Intrinsic Employee Motivation During COVID-19:

The Association of Perceived-Organizational-Support and Leadership-Style

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Management Summary

Background

The starting point of this research was the reduction of employee motivation during the COVD-19 pandemic. Since employee motivation is a main asset for a company's success, businesses face the challenge to raise their employees' motivation. Especially intrinsic employee motivation (IEM), defined as behavior that is driven by inner rewards (e.g. personal growth), seems to be important during the pandemic. IEM can be created using non-material resources (e.g. mentorship) and is therefore valuable when external rewards (e.g. salary) are limited. To raise IEM, more insight on the influencing factors is needed. Research suggests that white-collar (employees working in an office-environment) and blue-collar (employees engaging in manual labor) show different levels of IEM. Different leadership styles may also be associated to the relationship between collar and IEM. This study focused on the differences between task-oriented leadership style (supervisor focusses on achieving task) and relationship-oriented leadership style (supervisor focusses on motivation and relationships). Therefore, the first aim of this study is to enhance insight in the differences of collar on IEM and how leadership styles are related to this relationship, to give organizations the opportunity for possible leadership style adjustments. Furthermore, it is proposed that high job stress leads to low IEM and that perceiving support by the company (perceived-organizational support (POS)) is positively associated to the relationship between job stress and IEM. Consequently, the second aim of this study is to increase insights on those relationships to get a deeper understanding on how to support employees during a pandemic.

Method and Results

Data was collected among 130 employees at Continental AG/Vitesco Technologies in Nuremberg, Germany. White- and blue-collar employees answered a questionnaire. The results suggest that collar does not predict IEM levels during the pandemic. Furthermore, task-oriented and relationship-oriented leadership style seems to show different associations for white- and blue-collar. Task-oriented leadership style was associated with higher levels of IEM in white-collar employees compared to blue-collar and relationship-oriented leadership style was associated to higher levels of IEM in blue-collar employees compared to whitecollar. Additionally, the results suggest that high job stress leads to low IEM and high POS is related to high IEM. However, POS does not seem to be associated to the relationship of job stress and IEM.

Conclusion and Recommendations

The findings of this research highlight that intrinsic employee motivation may be

treated with special caution during the pandemic. This study implies that experiencing IEM might be of similar value to white- and blue-collar employees. Therefore, it may be recommended for supervisors to focus on an employee's individual level of IEM when motivating employees. Additionally, supervisors guiding white-collar might want to adapt qualities of task-oriented leadership style and supervisors guiding blue-collar might want to adapt some relationship-oriented leadership style qualities to raise IEM. Lastly, supervisors as well as employees need to be aware of high job stress during the pandemic, as constantly high job stress is related to reduced IEM and health risks, e.g. burnout. High levels of IEM may be reduced by using stress management techniques.

Abstract

It is not fully understood which factors influence intrinsic employee motivation during the COVID-19 pandemic. Therefore, this project intends to study hypotheses assuming an association of leadership style on the relationship between collar and intrinsic employee motivation (IEM), as well as an association of perceived-organizational support (POS) on the relationship between job stress and intrinsic employee motivation. To answer the hypotheses, a questionnaire was filled in by 130 employees at Continental AG/Vitesco Technologies in Nuremberg, Germany. The results show that collar does not predict IEM, but task-oriented and relationship-oriented leadership style seem to show different associations to white- and blue-collar employees during the ongoing pandemic. Additionally, the results suggest that job stress is negatively, and POS is positively related to IEM, however POS does not seem to be positively associated to the relationship between job stress and IEM. This study highlights the importance of differences in intrinsic employee motivation during the COVID-19 pandemic and suggests adjustments for supervisors.

Keywords: COVID-19 pandemic, intrinsic employee motivation, collar, leadership style, job stress, perceived-organizational support

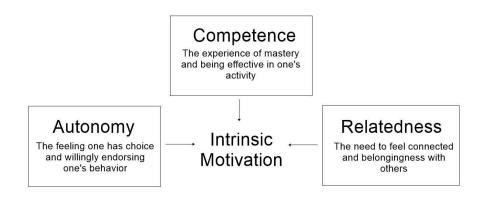
Introduction

The ongoing COVID-19 pandemic has drastically changed the entire world within a few months. To reduce the spread of the virus, many employees were asked to work from home and had to reduce their social contacts (Bitkom e.V., 2021). This has resulted in a severe reduction of employee motivation by almost 50% compared to years before the pandemic (Hitka et al., 2021). Interestingly, employee motivation is one of the main assets for a company's success as it is inconceivable to maintain a productive company climate and satisfied employees (Patterson et al., 2004; Gabčanová, 2011). Therefore, many companies now face the challenge to increase their employees' motivation (Wolor et al., 2020).

Employee motivation is defined as the force that initiates, guides and maintains goaldirected behavior (Lee & Raschke, 2016). In other words, it stimulates an employee to act towards a certain (work-related) goal (Locke, 1978). Two types of motivation, namely extrinsic and intrinsic motivation, explain how employee motivation influences goal-directed behavior (Ryan & Deci, 2000). These two motivations assume that employee motivation is triggered by different incentives: (1) Extrinsic motivation evolves when the employee works to earn a reward, e.g. money, promotion. During a crisis, such as the current pandemic, companies often lack the resources to simply raise extrinsic motivation (e.g. higher salaries) and in view of that fact, raising extrinsic motivation is often not applicable (Reinhart, 2021). (2) Intrinsic motivation refers to behavior that is driven by internal rewards e.g. personal growth, own decision-making. In the work context, this behavior is called *intrinsic employee motivation (IEM)* and is triggered when completing a task or developing oneself is personally rewarding (Thomas, 2009). Especially during times of a crisis, it is important to focus on IEM as it can be created using non-material resources such as mentorship or recognition (Fiedler, 1993; Kusurkar et al., 2011; Deci & Ryan, 2010). Since IEM seems to play a crucial role for keeping employee motivation high during the pandemic, this paper will set its focus on IEM. The self-determination theory (SDT; Figure 1) shows the system of raising IEM (Deci & Ryan, 2012).

Figure 1

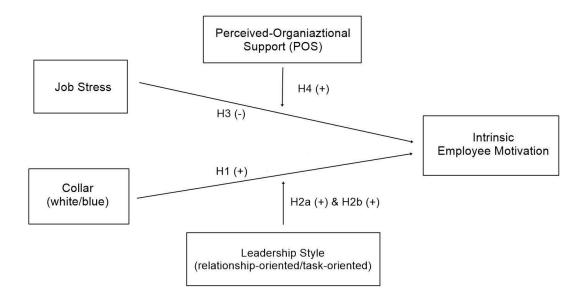
Self-Determination Theory by Ryan and Deci (2012)



This theory suggests that individuals are motivated to grow by three intrinsic psychological needs: Competence, autonomy, and relatedness. When these three needs are satisfied, IEM increases (Deci & Ryan, 2012). Interestingly, studies show that mentoring and support seem to raise those three psychological needs by giving employees the feeling of being capable of their own actions and a feeling of belongingness (McClure & Brown, 2008). Noticeably, during a crisis most employees also rate receiving mentoring and support as especially motivating as it raises relatedness and gives a feeling of emotional stability (Termini et al., 2021). This connection clearly highlights the importance of IEM during the current pandemic. Figure 2 illustrates the assumptions of which factors might influence IEM. These assumptions are discussed in the following paragraphs in more detail.

Figure 2

Visualization of the research model



Collar and Intrinsic Employee Motivation

In the work context, there are two different types of work-professions, namely whiteand blue-collar employees: (1) White-collar refers to occupations involving administrative and managerial duties which are performed at an office environment, e.g. accounting or consulting. (2) Blue-collar refers to occupations engaging in manual labor, e.g. manufacturing and construction (Locke, 1973). Interestingly, white- and blue-collar employees seem to differ in employee motivation. White-collar workers mainly perceive intrinsic rewards (e.g. personal growth, achievements) as most motivating, whereas blue-collar workers identify extrinsic rewards (e.g. salary) as more motivating in their occupations (Marandi & Moghaddas, 2013; Najjar & Fares, 2017). Therefore, it seems that white-collar employee's value intrinsic rewards as more important compared to blue-collar employees (Locke, 1973). This might be related to research revealing that extrinsic rewards are more motivating when performing standardized work and intrinsic rewards boost motivation when performing more complex job tasks (Najjar & Fares, 2017). Since blue-collar job tasks are more likely to be standardized and white-collar tasks are mostly complex, it suggests that white-collar employees perceive a greater urge to satisfy their inner psychological need for competence compared to blue-collar employees (Marandi & Moghaddas, 2013). This is also in line with the self-determination theory (Deci & Ryan, 2012) as it states that mentoring and support raise the three psychological needs - competence, autonomy, relatedness - and with that raise IEM (McClure & Brown, 2008). Mentoring and support are especially needed when supporting personal

growth and achievements of the employees, which are (as mentioned above) more motivating for white-collar employees' occupations (Marandi & Moghaddas, 2013; Najjar & Fares, 2017). This assumption leads to the first hypothesis:

 H_1 : White-collar employees naturally experience more intrinsic employee motivation than blue-collar employees.

