

# The moderating effect of employee personality on the relation between organizational controls and employee job performance<sup>1</sup>

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## Abstract

The alignment of organizational interest between employee and employer is essential for organizational success. However, knowledge on this topic is lacking, and the effect of employee personality on the relationship between organizational controls and employee job performance has not been researched. Therefore, this study aims to answer the question: *To what extent does employee personality influence outcome, behavior, and people controls in their effects on job performance?* An online questionnaire was sent out, where 114 respondents answered questions on their personality traits, on the use of organizational controls of their manager, and on their job performance. Results suggested that none of the hypothesized relations were statistically significant. However, the results did suggest that the positive effects of people control are attenuated by a person's level of conscientiousness. Furthermore, direct positive relations were found between 1) conscientiousness and job performance, 2) outcome control and job performance, and 3) intrinsic motivation and job performance. Based on this study, it is recommended that managers carefully consider interpersonal differences among its personnel when applying organizational controls to increase job performance.

**JEL-codes:** M51 (Firm Employment Decisions), M54 (Labor Management), C12 (Hypothesis Testing: General)

**Key-words:** *Employee personality, Organizational controls, Job performance, Cross-sectional data.*

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# 1. Introduction

Motivating stakeholders to act in alignment with the interests of an organization has been a primary objective for managers. One way through which interest alignment can be achieved, is through the use of controls. Organizational controls can be defined as “any process through which controllers motivate and direct controlees to behave in ways that are aligned with the controllers’ objectives” (Sihag & Rijdsdijk, 2018, p.93).

Organizational control is complex however, and many aspects of its implementation have not been researched thoroughly. Interpersonal differences between controlees is one of these aspects, more specifically the influence of them on the degree to which organizational controls can increase job performance. The Personality Trait Theory suggests that complex variations in behavior are primarily the results of a small number of underlying personality traits (Guy et al., 2011). Additionally, personality of people has been found to be a major predictor for their behavior in a work environment (Jensen & Patel, 2015; Neal et al., 2012), and controlling this behavior is a large part of what managerial science entails. Yet, although the relationship between job performance and personality traits has been a popular field of research for a long time (Thoresen et al, 2004), the influence of personality on the relation between organizational controls and employee job performance has not yet been researched.

This is a problem, since their relatedness seems inevitable. Naturally, personal preference for certain organizational controls is something that varies between people, and studies have already found that the personality of the controller has an effect on the choice of organizational control (van Amersfoort, 2021). Other studies have found that people tend to react differently to certain organizational controls based on their culture and generation (Petroulas, 2010; Chow, Shields & Wu, 1999). Although generalizations through culture or generation certainly shed light on the way people react differently to organization controls, human nature is fundamentally heterogeneous. And thus, this calls for a more personal approach to this topic, and requires research to be done on the employee personality fit with different organizational controls.

This study aims to gather insight into how employee personality affects the relation between organizational controls and employee job performance. Since organizational controls are generally associated with increased performance (Sihag & Rijdsdijk, 2018), adding knowledge to the topic is relevant for both literature and practice. Consequently, this research aims to answer the question:

*To what extent does employee personality influence outcome, behavior, and people controls in their effects on job performance?*

Providing an answer to this question may stimulate managers to change their use of managerial controls in a manner that is more appropriate for their organization and better fits the interpersonal differences among its personnel. Furthermore, it can add knowledge to the body of literature on job performance and management control systems. Moreover, it may contribute to the body of literature on person-organization fit (P-O fit).

In order for this questions to be answered, a literature review on the topics of organizational controls, job performance and personality is conducted. From this literature review flow a number of hypothesis that provide the grounds for answering this paper’s central question. The methodology on how this research paper aims to test the hypothesis is then discussed, followed by an analysis in the results section. Then, final remarks on this paper, including limitations, recommendations and further points of discussion are made before concluding the paper.

## 2. Literature Review

### 2.1 Management control systems and organizational controls

Management control systems (MCS) is a domain in the management literature where the main objective is to solve the three main control problems in organizations: a lack of direction, lack of motivation, and lack of ability (Merchant & van der Stede, 2018). The lack of direction occurs in a situation wherein an employee has no vision or clarity on what the expectations are on his output. The lack of motivation problem occurs when an employee lacks the motivation to act in the organizations best interest. A situation wherein an employee lacks the ability to perform a task, is referred to as the lack of ability problem. Effective organizational controls can be used to reduce or solve these problems.

Organizational controls, which is the main part of management control systems literature, are generally defined as any process through which controllers motivate and direct controllees to behave in ways that are aligned with the controllers' objectives (Cardinal et al., 2010; Turner and Makhija, 2006; Sihag & Rijdsdijk, 2018). Although studies differ in their adoption of organizational control dimensions, and the names they assign to them; generally, a version of these three dimensions are present: outcome, behavior and people controls.

