]	.332 [.205; .468]	.517 [.397; .626]	.817 [.738; .886]	.597 [.488; .690]		
ISN	.438 [.330; .542]	.274 [.185; .401]	.710 [.607; .801]	.644 [.540; .739]	.507 [.392; .613]	.386 [.251; .515]	
FWA	.122 [.102; .232]	.107 [.106; .268]	.106 [.093; .239]	.104 [.086; .220]	.100 [.086; .211]	.105 [.067; .236]	.196 [.130; .329]

Note: Values in square brackets indicate the 95% confidence interval for each correlation

Source: *Own table*