The Role of Leadership Style on Collar and Intrinsic Employee Motivation

As previously indicated, intrinsic employee motivation stimulates an employee to act towards a work-related goal (Lee & Raschke, 2016; Locke, 1978). These goals are not only defined by the employees themselves but also by the leadership style they experience, as the leaders direct their employees towards a goal (Buble et al., 2014; Raju, 2018). A *leadership* style is a leader's method of implementing plans, providing direction, and motivating their employees (Fiedler, 1967). Two leadership styles that are repeatedly associated with IEM are task-oriented leadership style and relationship-oriented leadership style: (1) Task-oriented leadership style refers to a leader focusing on tasks that need to be performed by the employees to meet a certain goal - this puts structure in place and leaders focus on a step-bystep solution for achieving a performance standard (Fiedler, 1967). Task-oriented leadership style is also related to the self-determination theory (Deci & Ryan, 2012). It raises competence in employees, since the leader aims to create a structured environment, which helps employees to reach high performance (Fiedler, 1967). (2) Relationship-oriented *leadership style* refers to a leader focusing on motivation and general well-being of the employees as a goal - this creates a supportive and feedback-rich environment and additionally focuses on building positive relationships within the teams (Fiedler, 1967). Relationship-oriented leadership style also seems to be connected to SDT (Deci & Ryan, 2012). It boosts relatedness, as the leader focuses on establishing a positive work climate and support among the employees (Fiedler, 1967). Therefore it can be concluded, that both leadership styles seem to link positively to IEM.

Interestingly, there is also research adding that white- and blue-collar employees respond differently to leadership styles (Fiedler, 1993). Since white- and blue-collar employees are motivated in different ways, they seem to find a certain leadership style more beneficial compared to other leadership styles (Locke, 1973; Marandi & Moghaddas, 2013; Najjar & Fares, 2017). The more the leadership style targets the goals and aimed rewards of the individual, the more effects on intrinsic employee motivation the leadership style shows: (1) Blue-collar employees' value extrinsic rewards (e.g. salary) as more motivating (Marandi & Moghaddas, 2013; Najjar & Fares, 2017). Since task-oriented leadership style focuses more

on completing tasks successfully and earning material rewards, it seems to raise IEM in bluecollar employees more effectively compared to white-collar employees, as it targets the goals of the blue-collar employees (Shu, 2015). (2) White-collar employees' value intrinsic rewards (e.g. personal growth) as more motivating (Marandi & Moghaddas, 2013; Najjar & Fares, 2017). Since relationship-oriented leadership style focuses more on intrinsic growth and the bonds between colleagues, it seems to raise IEM in white-collar employees more effectively compared to blue-collar employees, as it targets the goals of white-collar employees (Shu, 2015). Consequently, it might be expected that white- and blue-collar employees experience diverse effects of IEM, depending on the leadership style they experience. It might be assumed that blue-collar and white-collar employees both experience an increase in IEM when exposed to task-oriented leadership style as well as when exposed to relationshiporiented leadership style. However, task-oriented leadership style seems to focus more on the goals of blue-collar employees and therefore raises IEM levels more effectively for bluecollar. Relationship-oriented leadership-style seems to focus more on the goals of white-collar employees and therefore raises IEM levels more effectively for white-collar. Despite its importance, until now research has not considered the association of leadership style on the relationship between collar and IEM. Consequently, the second hypothesis was developed:

 H_{2a} : Task-oriented leadership style is positively associated with intrinsic employee motivation in blue-collar and white-collar employees, but higher levels for blue-collar compared to white-collar are expected.

 H_{2b} : Relationship-oriented leadership style is positively associated with intrinsic employee motivation in blue-collar and white-collar employees, but higher levels for white-collar compared to blue-collar are expected.

Job Stress and Intrinsic Employee Motivation

As mentioned above, leadership styles were identified as being positively related to intrinsic employee motivation (Deci & Ryan, 2012; Fiedler, 1967). However, there are also factors that seem to be negatively associated to IEM, one of them is job stress (Noermijati & Primasari, 2015). The pandemic has challenged many employees, as job stress levels have risen due to longer work hours, worries about personal finances and health (American Psychological Association, 2020). *Job stress* is defined as a physiological condition in which work-related obligations become burdensome and overwhelming, even to the point where it imposes negative effects on the employee's mental and physical well-being (Le Blanc et al., 2000). High job stress during the pandemic led to many risks (Mani & Mishra, 2020). It can lower an employee's perceived competency regarding their job as work may be overwhelming (Kinman & Grant, 2010). Additionally, feeling restrained by working conditions decreases the feelings of autonomy in employees (Vui-Yee & Yen-Hwa, 2020). Furthermore, being more dependent on other colleagues due to job stress might lead to a decrease in relatedness, as is can be a source of conflict, e.g. role conflicts (Gaines & Jermier, 1983). Summarizing, during high job stress an employee may feel less competent, autonomous, and related (Le Blanc et al., 2000). According to SDT this will lead to decreased IEM as the three factors that influence IEM are not fulfilled (Deci & Ryan, 2012). Resulting from this, the third hypothesis was established:

 H_3 : Job stress is negatively related to intrinsic employee motivation.

The Role of Perceived-Organizational Support on Job Stress and Intrinsic Employee Motivation

Besides job stress there seem to be other factors impacting intrinsic employee motivation, one of them is support (Paramitha & Indarti, 2014). To master uncertain times, a supportive environment can be beneficial for employees (Fiedler, 1993; Kusurkar et al., 2011). Support can not only be given by leaders but also by the organization itself (Eisenberger et al., 1986). This support at work is oftentimes approached from the perspective of *Perceived-Organizational Support (POS)*. POS refers to an employee's perception that the organization takes one's wellbeing into account and appreciates one's contributions (Eisenberger et al., 1986). Interestingly, POS has a positive effect on intrinsic employee motivation (Ajmal et al., 2015). If an employee has the feeling that the organization values the own contributions and is interested in one's wellbeing, IEM to perform one's job is raised (Yang et al., 2015). Again, this might be related to the self-determination theory (Deci & Ryan, 2012). Experiencing a feeling of support by the organization promotes their own belief of competence (McDonnell, 2019). This clearly highlights that perceived-organizational support is positively associated to intrinsic employee motivation.

Interestingly, research might also suggest an influence of POS on the relationship between job stress and IEM. Research showed that employees that perceived high job stress with organizational support showed higher levels of IEM than those that perceived high job stress without organizational support (Dima et al., 2021). Additionally, POS has a buffering effect on job stress, as high POS can lead to reduced feelings of job stress (Rhoades & Eisenberger, 2002). As mentioned above, research adds that POS also raises IEM. Since POS seems to reduce job stress and raise IEM, it can be assumed that POS is additionally related to the relationship between job stress and intrinsic employee motivation (Rhoades & Eisenberger, 2002; Deci & Ryan, 2012; Ajmal et al., 2015). Despite its importance, so far research has not considered the association of POS on the relationship between job stress and IEM. The fourth hypothesis derived from this as follows:

*H*₄: Perceived-Organizational Support (POS) is positively linked to the relationship between job stress and intrinsic employee motivation.

Research Goal and Questions

Filling the above-mentioned knowledge gaps regarding IEM during a pandemic could give more insight on influencing factors. High IEM is necessary to maintain a productive company climate and satisfied employees (Patterson et al., 2004). This research could give more insight on how collar is related to IEM and how leadership styles influence this relationship. This would give organizations the opportunity for possible leadership style adjustments. Additionally, this study can give insight into the relationships of job stress and POS on intrinsic employee motivation to get a deeper understanding on how to support employees during a pandemic. It is mostly important to test whether the current knowledge on IEM applies to times of a pandemic. And if not, in what way the circumstances influence IEM. Resulting from this goal, two research questions will be investigated: (1) Does collar predict intrinsic employee motivation in employees and how is leadership style linked to this relationship? (2) Is job stress negatively related to intrinsic employee motivation and how is perceived-organizational support linked to this relationship? To investigate these research questions, participants at Continental AG/Vitesco Technologies were asked to fill in a questionnaire.

Method

Participants

Based on the suggestions by Brysbaert and Stevens (2018) this study aimed for a power of .8 and a medium effect size of .25. The priori power analysis conducted with G*Power revealed that 128 participants are needed to potentially reach these aims. In total 130 participants, 61 females and 70 males, participated in the study. The ages of the employees varied from 18 to 65 years. All participants were employees at Continental AG/Vitesco Technologies in Nuremberg, Germany. The participants were white-collar (N = 87) and blue-collar employees (N = 44). Participants were asked to till in a questionnaire consisting of five parts (see Appendix A). White-collar were approached via e-mail and asked to fill in the online version of the questionnaire. Blue-collar were approached by their

supervisors and given a hard copy of the questionnaire. Participation was on a voluntary basis and an informed consent had to be given.

Materials

Intrinsic Employee Motivation (IEM). IEM was measured using the Intrinsic Motivation Inventory (IMI; Ryan 1982). The IMI is a self-report measure of intrinsic motivation. It consists of seven different sub-scales, but only the interest/enjoyment scale was considered, since it directly measures intrinsic employee motivation. In total seven statements had to be scored on a 7-point Likert scale (from 1 = not at all true to 7 = very true). The statements were adjusted to fit the work context (e.g. original: "This activity was quite enjoyable"; adjusted: "My work tasks are quite enjoyable"). The statements were translated into German by the researcher and checked for language correctness by the university supervisor. The IMI shows good reliability ($\alpha = .91$; Ostrow & Heffernan, 2018). Item three and four were reversed. A higher score on the IMI indicates higher intrinsic employee motivation.