#### 2.1.1 Outcome Controls

Through the use of outcome controls, controllers use quantitative performance targets and assign rewards to controllees based on the degree to which they have achieved this target (Sihag & Rijdsdijk, 2018). Controllees are relatively free in their approach to a task, and are held responsibly by management mostly for the outcome of their work. This makes that outcome controls are often linked to decentralization, in that the controllee has relatively high job autonomy (Merchant & van der Stede, 2018). This hands-off approach for managers is attractive, since the necessity of their know-how on the job itself is limited and requires a lower need for micromanagement, leaving more time to spend on other things. Furthermore, outcome controls can also act as a solution of the three basic control problems as mentioned by Merchant and van der Stede (2018). Outcome controls inform employees what outcome is expected from them, setting a well-defined objective alleviates a potential lack of direction for employees. The motivational aspect, has also been found to be positively related to outcome controls. Allowing controllees to decide their own actions and to determine effective strategies towards achieving a certain outcome, is especially beneficial for employee motivation if their interests are aligned with the outcome, by assigning appropriate rewards (Merchant & van der Stede, 2018).

#### 2.1.2 Behavior Controls

Behavior controls are the most direct form of control (Merchant & van der Stede, 2018). Instead of making the results the focus of control, a controller exercising behavior controls makes sure that the controllee acts in the organization's best interest by focusing the controls on the behavior itself. Merchant and van der Stede (2018) name four types of behavior control: Behavioral constraints, redundancy, preaction reviews, and action accountability. Behavioral constraints are controls due to which the controllees are not able or are limited in their ability to perform certain undesired behaviors (passwords, keys etcetera). Redundancy is a form of action control by which an excessive amount of workforce is set on a task to prevent it from being done undesirably. Controlling for the behavior of controllees by installing a point of approval by the controller in order for the action to be taken, is called pre-action reviews. This form of control, in combination with the action accountability control, are the most active forms of control from a people managing point of view. They require active managing of employee behavior. Action accountability is the form of control through which employees have to account for their actions, and the (un)desired behaviors are usually communicated through work rules, policies and procedures, contract provisions, and or codes of conduct (Merchant & van der Stede,

2018). Action accountability and preaction reviews both have the ability to be a solution to the three control problems. In a situation where employees are motivated to act in an undesirable way from the organization's perspective, behavior controls prevent them in doing so. Behavior controls can also provide the employee direction through the presence of well-described expectations in the forms of procedures and rules, or through other forms of communication. The lack of personal ability can also be compensated for through expertise of the preaction reviewer, or through the detailed information given through procedures or rules.

### 2.1.3 People Controls

People controls are entirely different from the two aforementioned control methods. Instead of focusing on influencing the process itself, by controlling for input (behavior) or output (outcome), people control is focused on creating a setting wherein the process as a whole can flourish and produce desirable output. The setting wherein this process takes place is seen as a social construct, wherein people controls build on the natural tendencies of employees to control and motivate themselves (Merchant & van der Stede, 2018). People control consists of three activities: 1) selection and placement, 2) training, and 3) job design and resourcing (Merchant & van der Stede, 2018). Through these, it helps solve all three issues of control. Training, for instance, helps in clarifying expectations, and thus solve employees lack of direction. Moreover, it helps in making sure everyone is able to do a good job (capabilities and resources) and thus it solves employees lack of ability. Thirdly, in combination with the others, it can help increase the likelihood of employees engaging in self-monitoring, which is highly affiliated with intrinsic motivation and loyalty.

## 2.2 Job Performance

Job performance is an essential aspect of organizations, and although it may sound straightforward, there are multiple aspects and dimensions that need to be considered when applying it to a study. Defining the term is a start, and the literature seems to have found consensus in defining job performance as *things that people do, actions the individual performed to achieve a desired goal or target within the organization* (Campbell, 2012; Campbell & Wierniks, 2015; Andrade, Queiroga & Valentini, 2020). Consequently, this implies that organizational outcomes are partially the result of actions performed by the actors within (Andrade, Queiroga & Valentini, 2020). This implication is relevant, since the focus points of the different management control systems in this study are divided into outcome, behavior, and people control. However, following from the argument above, one could argue that the final purpose of these control methods, is influencing the behavior of the actors within an organization, since the actions taken by the actors are probably most directly related to organizational outcomes. Whether controlling for the behaviors, either directly (through behavior control), or indirectly (through outcome or people control), is more effective for job performance is another issue. One study found that employees' intrinsic motivation was positively associated with cultural and personnel control (both similar to people control), and that their extrinsic motivation was positively related to results control, yet no relation between either of them was found with action control (Van der Kolk, van Veen-Dirks, ter Bogt, 2018). Moreover, In their study, both forms of motivation were positively related to job performance.