White- and Blue-Collar. Collar was measured by asking the employees if they are a production worker or not ("Are you a production worker?"). Following from their answer it could be categorized if they are white- or blue-collar employees since only production workers can be identified as blue-collar employees at Continental AG/Vitesco Technologies. Collar was coded into two levels (1 = blue-collar and 2 = white-collar).

Task-Oriented and Relationship-Oriented Leadership Style. Leadership style was assessed using the Style Questionnaire adapted from Northouse (2009). The style questionnaire measures two types of leadership behaviors: task-oriented and relationship-oriented. Participants had to score their supervisor on 20 items (e.g. "Helps others in the group feel comfortable") on a 5-pont Likert scale (1 = never to 5 = always). The Style Questionnaire showed good reliability ($\alpha = .82$; Northouse, 2009). The statements were translated into German. The sum of the responses on the odd-number items determines the task-oriented and the sum of the even-numbered items determines the relationship-oriented leadership style score.

Job Stress. The General Work Stress Scale (GWSS) by de Bruin and Taylor (2005) was used to measure job stress. This scale was designed to measure the level of stress at the workplace. In total nine items (e.g. "Do you spend a lot of time worrying about your work?") had to be scored on a 5-point Likert scale (1 = never to 5 = always). The GWSS showed good reliability ($\alpha = .90$; de Bruin and Taylor, 2005). The statements were translated into German. A higher score on the GWSS indicates higher job stress.

Perceived-Organizational Support (POS). POS was rated using the short version of the Survey of Perceived-Organizational Support (SPOS) by Eisenberger et al. (1986). The survey measures the employee's general belief if the organization is committed to him/her, values their commitment, and is generally concerned about their well-being. Altogether eight items (e.g. "The organization values my contribution to its well-being") had to be scored on a 7-point Likert scale (0 = strongly disagree to 5 = strongly agree). The SPOS showed good reliability ($\alpha = .71$; Hellman et al., 2006). The statements were translated into German. Items two, three, five and seven were reversed. A higher score on the SPOS refers to a higher POS.

Control Variables. The first two control variables were gender (male/female/divers) and age (18-30/31-40/41-50/51-65). The third control variable was frequency of home-office use ("How often do you work in home-office?") which had four levels (Never/Once or twice a week/3-4 times a week/Every day of the week). The fourth control variable was work-changes due to COVID-19 ("How much has the COVID-19 pandemic changed your work?") which also had four levels (Not at all/Hardly changed (mostly remained the same)/Somewhat changed (mostly realized changes)/Changed completely).

Procedure

Prior to the data collection, the questionnaire was checked and granted permission by the workers' council, the company supervisor and the university supervisor regarding privacy protection and language correctness. The white-collar employees filled in an online version of the questionnaire. The online questionnaire was created using LimeSurvey. Blue-collar employees had to fill in a paper version of the questionnaire, since they do not have computer access at Continental AG/Vitesco Technologies. Firstly, the team assistants were invited to a short ten-minute meeting in which they were informed about the topic and the procedure of the study. They were asked to approach their team and inform them about the questionnaire. The team assistants got the LimeSurvey link as well as the PDF file of the paper version via email. Team assistants with only white-collar team members were asked to send out the link of the questionnaire to their team members. Team assistants with blue-collar team members were asked to print the questionnaires and hand them out to their team members. Most team assistants printed the questionnaire and asked their supervisor to hand it to the blue-collar employees, as the supervisor is in direct personal contact with the blue-collar employees at the production line. The data was collected for three weeks and employees could fill in the questionnaire during their worktime. Filling in the questionnaire took approximately ten minutes. The questionnaire started with reading the information letter and agreeing to the consent form. After that the scales had to be answered in the following order: Intrinsic

Motivation Inventory, Style Questionnaire, General Work Stress Scale, Survey of Perceived-Organizational Support and questions about the control variables. The questionnaire ended with a written debriefing. White-collar employees handed in the finished questionnaire online, blue-collar employees had to hand them back to their supervisor who in turn handed it to their team assistant. After the team assistants received the filled-in questionnaires back, they contacted the researcher who then collected the questionnaires at the team assistant's office. The data of the online questionnaire was transferred from LimeSurvey to SPSS 27. The data of the paper version of the questionnaire was transferred to SPSS 27 manually.

Data Analysis

Two analyses were performed as the independent variables had two separate interactions with the dependent variable. The first analysis was a two-way ANCOVA. The quantitative dependent variable was IEM ranging from the minimum score 7 to the maximum score 49. Collar (white/blue) was the qualitative between-subject factor. Leadership style (task-oriented/relationship-oriented) was the quantitative covariate, each having an own score between 10 and 50. The second analysis was a multiple regression analysis. The quantitative dependent variable was IEM (7-49). Job Stress was the quantitative independent variable ranging from the minimum score 8 to the maximum score 40. POS was the quantitative covariate ranging from the minimum score 0 to the maximum score 48. Exploratory analyses were performed for the control variables. Before running the analyses, the raw data was sorted, reversed items were recoded and the totals of the variables were calculated. The variables task-oriented and relationship-oriented leadership style as well as job stress and POS were standardized to compare those scores that had different normal distributions. A normality check was conducted which showed that according to the guidelines by Field (2009) intrinsic employee motivation, leadership style and perceived-organizational support were normally distributed. Based on the suggestion by Field (2009), no outliers were found.

Results

Descriptive Statistics

In order to get an overview of all variables, Table 1 presents the descriptive statistics. In general, participants had a moderate level of intrinsic employee motivation and a moderate level of perceived-organizational support. Notably, participants showed a fairly low level of job stress. The dependent variable IEM was correlated to all the variables except task-oriented leadership style and the control variables. The control variables did not show any significant effects on the central variables.

Table 1

Means, Standard Deviations and Correlations of Variables

	М	SD	1	2	3	4	5	6	7	8	9	10
1) Intrinsic Employee Motivation	26.9	6.0	1									
2) Collar ^{a, b}	1.7	0.5	.233**	1								
3) Task-Oriented Leadership Style	35.7	8.0	.104	194*	1							
4) Relationship-Oriented Leadership Style	38.2	8.2	.485**	.113	.612**	1						
5) Job Stress	18.7	6.3	428**	043	033	375**	1					
6) Perceived-Organizational Support	23.8	9.8	.522**	.092	.220*	.537**	492**	1				
7) Gender ^{a, c}	1.5	0.5	022	.055	159	091	.028	095	1			
8) Age ^a	2.2	1.0	.004	.007	009	033	.048	092	081	1		
9) Home-Office Frequency ^a	0.9	1.1	.130	.590**	129	.109	042	.199*	139	004	1	
10) Work-Changes due to COVID-19 ^a	1.6	1.0	.077	030	.075	.045	.200*	.123	101	024	.236**	1

Note. N = 130

^a Not a continues variable, therefore interpretation of mean and standard deviation depend on the levels of the variable. ^b Collar was coded as 1 = blue-collar and 2 = white-collar. ^c Gender was coded as 1 = female and 2 = male.

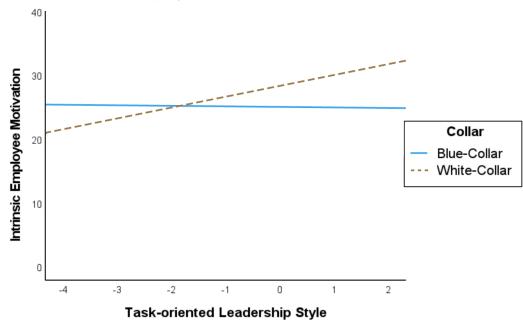
* = *p* < .05. ** = *p* < .01

Main Analysis

Analysis 1. The ANCOVA revealed that this study could not show a relationship between collar and intrinsic employee motivation (F(1, 5) = .57, p = .45). The means between white-collar (M = 24.93, SD = 3.45) and blue-collar employees (M = 27.87, SD = 4.62) did not significantly differ, however blue-collar employees showed a slightly higher level of intrinsic employee motivation compared to white-collar employees. Furthermore, the analysis could not show a relationship between task-oriented leadership style and intrinsic employee motivation ($\beta = .27$, t(128) = .28, p = .78). A relationship between relationship-oriented leadership style and intrinsic employee motivation could be shown ($\beta = 2.23$, t(128) = 3.01, p = .003). Additionally, the relationship between collar and IEM was positively related to both task-oriented leadership style (F(1, 5) = 13.82, p < .001) as well as relationship-oriented leadership style (F(1, 5) = 11.61, p = .001). Collar was coded as I = blue-collar and 2 = white-collar. Consequently, multiple regression post hoc analyses were performed.

The results of the post hoc analyses showed that task-oriented leadership style raised the IEM levels for white-collar employees ($\beta = .212$, t(128) = 3.25, p = .002) but did not raise the IEM levels for blue-collar ($\beta = .01$, t(128) = 3.25, p = .94). Therefore, task-oriented leadership style was positively associated with IEM in white-collar employees ($R^2 = .112$) but not in blue-collar employees (see Figure 3).

Figure 3

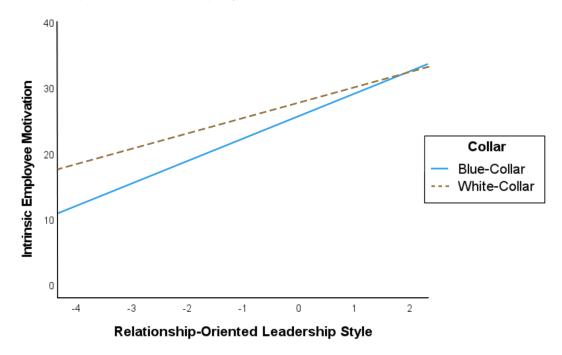


Intrinsic employee motivation levels of white- and blue-collar employees when experiencing task-oriented leadership style

Additionally, it was shown that relationship-oriented leadership style raised the IEM levels for white-collar employees ($\beta = .288$, t(128) = 5.03, p < .001) as well as for blue-collar employees ($\beta = .415$, t(128) = 3.58, p = .001). Therefore, relationship-oriented leadership style was positively associated with IEM in white-collar and blue-collar employees, however the visualization shows that relationship-oriented leadership style evoked higher IEM levels for blue-collar ($R^2 = .234$) compared to white-collar ($R^2 = .184$) employees (see Figure 4).

Figure 4

Intrinsic employee motivation levels of white- and blue-collar employees when experiencing relationship-oriented leadership style



Analysis 2. The multiple regression analysis revealed that the overall model is significant (F(3, 126) = 20.23, p < .000) with a strong effect size ($R^2 = .325$). Job stress had a significant negative relation to IEM ($\beta = -1.07$, t(128) = -2.01, p = .05) and therefore high job stress was related to less intrinsic employee motivation. Furthermore, it was shown that perceived-organizational support has a significant positive relation to IEM ($\beta = 2.64$, t(128) = 5.17, p < .001) and therefore high perceived-organizational support led to more intrinsic employee motivation. However, a positive association of POS on the relationship between job stress and IEM could not be shown ($\beta = .74$, t(128) = 1.63, p = .17).

Discussion

Employee motivation is one of the main assets for a company's success (Patterson et al., 2004; Gabčanová, 2011). It is alarming, that during the global pandemic, employee motivation has reduced drastically (Hitka et al., 2021). Especially intrinsic employee motivation seems to be of great value to raise IEM, as it can be created using non-material resources such as mentorship or recognition (Fiedler, 1993; Kusurkar et al., 2011; Deci & Ryan, 2010). Consequently, more knowledge on intrinsic employee motivation and its associated factors are needed. This study aimed to enhance insight on the differences between blue- and white-collar employees on IEM and how task-oriented and relationship-oriented leadership styles are linked to these differences. Additionally, it was investigated if high job stress leads to lower IEM and how perceived-organizational support is associated to this relationship.

The assumption that (H₁) white-collar employees naturally experience more IEM than blue-collar employees (Marandi & Moghaddas, 2013; Najjar & Fares, 2017) could not be shown in this study. Furthermore, (H_{2a}) task-oriented leadership style was assumed to raise IEM in white- and blue-collar employees, however higher levels for blue-collar compared to white-collar were expected (Marandi & Moghaddas, 2013, Shu, 2015). This expectation could not be confirmed as task-oriented leadership style raised the IEM levels for white-collar employees but not for blue-collar employees. Additionally, is was expected that (H_{2b}) relationship-oriented leadership style raises IEM in blue-collar and white-collar employees, but higher levels for white-collar compared to blue-collar were expected (Marandi & Moghaddas, 2013, Shu, 2015). Interestingly, the findings suggest opposite effects as relationship-oriented leadership style showed higher IEM levels for blue-collar employees compared to white-collar employees. Moreover, the prediction that (H₃) job stress is negatively related to intrinsic employee motivation (Deci & Ryan, 2012; Le Blanc et al., 2000) could be confirmed by this study. The assumption that (H₄) perceived-organizational support is positively linked to the relationship between job stress and IEM could not be shown. However, it was shown that POS led to more IEM. Lastly, the control variables did not show links to the central variables. The relations between the hypotheses and this study's findings are discussed below.

Theoretical Implications

The first hypothesis could not be confirmed by this study as there were no differences between white- and blue-collar employees regarding their IEM levels. This might be explained by a study revealing that regardless of occupational status, employees desire their work to matter to their inner selves (Lips-Wiersma et al., 2016). The inner self plays an important role for IEM as the inner self is the aspect that drives employees to show intrinsic motivation (Mills, 1991). Additionally, it was found that during stressful events, such as the pandemic, employees especially focus on keeping their inner selves satisfied (Warren-Smith, 2020). Keeping the inner self satisfied at work is often achieved by personal growth or own decision-making, which in turn raises IEM (Lips-Wiersma et al., 2016). This implies that experiencing IEM might be of similar value to white- and blue-collar employees during the pandemic as both want to satisfy their inner-selves.

However, the results of the second hypothesis show that collar still plays an important role when motivating employees through leadership styles as task-oriented leadership style showed higher IEM levels for white-collar and relationship-oriented leadership style showed higher IEM levels for blue-collar employees. The second hypothesis was based on research suggesting that the more the leadership style targets the goals of the individual (blue-collar mostly motivated by extrinsic goals; white-collar mostly motivated by intrinsic goals), the more effects on IEM the leadership style shows (Shu, 2015). One explanation why the results showed opposite effects than predicted may be attributed to the suggestion, that during uncertain times, such as the pandemic, the goals of employees shift: (1) Employees who used to focus on self-development shift their attention to more fundamental tasks, since short-term goals (e.g. providing for family) become more expedient; (2) Employees who used to focus on earning rewards now shift their goals to connecting to colleagues, as they value relatedness as an important factor for support during uncertain times (Kniffin et al., 2021). Therefore, it may be suggested that white-collar employees value structure and blue-collar value relatedness as important goals during the pandemic. Since task-oriented leadership style promotes structured work (Fiedler, 1967), white-collar employees may value this leadership style as more beneficial, as it might direct them into an organized and helpful way of working. As relationship-oriented leadership style promotes creating supporting bonds (Fiedler, 1967), blue-collar employees may experience that leadership style as more valuable as it creates relatedness. Hence, this research might propose that white- and blue-collar employees may value goals differently during the pandemic and therefore also experience leadership styles variously.

The third hypothesis was confirmed since employees who encountered a high amount of job stress displayed lower levels of IEM (Deci & Ryan, 2012; Le Blanc et al., 2000). This is in line with research by Dima et al. (2021) revealing that high job stress was indeed related to the consequences of the pandemic (e.g. job insecurity) which was one of the reasons why intrinsic motivation decreased. They additionally showed that stress was mainly generated by work-related factors (Dima et al., 2021). This highlights the importance of limiting job stress during the pandemic, as it seems to have a high probability for lowering IEM.

The fourth hypothesis could not be confirmed by this study. One reason why there was no positive relation of POS found on the relationship between job stress and IEM could be that other factors may need to be added to show a positive impact. Job stress is a highly complex aspect and research suggests that combining factors that promote IEM (e.g. vacation, leadership styles and social interaction) may buffer the effect of job stress on IEM (Seifert et al., 2012). Nevertheless, this study could show that POS had a positive relationship to IEM as employees experiencing a high POS displayed higher IEM. This highlights that POS may not be positively related to the relationship of job stress and IEM, however it is still an important factor when examining IEM during the pandemic.

Limitations and Future Directions

Even though this study brings some new insights on intrinsic employee motivation during the pandemic, it showed several limitations that demand attention. Firstly, the study design showed limitations, since a non-experimental design was used, and results were collected using self-reported data. White- and blue-collar employees were approached differently, since blue-collar employees do not have computer access. Therefore, white-collar employees filled in the questionnaire online, whereas blue-collar employees filled in the questionnaire on paper. The hard-copy questionnaire was given to the blue-collar employees by their supervisors and also handed back to their supervisors. This might have led to a social desirability bias (Grimm, 2010) as blue-collar employees might have answered the questionnaire in a manner that will be viewed as favorably by their supervisors. Additionally, the study had a one-time measure only. This might have led to biases concerning participants feelings at the time they filled in the questionnaire (Rosenman et al., 2011) as well as weakened the reliability and validity of the study (Cohen et al., 2017). Furthermore, participation was voluntary and might have led to a self-selection bias, which might have resulted in a lack of respondents (Heckman, 1990). Consequently, these biases might limit the generalizability of the findings (Rosenman et al., 2011). It would be valuable if future research would control for these biases by assuring that white- and blue-collar employees participate under the same conditions, use a repeated-measures design, and using random methods when selecting participants.