When describing job performance, Borman and Motowidlo (1997) distinguish between task performance and contextual performance, where the former is defined in specific job requirements, and the latter is defined in terms of behavior that is beneficial to the organization goals. There seems to be a general consensus in the job performance literature on such a separation, as many other studies apply a similar distinction (Carlos & Rodrigues, 2017; Andrade, Queiroga & Valentini, 2020).

## 2.3 Personality Trait Theory, the Big Five Model and job performance

Personality has been a popular research topic in the literature on employee job performance. Personality traits are a clear metric based on which people distinguish themselves from one another, each combination of traits having its own unique positives and downsides. The personality of people has been found to be a major predictor for their behavior in a work environment (Jensen & Patel, 2015; Neal et al., 2012), and consequently for their job performance (Awadh & Ismail, 2012). In the literature on personality, there are multiple theories on the topic, one of which is the Personality Trait Theory. This theory suggests that complex variations in behavior are primarily the results of a small number of underlying personality traits (Guy et al., 2011). Due to the size of the literature on this theory, the manageability of the amount of traits has become an issue, and so has appointing appropriate, mutually excluding definitions to them (Mount & Barrick, 1998). One model that has made a rather successful attempt at structuring the literature by selecting five major personality traits, is the Big Five Model.

### 2.3.1 Applying the Big Five Model to the Organizational Controls and Job Performance

The Big Five Model is arguably the most popular personality test in the research literature. It has been applied to many research areas, and the big five traits have been found to be significantly related to job performance (Barrick & Mount, 2000). The five personality traits presented by the Big Five Model are Neuroticism, Extraversion, Openness to Experience, Conscientiousness and Agreeableness:

#### 2.3.1.1 Neuroticism

Neuroticism can be interpreted as emotional instability, and is a metric that is often associated with feelings of fear, sadness, insecurity, embarrassment, anger, guilt and disgust (Rothmann & Coetzer, 2003; Barrick & Mount, 1998). This personality trait is often found to be negatively related to job performance, which is most likely due to the interpersonal aspects present in contextual job performance (Hurtz & Donovan, 2000). The same study from Hurtz and Donovan (2000) also found that emotional stability (the counterpart of Neuroticism) elicited positive correlations with job performance in the sales industry. The sales industry is known for high usage of outcome controls, implementing targets and bonus incentive systems to motivate its personnel. Usually, implementing such systems has multiple reasons, one of which is to retain the confident and capable employees. One thing that can be derived from the Big Five Model, is that confidence is the opposite of what is expected of people scoring high on neuroticism. Therefore, the positive effect of outcome controls is likely to be attenuated by the employee's level of neuroticism.

- *H<sub>1a</sub> The positive effect of outcome controls on job performance is attenuated by the employee's level of neuroticism.*

Behavior controls on the other hand, might elicit positive effects on job performance, due to the insecurity of employees and congruently the insecurity for the organization, being compensated through direct and clear procedures in execution of their task.

- *H<sub>1b</sub> The positive effect of behavior controls on job performance is amplified by the employee's level of neuroticism.*

With regards to people control, it is likely that people eliciting high scores on neuroticism are benefitted by the support they get from others. A source of back-up, emotionally as well as practically may give them more confidence, clearer direction and a better understanding of expectations. Therefore, the following hypothesis is set:

- *H<sub>1c</sub> The positive effect of people controls on job performance is amplified by the employee's level of neuroticism*

### 2.3.1.2 Extraversion

Extraversion may be the most complex personality trait in the big five model. It typically includes behaviors such as sociability, assertiveness, activity and talkativeness (Rothmann & Coetzer, 2003; Barrick & Mount, 1998). Extraversion has also been linked with ambition (Hogan, 1986), and confidence (Awadh, Ismail, 2012). However, in general, people that may be very talkative may not necessarily be confident or the other way around. Hogan (1986) therefore distinguishes two components of extraversion; sociability (sociable, expressive, exhibitionist) and ambition (initiative, impetuous, surgency). Extraverted people have also been found to be longing for social acknowledgment (Costa & McCrae, 1992), and have been positively associated with job performance in sales or managerial positions (Rothman & Coetzer, 2003). On the other hand, Rothman & Coetzer (2003) describe introverts as people that are more reserved, independent, and even-paced. The complications arise when making arguments for why either of these two extremes would be beneficial in correlation with the different organizational controls. Extraversion seems to have high potential to be positively correlated with outcome controls, with their need for social acknowledgement and appraisal being a motivator to meet targets set by management. Therefore, the following hypothesis is set:

- ***H<sub>2a</sub>*** *The positive effect of outcome controls on job performance is amplified by the employee's level of extraversion*

With regards to behavioral control, it could be argued that the spontaneous and talkative nature of extraverted people would get in the way of procedural necessities. Behavior controls may be less motivating, feeling as a drag, and their assertive nature may influence them in cutting corners or lackluster attitudes towards procedural necessities and other forms of regulation.