Another limitation might have been that at the point of data collection the pandemic had been present for more than a year, which might suggest that employees already adjusted

to the new, stressful situation. This could explain why the mean score of job stress was fairly low. Since the hypotheses regarding the positive association of POS on job stress and IEM were based on research dealing with high levels of job stress, an environment with higher job stress might have led to different results. Additionally, the healthy user bias might explain the lower job stress levels. The healthy user bias states that participants who volunteer for studies can be expected to be healthier than people who don't volunteer (LaFleur et al., 2011). This might have happened with job stress as participants who have good coping mechanisms regarding job stress might have been more willing to participate. Future studies could therefore focus on comparing data that was collected in the beginning of the pandemic to recent data to detect differences. Furthermore, it would be valuable to collect data at different companies to get a clearer picture on different job stress levels, especially in organizations with higher job stress.

Lastly, another limitation could have been that the control variable, which measured the work-changes due to the pandemic, was not related to any of the main variables. This may imply that the work-changes are not associated with a decrease in IEM but rather other factors, e.g. long working hours, heavy workload, and conflicts (Chauhan et al., 2014). Therefore, future research may want to focus on more factors that could relate to low IEM and test whether these factors are related to the pandemic.

Practical Implications

The findings of this research imply that during the pandemic, experiencing IEM might be of similar value to white- and blue-collar employees. Therefore, there might be more differences within the groups compared to between the groups. Consequently, it might be recommended for supervisors at Continental AG/Vitesco Technologies to focus on employees' individual levels of intrinsic employee motivation when enhancing those levels. Hence, supervisors might want to get more knowledge on their employees' individual levels of IEM (e.g. by using a questionnaire) before working out concepts to motivate them.

In addition, this study suggests that white- and blue-collar employees may value different leadership styles as more benefiting during the pandemic. The finding that white-collar employees displayed a higher level of IEM when exposed to task-oriented leadership style had a medium effect size. The result that Blue-collar employees showed higher levels of IEM when experiencing relationship-oriented leadership style showed a strong effect size. Therefore, supervisors at Continental AG/Vitesco Technologies need to consider goal changes of their employees and therefore may want to adapt their leadership style accordingly. Supervisors guiding white-collar employees might want to adapt qualities of the

task-oriented leadership style and supervisors guiding blue-collar might want to adapt some of the relationship-oriented leadership style qualities. Paying attention on how to support the goals of the employees may be very beneficial for intrinsic employee motivation during the pandemic.

Lastly, supervisors as well as employees at Continental AG/Vitesco Technologies need to consider job stress and its consequences during the pandemic, as high and constant job stress factors are not only related to reduced IEM but also several health risks, e.g. burnout (Iacovides et al., 2003). Therefore, it is suggested to frequently measure job stress. In case high levels are detected it is suggested to lower high stress to keep IEM high. This may be done by using stress management techniques, e.g. physical activity, mindfulness courses, and relaxation techniques (Varvogli & Darviri, 2011). Additionally, companies may want to monitor their perceived-organizational support as it can increase IEM. It may be suggested to raise POS by establishing strategies and policies that contribute to positive attributes towards the organization and positive employee beliefs e.g. fairness, supportive workforce (Eisenberger et al., 2016).

Conclusion

Summarizing, this study showed that intrinsic employee motivation may be affected differently during the COVID-19 pandemic. IEM might be of similar value to white- and blue-collar employees during the pandemic as they both want to satisfy their inner-selves. Furthermore, it seems that white-collar employees display higher levels of IEM when exposed to task-oriented leadership style and blue-collar employees display higher levels of IEM when exposed to relationship-oriented leadership style. This suggests awareness when executing leadership styles during the pandemic. Additionally, the negative link of job stress on IEM and its consequences need to be considered by supervisors as well as employees. Lastly, perceived-organizational support might be valuable when raising IEM as it led to higher IEM levels. These findings need to be considered by companies and supervisors when keeping intrinsic employee motivation high during the pandemic.

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Liebe Kolleg*innen,

ich bin Laura und absolviere derzeit meinen Master in Arbeits-, Organisations- und Gesundheitspsychologie. Aktuell arbeite ich an meiner Master These zum Thema "Mitarbeitermotivation zu Zeiten von COVID-19" in Kooperation mit Continental AG/Vitesco Technologies. Es wäre mir eine große Hilfe, wenn Sie, als Teil von Continental AG/Vitesco Technologies, an meiner Umfrage teilnehmen! Die Umfrage dauert ca. 10 Minuten. Ihre Teilnahme beruht auf freiwilliger Basis und kann <u>nicht</u> auf Ihre Person zurückgeführt werden. Alle weiteren Details finden Sie im folgenden Abschnitt.

> Ich bedanke mich herzlichst für Ihre Unterstützung 😊 Laura Döpper



Dieser Fragebogen kann auch online ausgefüllt werden!

INFORMATIONSSCHREIBEN

Für Teilnehmer der Studie: "Mitarbeitermotivation zu Zeiten von COVID-19"

1a. Forschungsziel

Sie wurden eingeladen, an einer wissenschaftlichen Forschung teilzunehmen. Das Ziel dieser Studie ist herauszufinden, welche Faktoren Mitarbeitermotivation zu Zeiten von COVID-19 beeinflussen. Diese Studie soll Continental AG/Vitesco Technologies als Grundlage dienen, um Sie als Mitarbeiter in dieser schwierigen Situation zu unterstützen.

1b. Studie

Sie werden gebeten an einer Umfrage teilzunehmen. Diese Umfrage besteht aus fünf kurzen Teilen. Das Ausfüllen des Fragebogens dauert ca. 10 Minuten.

2a. Verwaltung Ihrer personenbezogenen Daten

Die Teilnahme ist **anonym** und **keine** der erhobenen Daten werden auf Ihre Person zurückzuführen sein. Beim Hinterlassen einer E-Mail Adresse (um über die Ergebnisse der Studie informiert zu werden) wird auch diese **nicht** mit Ihren Antworten auf die Umfrage verknüpft.

2b. Aufbewahrungsdauer der Daten

Die von Ihnen unterzeichnete Einverständniserklärung wird nach Abschluss der Recherche 10 Jahre lang aufbewahrt. Ihre <u>anonymisierten</u> Forschungsdaten werden 10 Jahre nach Abschluss der Recherche gespeichert. Einverständniserklärung und Forschungsdaten werden separat von einander aufbewahrt.

2c. Freigeben Ihrer Daten

Aufgrund der Bedeutung der Kontrolle, Wiederverwendung und/oder Replikation von Forschungsergebnissen werden Forschungsdaten zunehmend mit anderen Forschern geteilt oder anderen Forschern zur Verfügung gestellt. Da Ihre Daten anonymisiert sind, werden keine der geteilten Daten auf Sie zurückzuführen sein.

2d. Zusätzliche Informationen zu Ihren Rechten bei der Verarbeitung Ihrer personenbezogenen Daten

Die Radboud University ist für die Einhaltung der Datenschutz-Grundverordnung (General Data Protection Regulation (GDPR)) bei der Verarbeitung Ihrer personenbezogenen Daten verantwortlich. Die Forscherin stellt sicher, dass Ihre Privatsphäre und die damit verbundenen Bedingungen geschützt sind. Er/sie hält sich an den niederländischen Verhaltenskodex für wissenschaftliche Integrität und die Universitätspolitik, in Bezug auf die Speicherung und Verwaltung von Forschungsdaten, bei der Durchführung dieser Forschung. Die Datenschutzerklärung der Radboud University finden Sie unter: https://www.ru.nl/english/vaste-onderdelen/privacy-statement-radboud-university.

Wenn Sie Fragen zu Ihrer Privatsphäre haben, wenden Sie sich bitte an die Privacy Officer (Faculty of Social Sciences - P.Janssen@socsci.ru.nl). Bei allgemeinen Fragen wenden Sie sich bitte über privacy@ru.nl an das Büro des Datenschutzbeauftragten der Radboud Universität. Weitere Informationen zu Ihren Rechten bei der Verarbeitung Ihrer personenbezogenen Daten finden Sie unter <u>https://www.ru.nl/privacy/english/protection-personal-data/data-subjects-rights_and on the website of the Dutch Data Protection Authority (https://autoriteitpersoonsgegevens.nl/en).</u>

3. Freiwillige Teilnahme

Ihre Teilnahme an dieser Studie ist freiwillig. Falls Sie sich dafür entscheiden, nicht an dieser Studie teilzunehmen, kommen damit **keine** Konsequenzen auf Sie zu.

4. Kontakt Informationen

Falls Sie zum jetzigen Zeitpunkt Fragen, Kommentare oder Sorgen haben, zögern Sie bitte nicht, mir diese mitzuteilen. Sie erreichen mich dazu unter: <u>lauradoepper@continental.com</u> ODER <u>l.dopper@student.ru.nl</u>.

In dem Fall, dass Sie im Nachhinein weitere Fragen, Kommentare oder Sorgen haben, teilen Sie diese gerne meinen Betreuern oder mir mit.