- ***H<sub>2b</sub>*** *The positive effect of behavior controls on job performance is attenuated by the employee's level of extraversion*

The need for social recognition and appraisal may be satisfied through uses of social events, off-site meetings or casual lunches or dinners. Additionally, their talkative and expressive nature might also cause for better job performance in the use of such events. However, the more formal uses of people control, training, selection, and job design may benefit both groups of people. Therefore, strong expectations are not present with regards to extraversion, job performance and people control. Yet, this study expects that:

- ***H<sub>2c</sub>*** *The positive effect of people controls on job performance are amplified by the employee's level of extraversion.*

### 2.3.1.3 Openness to Experience

Openness to experience includes active imagination, attentiveness to inner feelings, a preference for variety, intellectual curiosity and independence of judgement (Rothman & Coetzer, 2003). Research by Hertz and Donovan (2000) found a small positive relation between openness to experience and job performance in the customer service sector, which could be due to their attentiveness to inner feelings. Research has also shown that openness to experience is related to success in consulting, training, and adapting to change. In contrast, Hayes, Roehm and Castellano (1994) found that successful employees (as opposed to unsuccessful ones), had significantly lower scores on openness to experience. Thus, although it may not be a general predictor for job performance, it may be a predictor when different job requirements are taken into account.



The use of behavioral controls imply a degree of managerial control on the day-to-day behavior of employees. The procedures and formats that are implemented eliminate a degree of variety, in order to prevent human errors from taking place, and in doing so often eliminate the need for personal imagination. This form of managerial control is a main part of autocratic leadership styles, which was found to be an unappreciated leadership style among people who were open to experiences (Bertsch et al., 2017). Based on the elimination of variety and lower need for employee imagination brought about by behavioral control, their positive effects on job performance are likely to be attenuated by the degree of an employee's openness to experience:

- **H<sub>3a</sub>** *The positive effects of behavior controls on job performance are attenuated by the employee's level of openness to experience.*

With regards to the effectiveness of outcome controls on job performance, it is difficult to direct expectations towards a positive or a negative. On the one hand, outcome controls require personal task management with a relatively high degree of freedom, of which the effectiveness would be expected to be amplified by an employee's level of openness to experience. On the other hand, outcome controls remain a form of judgement on one's behavior, which is not in line with an employee's openness to experience. Therefore, no hypothesis is set with regards to this relation.

The experiences provided by off-site gatherings and social events through the use of people controls, may fall in line with the intellectual curiosity, and the preference for variety of employee's openness to experience. Combining this with the training and selection aspects that may be beneficial for people regardless of their big five traits, provides reason to set the following hypothesis:

- **H<sub>3b</sub>** *The positive effects of people controls on job performance are amplified by the employee's level of openness to experience.*

#### 2.3.1.4 Conscientiousness

Along with extraversion, this personality traits may be the most popular in management literature. The trait entails a high degree of self-control, and a tendency to work planned, prepared, and organized. It is also often associated with being strong-willed, purposeful and determined. On the other hand, high conscientiousness may lead to annoying fastidiousness, and compulsive neatness (Rothman & Coetzer, 2003). Based on the tendency of these obsessive behaviors, it is likely that relatively unnecessary behavior controls will decrease job performance, yet the effectiveness of behavior controls that are directly positively linked to job performance, is likely to be amplified by an employee's level of conscientiousness.

- **H<sub>4a</sub>** *The positive effects of behavior controls on job performance are amplified by the employee's level of conscientiousness.*

Conscientious people have the tendency to set goals for themselves. This autonomous goal-setting has been positively related to job performance (Barrick, Mount & Strauss, 1993). Due to their tendency to plan and organize themselves, it is likely that highly conscientious people will plan and organize their own task execution toward achieving an externally set goal. To increase the effectiveness of outcome controls, it is required for employees to be able to manage their own behavior well, in order to comply to the set expectations. Thus, it is likely that the effectiveness of outcome controls is amplified by an employee's level of conscientiousness.

- **H<sub>4b</sub>** *The positive effects of outcome controls on job performance are amplified by the employee's level of conscientiousness.*

People controls in the form of training and job design may be beneficial for people regardless of their trait composition. However, the social events, dinners, and lunches, may not exactly help a typically conscientious person in his or her job performance. It may even be seen as a waste of time, and an annoying obligation instead of a chance to decompress, since they have also been associated with a tendency to elicit workaholic behaviors (Rothman & Coetzer, 2003). The questions of this study on people control mostly apply to a positive team spirit and the engagement of everyone involved in a team. Therefore it is best to take a neutral stance on the effect of people controls on job performance through conscientiousness.