Student:

Laura Döpper <u>laura.doepper@continental.com</u> ODER <u>l.dopper@student.ru.nl</u> *Praktikantin HR Training & Development* Betreuer Continental AG/Vitesco Technologies: Werner Steger werner.steger@continental-cooperation.com Leitung Aus- und Weiterbildung

Betreuerin Universität: Joyce Elena Schleu joyce.schleu@bsi.ru.nl Radboud University, Behavioural Science Institute

EINVERSTÄNDNISERKLÄRUNG

zur Teilnahme an der Studie: "Mitarbeitermotivation zu Zeiten von COVID-19"

Hiermit bestätige ich, dass:

- ich schriftlich über die Studie informiert worden bin und die Informationen zufriedenstellend waren;
- ich die schriftlichen Informationen gelesen habe;
- mir die Gelegenheit gegeben wurde, Fragen zu dieser Studie zu stellen;
- meine Fragen zufriedenstellend beantwortet worden;
- mir reichlich Gelegenheit gegeben wurde, über die Teilnahme an der Studie nachzudenken;
- ich ganz freiwillig an der Studie teilnehme

Ich verstehe, dass:

- ich das Recht habe, meine Einwilligung und Teilnahme an dieser Studie jederzeit ohne Begründung zu widerrufen;

- meine personenbezogenen Daten in Übereinstimmung mit den geltenden europäischen Datenschutzbestimmungen verarbeitet werden;

- meine Daten in Übereinstimmung mit der Datenschutzerklärung der Radboud University verarbeitet werden (<u>https://www.ru.nl/english/vaste-onderdelen/privacy-statement-radboud-university</u>);

- dieses Einwilligungsformular 10 Jahre lang aufbewahrt wird;

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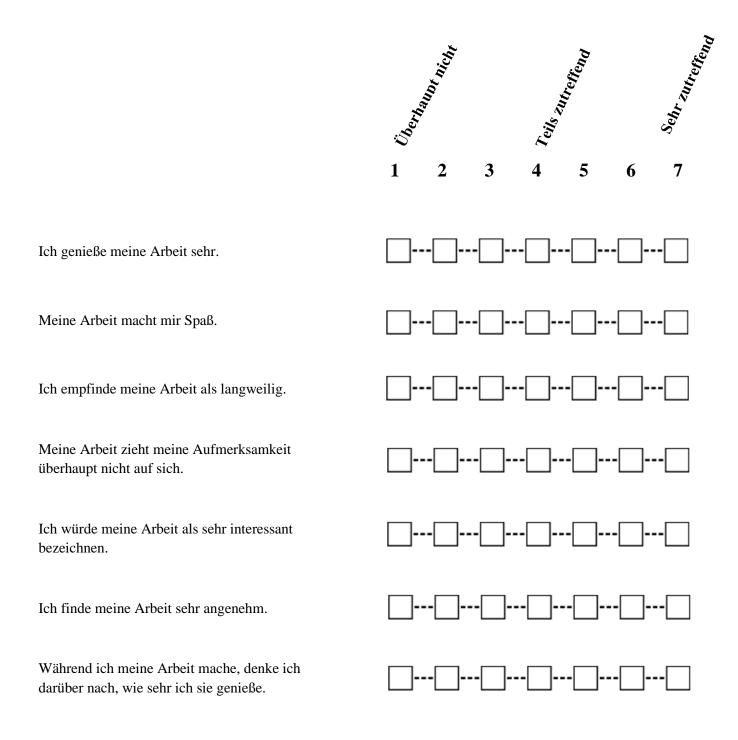
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NEIN

Nun folgen die Fragebögen, bestehend aus fünf Teilen. Bitte beantworten Sie **ALLE** Fragen. Überspringen Sie keine Frage, auch wenn Sie sich nicht sicher sind. Beantworten Sie einfach, was Ihrer Meinung nach am besten passt.

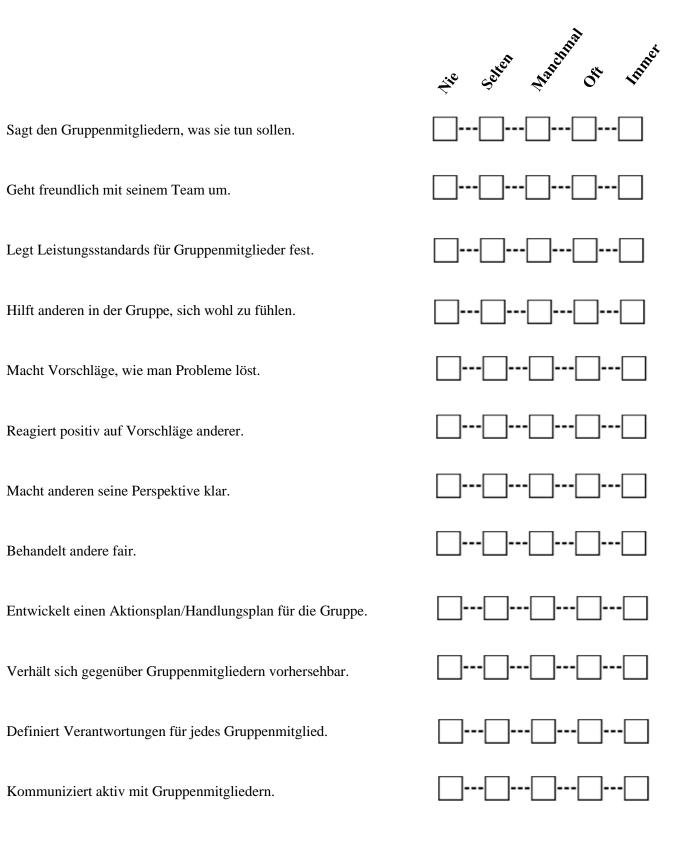
<u>Teil 1</u>

Anleitung: Bitte geben Sie für jede der folgenden Aussagen an, wie sehr diese **auf Sie** zutrifft, indem Sie die folgende Skala verwenden:



<u>Teil 2</u>

Anleitung: Lesen Sie jeden Punkt sorgfältig durch und überlegen Sie, wie oft **Ihr direkter Vorgesetzter** das beschriebene Verhalten zeigt. Bitte verwenden Sie dabei die folgende Skala:



Stellt seine/ihre eigene Rolle innerhalb der Gruppe klar.

Zeigt sich besorgt um das Wohlergehen anderer.

Legt einen Plan vor, wie die Arbeit auszuführen ist.

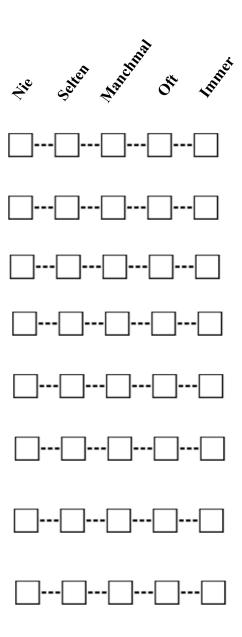
Zeigt Flexibilität bei der Entscheidungsfindung.

Stellt Kriterien auf, was von der Gruppe erwartet wird.

Teilt den Gruppenmitgliedern Gedanken und Gefühle offen mit.

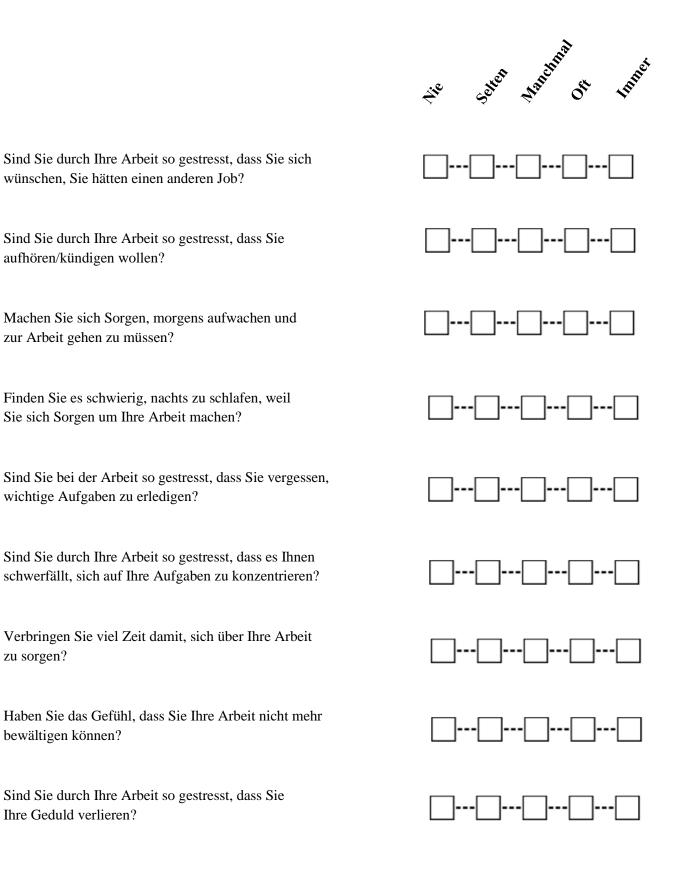
Ermutigt die Gruppenmitglieder, qualitativ hochwertige Arbeit zu leisten.

Hilft Gruppenmitgliedern, miteinander auszukommen.