#### 2.3.1.5 Agreeableness

An agreeable person is fundamentally altruistic, sympathetic to others and eager to help them, and in return believes that others will be equally helpful (Stevens & Ash, 2001). The other side of this spectrum is skeptical of others intentions, egotistical and elicits behaviors of competition, rather than cooperation (Rothman & Coetzer, 2003). Research has found that agreeableness may lead to success in occupations where teamwork and customer service are relevant (Judge et al., 1999). The effectiveness of outcome controls on job performance may be amplified through an employee's agreeableness in a situation where this employee functions in a team that works towards certain targets, due to increasing cooperation. However, on the other side of the spectrum, might the effectiveness of outcome controls be enhanced by an employee's level of disagreeableness in a situation where the employee is individually controlled on outcome, due to increasing competition. Assuming the targets in the cases of this study's participants are set to control for the outcomes of individuals, the following hypothesis is set:

- ***H<sub>5a</sub>*** *The positive effect of outcome controls on job performance is attenuated by the employee's level of agreeableness.*

The agreeableness of a person is likely to be related to a flexible attitude and will elicit a cooperative attitude towards following regulations or procedures that have to be met. Therefore, the following hypothesis is set:

- ***H<sub>5b</sub>*** *The positive effect of behavior controls on job performance is amplified by the employee's level of agreeableness*

Agreeable people are also seen as likeable people, and value cooperation and social conformity. Agreeableness has also been found to be related to success in occupations where teamwork plays an important role, therefore, it is likely that the effects of people control are increasingly better adopted by and their effects on job performance amplified by an employee's degree of agreeableness. However, agreeableness may also exclusively amplify the job performance of colleagues, instead of amplifying the individual job performance. Since the latter one is more likely, no hypothesis is set with regards to this relation.

2.3.2 Conceptual model

Hence, derived from the hypothesized relations established in this section, flows the following conceptual model, as shown in figure 1.

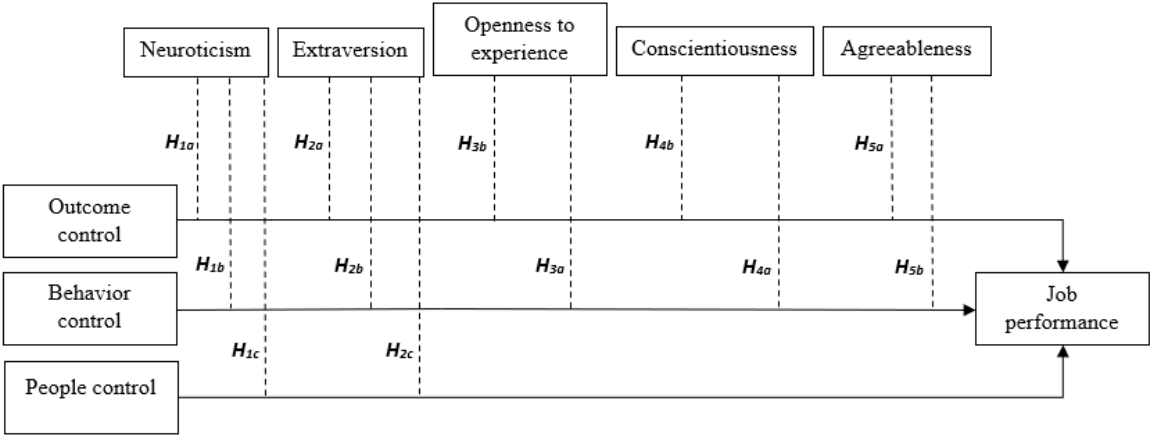


Figure 1 Conceptual Model

## 3. Methodology

### 3.1 Participants

This study applies a quantitative research approach by sending out online questionnaires through the personal network of the author. Most participants were either direct, or indirect acquaintances of the author. The author also distributed QR-codes in the neighborhood, with a chocolate bar attached, which may approximately account for an extra 5-20 participants. The target group for these questionnaires were all people that can accurately answer questions on their job or working situation in which they have to deal with a superior or manager.

A total of 146 respondents participated in the online survey. Of this pool, 124 participants completed the survey for 100%, and another respondent completed the survey to a sufficient level of 74%. Of those 125 respondents, three did not agree to the privacy statement, and eight people declared to be unable to accurately answer the questions asked in the survey, due to having no relevant experiences with a superior or manager. This resulted in a total respondent pool of 114 (N=114) to be analyzed in the results section.

Demographic data was collected on 113 respondents. As shown in Table 1, 51.3% of the respondents were male, and the rest female. 87.6% was Dutch, and the average age was 38,19 years, with the minimum being 18, and the maximum being 73. The majority worked 1) more than 32 hours per week (47.8%), 2) at an organization that was larger than 250 employees (54%), and 3) had worked at their organization for longer than 5 years (47.8%). The most popular industries or job types of the participant pool were healthcare (14.2%), legal or compliance (10.6%), education (8.8%), engineer (8%), sales and marketing (8%), ICT or data (7,1%).

**Table 1. Descriptive statistics of the participants**

Characteristic	Frequency	Valid percent
<b>Gender</b>		
Male	58	51.3
Female	55	48.7
<b>Age</b>		
18-25	27	23.9
26-35	33	29.2
36-45	15	13.3
46-55	23	20.3
56-65	12	10.6
66+	2	1.8
<b>Tenure</b>		
< 6 months	7	6.2
6 months - 2 years	34	30.1
2 – 5 years	18	15.9
> 5 years	54	47.8
<b>Organization size</b>		
< 4	3	2.7
5-49	29	25.7
50-250	20	17.7
> 250	61	54
<b>Hours / week</b>		
< 24 hours	19	16.8
24 – 32 hours	40	35.4
> 32 hours	54	47.8

**Job type**

Healthcare	16	14.2
Legal or compliance	12	10.6
Teacher or educator	10	8.8
Sales and marketing	9	8
Engineer	9	8
ICT / Data	8	7.1
Retail	6	5.3
Business consultant	5	4.4
Financial expert	3	2.7
Hospitality and tourism	3	2.7
Other	32	28.3

**Nationality or continent**

Dutch	99	87.6
European (but not Dutch)	10	8.8
American (North or south)	1	.9
Asian	1	.9
Other	2	1.8

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*The missing value is excluded, therefore N=113 (valid percentage = percentage)*

## 3.2 Materials

The online questionnaire was developed with Qualtrics. Responses were conveyed on a device of the participants choosing, such as a laptop, tablet or smartphone. The questionnaire begins with an initial privacy agreement declaration, and a question aimed to filter out any participants that did not have relevant experiences with a superior or manager. Then, the survey started with 15 questions on the participants personality, followed by 10 questions on their perceived degree of organizational control, followed by another 10 questions on their job performance. After these 35 questions, 13 questions were asked functioning as control variables; well-being (2), intrinsic and extrinsic motivation (2, and 2), tenure, organization size, industry, hours per week, and other basic demographics such as age, gender and nationality.

### 3.2.1 Managerial Controls (*Outcome, Behavior & People control*)

To measure the people, behavior, and outcome controls, this study uses a comprised set of ten questions which has been used by Rijdsdijk and van den Ende (2011), which can be found in Appendix 2. Their scale was originally described from the perspective of the controller (manager), and is transformed into the perspective of the controlee, in order for it to be applicable to the current study. Furthermore, the scale is originally used in project-team situation, something that is not necessarily the case for our participants, and is therefore transformed into a more general work environment. The complete adaptation can be found in Appendix 3.

#### 3.2.1.1 Outcome control

In their research, outcome control is defined as “Control where the controller specifies performance outputs, standards, or goals, and monitors and evaluates controlees’ performance relative to those outputs or goals” (Rijdsdijk & van den Ende, 2011. P.9). The definition is copied and applied to this study. To be applicable to this study, the questions from their scale have been transformed into taking the perspective from the controlee, as opposed to the controlled. For example: ‘I set clear goals for the project team concerning the cycle time of the project’, was transformed into ‘Clear goals are set by my manager concerning time for different tasks and / or projects’. Answers to these questions are given on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

### 3.2.1.2 Behavior control

In the research by Rijdsdijk and van den Ende (2011), the concept of behavior control is defined as “control where the controller specifies appropriate behaviors, explicit procedures, or rules for the contree, and monitors and evaluates contreees based on their performance relative to specified behaviors or procedures”(p.9). This definition is also directly applicable to this study, and is copied as well, with the only need for change arising in rewriting their questions. For example, the question: ‘I specified the processes and methods by which the team had to operate’, was changed into ‘The methods and processes by which I had to operate are specified by the manager’. Answers to these questions are given on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

### 3.2.1.3 People control

In their research, the term ‘clan control’ is used, and defined as; “Control where the controller relies upon informal interactions to achieve shared values and norms among the contreees, and within the group to which they are affiliated. The controller also relies on input mechanisms such as selection and value training to guide and influence contreee behaviors”(Rijdsdijk & van den Ende, 2011. P.9). This research has described people control as *the efforts by a manager to create a setting wherein the natural tendencies of employees to motivate each other can flourish and produce desirable output, through the use of selection and placement, training, and job resourcing*. Both definitions are very similar, and the scale used by Rijdsdijk & van den Ende is expected to measure people control as well.