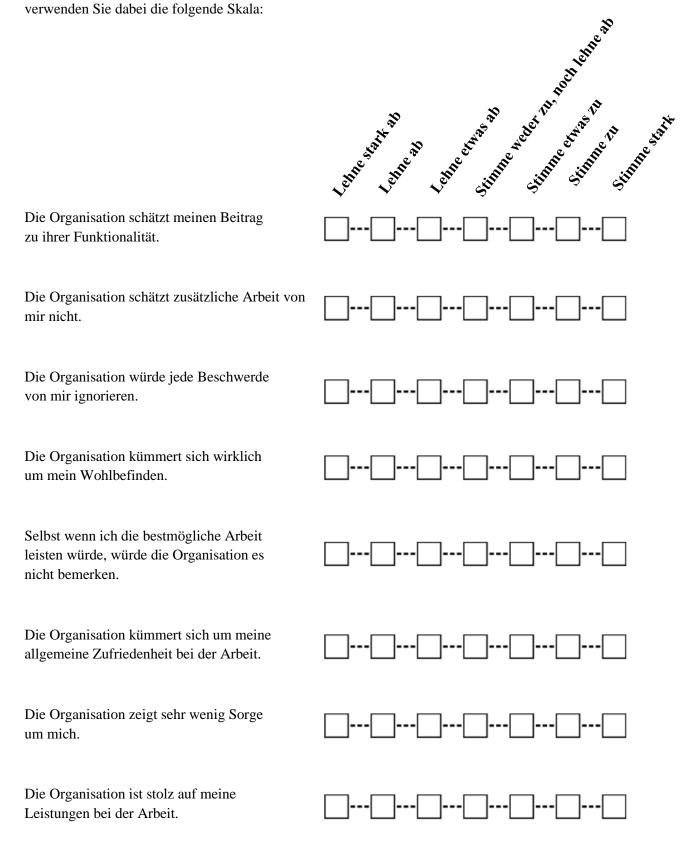
<u>Teil 3</u>

Anleitung: Bitte geben Sie für jede der folgenden Fragen an, wie sehr diese **auf Sie** zutrifft, indem Sie die folgende Skala verwenden:



<u>Teil 4</u>

Anleitung: Unten finden Sie Aussagen, die **mögliche** Meinungen, die **Sie** über die Arbeit bei Continental AG/Vitesco Technologies haben, wiederspiegeln könnten. Bitte geben Sie den Grad Ihrer Zustimmung oder Ablehnung gegenüber den Aussagen an. Bitte verwenden Sie dabei die folgende Skala:



<u>Teil 5</u>

Nun folgen fünf kurze Fragen zu Ihrer Person. Diese können NICHT auf Sie zurückgeführt werden. 1. Ich bin ... Produktionsmitarbeiter Sonstige 2. Bitte geben Sie Ihr Geschlecht an männlich weiblich divers 3. Wie alt sind Sie? 18-30 Jahre 31-40 Jahre 41-50 Jahre 51-65 Jahre 4. Wie oft nehmen Sie Home-Office in Anspruch? Jeden Tag 3-4 mal 1-2 mal Nie in der Woche pro Woche pro Woche 5. Wie sehr hat sich Ihre Arbeit durch die COVID-19 Pandemie verändert? stark etwas kaum gar nicht verändert verändert verändert verändert (größtenteils (größtenteils Veränderungen gleich geblieben) gespürt)

Vielen Dank für Ihre Teilnahme an meiner Studie 😊!

Falls Sie über die Forschungsergebnisse informiert werden wollen, geben Sie gerne Ihre E-Mail Adresse an (diese wird **NICHT** mit Ihren Antworten in Verbindung gebracht):

_.

Eventuelle Kommentare:

.

Debriefing

Erneut vielen Dank für Ihre Teilnahme. Zu Beginn dieser Studie haben Sie bereits erfahren, dass diese Studie das Thema "Mitarbeitermotivation zu Zeiten von COVID-19" untersucht. Gerne würde ich Ihnen nun einen genaueren Einblick in meine Studie verschaffen.

Motivierte Mitarbeiter sind eine Bereicherung für ein Unternehmen, da diese den Erfolg des Unternehmens beeinflussen. Da nicht vollständig geklärt ist, welche Faktoren Mitarbeitermotivation während der COVID-19 Pandemie beeinflussen, zielt diese Studie darauf ab, die Faktoren "berufsbezogener Stress", "wahrgenommene organisatorische Unterstützung", "Unterschiede zwischen Fachkräften" und "Führungsstil" genauer zu untersuchen.

Mitarbeitermotivation ist definiert als der Zustand einer Person, der sie dazu veranlasst, eine bestimmte Handlungsalternative auszuwählen, um ein bestimmtes Ergebnis zu erreichen. Besonders die intrinsische Mitarbeitermotivation scheint in Krisenzeiten wichtig zu sein. Intrinsische Mitarbeitermotivation bezieht sich auf Verhalten, das von internen Belohnungen (z. B. persönliches Wachstum, eigene Entscheidungsfindung) bestimmt wird.

Es wird vermutet, dass berufsbezogener Stress sich negativ auf intrinsische Mitarbeitermotivation auswirken kann. Interessanterweise wird vermutet, dass eine hohe wahrgenommene Unterstützung durch das Unternehmen diese Auswirkung verringern kann und das Stresslevel sinken lässt.

Des Weiteren wurde gezeigt, dass es bei intrinsischer Mitarbeitermotivation sowohl zu Unterschieden zwischen Fachkräften als auch zu Unterschieden zwischen Führungsstilen kommen kann. Es wird vermutet, dass spezielle Führungsstile bei bestimmten Fachkräften mehr intrinsische Mitarbeitermotivation erzeugen als andere.

Diese Studie versucht genau diese Folgerungen zu untersuchen und berücksichtigt dabei die aktuelle COVID-19 Pandemie. Zur Datensammlung wurden Sie mit diesem Fragebogen zu Ihren Ansichten befragt. Durch Ihre Unterstützung können nun Daten ausgewertet werden, welche bei der Beantwortung von offenen Fragen, bezüglich der Mitarbeitermotivation während der COVID-19 Pandemie, ausstehen.

Questionnaire English Version

Dear colleagues,

I'm Laura and I'm currently doing my master's in work, Organization and Health Psychology. Ate te moment I am working on my master's thesis on the subject of "Employee Motivation during COVID-19" in cooperation with Continental AG/Vitesco Technologies. It would be of great help to me if you, as part of Continental AG/Vitesco Technologies, could fill in my survey! The survey takes about 10 minutes. Your participation is on a voluntary basis and cannot be traced back to you personally. All further details can be found in the following section.

Thank you very much for your support 🮯

Laura Döpper



This questionnaire can also be filled in online!

INFORMATION LETTER

For participants of the study: "Employee Motivation during COVID-19"

1a. Research goal

You have been invited to take part in a scientific research. The aim of this study is to get more insight on which factors influence employee motivation in times of COVID-19. This study is intended to serve as a basis for Continental AG/Vitesco Technologies to support you as an employee in this difficult situation.

1b. Study

You will be asked to take part in a survey. This survey consists of five short parts. Filling out the survey takes about 10 minutes.

2a. Management of your personal data

Participation is **anonymous** and **none** of the data collected can be traced back to you personally. If you leave an e-mail address (to be informed about the results of the study), it will **not** be linked to your answers to the survey.

2b. Retention period of the data

The declaration of consent you have signed will be kept for 10 years after the research has been completed. Your **anonymized** research data will be stored for 10 years after the research has been completed. Declaration of consent and research data are stored separately from each other.

2c. Share your data

Because of the importance of controlling, reusing and/or replicating research results, research data is increasingly shared with other researchers or made available to other researchers. Since your data is anonymized, none of the shared data can be traced back to you.

2d. Additional information about your rights when processing your personal data

Radboud University is responsible for compliance with the General Data Protection Regulation (GDPR) when processing your personal data. The researcher ensures that your privacy and the associated conditions are protected. He/she will adhere to the Dutch Code of Conduct for Scientific Integrity and University Policy regarding the storage and management of research data when carrying out this research. Radboud University's privacy policy can be found at: https://www.ru.nl/english/vaste-onderdelen/privacy-statement-radboud-university

If you have any questions about your privacy, please contact the Privacy Officer (Faculty of Social Sciences - P.Janssen@socsci.ru.nl). For general questions, please contact the Radboud University Data Protection Officer office at privacy@ru.nl. You can find more information about your rights when processing your personal data at <u>https://www.ru.nl/privacy/english/protection-personal-data/data-subjects-rights</u> and on the website of the Dutch Data Protection Authority (<u>https://autoriteitpersoonsgegevens.nl/en</u>).

3. Voluntary participation

Your participation in this study is voluntary. If you choose not to participate in this study, there will be **no** consequences.

4. Contact information

If you have any questions, comments, or concerns at this point, please don't hesitate to let me know. You can contact me at: <u>lauradoepper@continental.com</u> OR <u>l.dopper@student.ru.nl</u>.

In the event that you have further questions, comments or worries afterwards, please let my supervisor or me know.