As mentioned before, the original perspective used in the questions are transformed. To give an example, the statement: ‘I tried to achieve a sense of unity among myself and the different members of the project team’, is rewritten into: ‘Efforts by my manager are made towards achieving a sense of unity among the different members of the team / department and the manager’. Answers to these questions are given on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). (See. Appendix 2 & 3).

### 3.2.2 Job Performance

The concept of job performance, as described by Andrade, Queiroga and Valentini (2020), contains both a behavioral as well as an outcome aspect. With a person’s behavior being what that person does, and the outcome being whether the consequences of these actions are beneficial for achieving the organizational goal. Logically, the outcomes of one’s behavior are not only dependent on the behavior itself, but in the real world are also influenced by factors outside of the control of that person. Their 10-item job performance scale (see Appendix 1) will be adopted and adapted by this study, in order to measure our dependent variable effectively. In this scale, participants are asked to indicate their agreement with a statement about their behavior in their work environment, based on 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

A questions that measures contextual performance could be: “I execute my tasks foreseeing their results”, and a question that measures task performance could be: “I plan actions according to my tasks and organizational routines”.

### 3.2.3 Personality Traits

Neuroticism, Extraversion, Openness to experience, Conscientiousness, Agreeableness are the variables first used in the Big Five Inventory, a self-reported measurement scale using 44-items. This research uses a shortened, 15-item version of the BFI (the BFI-S), in which the five variables are each measured with 3 items (See. Appendix 4), and has been shown to elicit acceptable levels of reliability and validity (Hahn, Gottschling & Spinath, 2012). In this scale, participants are asked to rate their own behaviors and attitudes on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

An example of a question measuring the neuroticism of a participant is: ‘I see myself as someone who worries a lot’. An example of a question measuring the extraversion of a participant is:

'I see myself as someone who is outgoing, sociable'. An example of a question measuring the openness to experience of a participant is: 'I see myself as someone who is original, comes up with new ideas'. An example of a question measuring the conscientiousness of a participant is: 'I see myself as someone who does a thorough job'. An example of a question measuring the agreeableness of a participant is: 'I see myself as someone who has a forgiving nature'.

#### 3.2.4 Control Variables

Variables that are usually added to social research studies, have also been found to be related to management styles and preferences. Such variables include sex (Bertsch et al., 2017), age (Petroulas, et al., 2010), and nationality (Chow, Shields & Wu, 1999).

Job performance has been found to be correlated with both Job satisfaction (Judge et al., 1998; Petty et al., 1984), and people's well-being (Wright, Bonnet & Sweeney, 1993; Wright & Bonnet, 1997). Although these concepts have some similar ground, a person's well-being is typically considered to be a broader construct than job satisfaction, and more recent research concluded that a person's well-being was the only variable significantly related to job performance (Wright & Cropanzano, 2000). Taking into account the size of the questionnaire, the latter is incorporated into the current study through the selection of 2 items from an originally 5-item measure called the WHO-5 Well-Being Index. This scale was originally used for clinical purposes, and has since been successfully applied to many fields of research, under which measuring and comparing well-being between groups was among the purposes (Topp et al., 2015). In the questionnaire of this study, participants are asked to indicate the frequency of two separate occurrences over the last two weeks on a 6-point Likert scale (*All of the time – At no time*), such as '... I have felt cheerful and in good spirits', or '... my daily life has been filled with things that interest me'. The full index can be found in Appendix 5.

Job motivation has also been found to be positively related to job performance (Hemakumara, 2020). In the job motivation literature, distinctions are usually made on extrinsic and intrinsic motivation, of which the latter was most significant in predicting job performance. Although the current study applies a similar distinction, the length of the questionnaire has to be taken into account. Therefore, the Shorter Work Extrinsic and Intrinsic Motivation Scale (SWEIMS) is used – originally consisting of 12 items – of which four items are selected to measure both the extrinsic and intrinsic motivation of the participants (two items per dimension). This scale was designed as a direct, explicit assessment of individual differences in the degree to which adults perceive themselves to be intrinsically and extrinsically motivated to what they do (Kotera et al., 2020). Participants are asked to indicate to which degree certain statements corresponds to their situation on a 5-point Likert scale (*Does not correspond at all - corresponds exactly*). As a measure for Intrinsic motivation, the items 'I put in effort for my job for the satisfaction that I experience from taking on interesting challenges', and 'I put in effort for my job for the satisfaction I experience when I am successful at doing difficult tasks' are used. As a measure for extrinsic motivation, the items 'I put in effort for my job because it allows me to earn money', and 'I put in effort for my job for the income it provides me' are used.

### 3.3 Research design

This study used a correlational research design. The dependent variable of this study is *job performance*. The independent variables were *outcome control*, *behavioral control*, *people control*, as well as the control variables *intrinsic motivation*, *extrinsic motivation* and *well-being*. The moderation variables were *neuroticism*, *extraversion*, *openness to experience*, *conscientiousness*, and *agreeableness*. All variables were measured on an ordinal scale, either with a 6- or 7- point Likert scale.