Student: Laura Döpper laura.doepper@continental.com OR l.dopper@student.ru.nl Intern HR Training & Development Supervisor Continental AG/Vitesco Technologies: Werner Steger werner.steger@continental-cooperation.com Head of Training & Development

University Supervisor: Joyce Elena Schleu joyce.schleu@bsi.ru.nl Radboud University, Behavioural Science Institute

CONSENT FORM

to participate in the study: "Employee motivation during COVID-19"

Hereby I confirm, that:

- I was informed in writing about the study and the information was satisfactory;
- I have read the information letter;
- I was given the opportunity to ask questions about this study;
- my questions have been answered satisfactorily;
- I was given opportunity to rethink my participation in the study;
- I participate voluntary

I understand that:

- I have the right to withdraw my consent and participation in this study at any time without giving any reason;

- my personal data are processed in accordance with the applicable European data protection regulations;

- my data are processed in accordance with the data protection declaration of Radboud University (<u>https://www.ru.nl/english/vaste-onderdelen/privacy-statement-radboud-university</u>);

- this consent form is kept for 10 years;

I agree to participate in this study

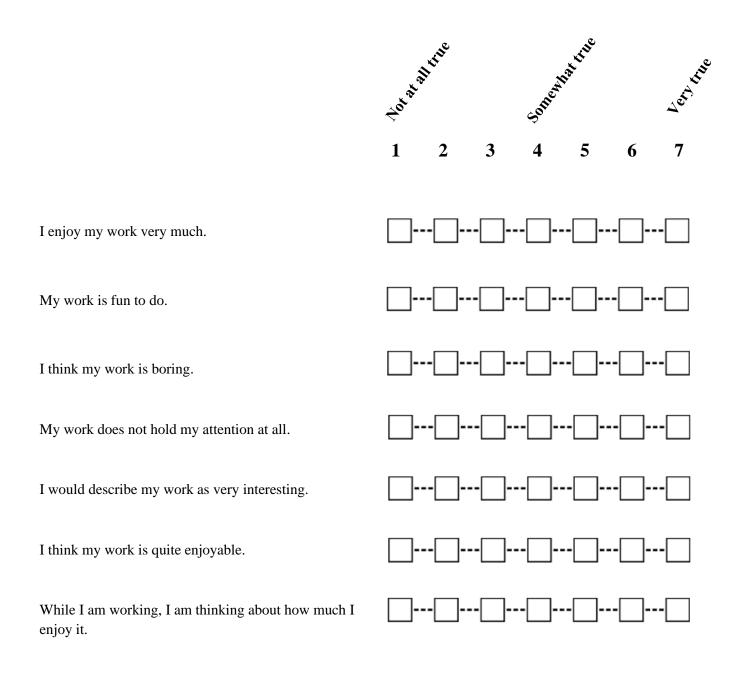
YES

NO

Now the questionnaires follow, consisting of five parts. Please answer **ALL** questions. Don't skip a question even if you're not sure. Just answer what you think fits best.

<u>Part 1</u>

Instructions: For each of the following statements, please indicate how much they apply **to you** using the following scale:



<u>Part 2</u>

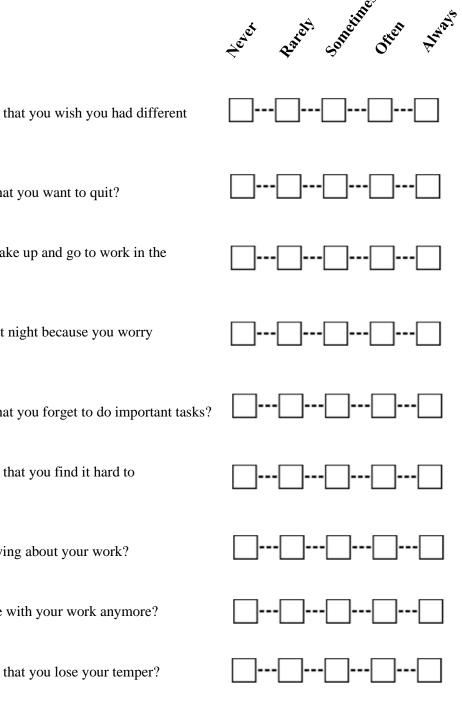
Instructions: Read each point carefully and consider how often **your supervisor** shows the behavior described. Please use the following scale:

tevet collon occasionally often Plues. Tells group members what they are supposed to do. Acts friendly with members of the group. Sets standards of performance for group members. Helps others in the group feel comfortable. Makes suggestions about how to solve problems. Responds favorably to suggestions made by others. Makes his or her perspective clear to others. Treats others fairly. Develops a plan of action for the group. Behaves in a predictable manner toward group members. Defines role responsibilities for each group member. Communicates actively with group members.

Occasionality Occasionality Other teret schon Alman. Clarifies his or her own role within the group. Shows concern for the well-being of others. Provides a plan for how the work is to be done. Shows flexibility in making decisions. Provides criteria for what is expected of the group. Discloses thoughts and feelings to group members. Encourages group members to do high-quality work. Helps group members get along with each other. |---| |---

Part 3

Instructions: For each of the following statements, please indicate how much they apply to you using the following scale:



Does work make you so stressed that you wish you had different job?

Do you get so stressed at work that you want to quit?

Do you worry about having to wake up and go to work in the morning?

Do you find it difficult to sleep at night because you worry about your work?

Do you get so stressed at work that you forget to do important tasks?

Does work make you so stressed that you find it hard to concentrate on your tasks?

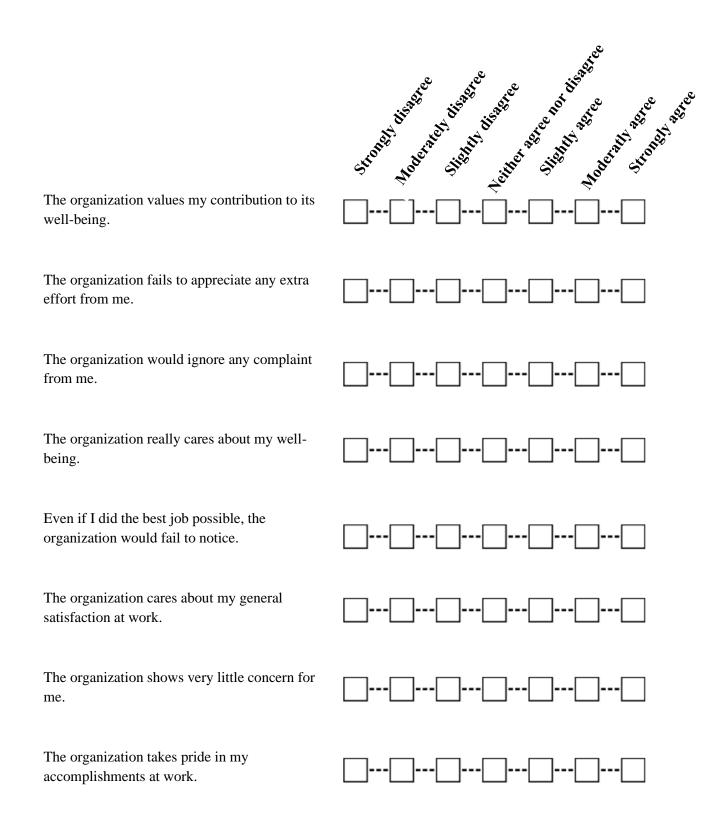
Do you spend a lot of time worrying about your work?

Do you feel like you cannot cope with your work anymore?

Does work make you so stressed that you lose your temper?

Part 4

Instructions: Below you can find statements that may reflect **your** opinion about working at Continental AG/Vitesco Technologies. Please indicate the degree of your agreement or disagreement with each statements. Please use the following scale:



<u>PART 5</u>

Here are five short questions about yourself. These can **NOT** be traced back to you.

1. I am	Production worker	Others					
2. Please indicate your gender	male	female	divers				
3. How old are you? 18-30 Years	31-40 Years	41-50 Years	51-65 Years				
4. How often do you work in home Each day	e-office? 3-4 times	1-2 times	Never				
of the week per week per week 5. How much has the COVID-19 pandemic changed your work?							
Changed completely	somewhat changed (mostly realized changed)	hardly changed (mostly remained the same)	Not at all				

Thank you for participating in my study 😇!

If you would like to be informed about the research results, please leave your e-mail address (this will **NOT** be associated with your answers):

Any comments:

_.

Debriefing

Thank you again for your participation. At the beginning of this study, you already learned that this study examines the topic of "Employee motivation during COVID-19". I would now like to give you a closer look at my study.

Motivated employees are an asset to a company as they influence the company's success. Since it has not been fully investigated which factors influence employee motivation during the COVID-19 pandemic, this study aims to examine the factors "job stress", "perceivedorganizational support", "differences between collar" and "leadership style" in more detail.

Employee motivation is defined as the force that initiates, guides, and maintains goal-directed behavior. Intrinsic employee motivation seems to be particularly important in times of a crisis. It refers to behavior that is determined by internal rewards (e.g. personal growth, own decision-making).

It is believed that job stress can negatively affect intrinsic employee motivation. Interestingly, it is assumed that a high level of perceived-organizational support from the company can reduce this impact and lower the stress level.

Furthermore, it was shown that intrinsic employee motivation can lead to differences between collar and differences between leadership styles. It is believed that specific leadership styles generate more intrinsic employee motivation in certain professions than others.

This study tries to investigate exactly these conclusions and takes into account the current COVID-19 pandemic. In order to collect data, you were asked about your views using this questionnaire. With your support, data can now be evaluated and questions regarding employee motivation during the COVID-19 pandemic may be answered.