Due to the nature of self-report measures, a large amount of extraneous variables could have influenced the results. If a participant had had a recent experience that is not in line with their general personality, job performance or the degree to which they recognize the organizational controls, certain

items might have provoked memories, and thus influencing their answer. Moreover, other influences such as the personalities of the respondents may also have caused them to overscore or underscore any type of item.

### 3.4 Procedure

The data from the online questionnaire was collected over a period of eight days. After agreeing to the privacy statement, the questions on the participants personality were asked first, followed by the questions on the organizational controls, and their job performance. To finalize the questionnaire, the participants were asked about their well-being, intrinsic and extrinsic motivation, as well as some extra control variables such as their age, gender, tenure, organization size, weekly work hours, etcetera. All questions were in English (with browsers potentially facilitating translation), and the average participant was finished the survey within 10 minutes.



## 4. Results

### 4.1 Structural validity: item factor analysis and scale reliability

#### 4.1.1 General factor analysis

Appendix 7 shows a factor analysis, in which all scale-based items that were used in the questionnaire are incorporated. Twelve factors (components) were extracted, with values ranging between .478 - .919, and the overall model obtaining a score of .672 on the Kaiser Meyer Olkin (KMO) measure of sampling adequacy. Most components had high factor loadings exclusively with their corresponding items, with the exceptions being discussed below.

The fifth and ninth component elicited high factor loadings with items from different scales. More specifically, two items used to measure *conscientiousness*, correspond to the same component (component five) as five items from *job performance*, as well as another item that is used to measure *intrinsic motivation*. For the ninth components, correlations are also found between two items measuring *conscientiousness*, and three items measuring *job performance*. This means that job performance, intrinsic motivation and conscientiousness are partially correlating or have a strong relationship. The three constructs have deep similarities, which can also be seen in the items. A high factor loading is therefore not necessarily problematic, yet will be taken into account in later analysis and in the paper's final discussion.

The table also shows a high factor loading between the item 'Clear goals are set ... projects', and the component most strongly correlated to the items used to measure behavioral control ( $corr = .633$ , as opposed to component 10  $corr = .430$ ). Although this correlation can cause problems in later analysis, incorporating the item in question is essential to measuring outcome control, and deleting the item would therefore not be appropriate.

#### 4.1.1 Big Five Inventory (shortened)

The appendix includes a statistics table on the factor analysis (See Appendix 6). Based on the Kaiser-Meyer-Olkin test = .590, the BFI-S scale was fit for a factor analysis. None of the items showed any range restriction or systematic missing values. To investigate the Big Five structure of the BFI-S, an exploratory factor analysis with varimax rotation was used, limiting the extraction of 5 factors with an eigenvalue higher than  $>1$ . This resulted in the factors corresponding to their respective scales, while explaining 62% of the total variance, corresponding to the findings by Hahn, Gottschling & Spinath (2012), with the Bartlett's test showing  $<0,001$  significance, supporting the assumption that the variables in this model are uncorrelated with one another.

Before the variables were computed, the Cronbach alpha coefficients of the Big Five variables were calculated, and are as follows: Extraversion = .79, Conscientiousness = .45, Openness = .55, Agreeableness = .53, and Neuroticism = 0.71. Usually, the threshold for the Cronbach Alpha on scales = .7 or higher, and although these scores are met by two of the variables, the lower scores of Conscientiousness, Openness and Agreeableness might also be acceptable. In another study, Hahn, Gottschling & Spinath (2012), analyzed the same scale (BFI-S) and came to similar Cronbach alpha scores and concluded that the measure provided 'acceptable levels of internal consistency ... convergent validity and discriminant validity, and in cases of profound need for sparsity; 'this scale offers a sufficient level of utility'. In their study, the Cronbach Alpha scores were: Neuroticism = .66, Extraversion = .76, Openness = .58, Agreeableness = .44, Conscientiousness = .60. Clearly, the current study has a lacking score on conscientiousness, which is unfortunate, and is therefore less likely to cause significant statistical relations. However, as will be discussed below, the other scales (MCS and Job performance) are relatively strong, and statistical analyses can therefore still provide enough grounds for reliable statistical analyses.

#### 4.1.2 Organizational controls

An exploratory factor analysis was done, for which the model was found to be appropriate based on a Kaiser-Meyer-Olkin coefficient of  $= .824$ . A varimax rotation was used, and three factors were extracted, of which almost all items corresponded with their respective scales. One exception was the item nr.3 'Clear goals are set by my manager concerning my time for different task and / or projects', which corresponded more strongly to the second factor  $= .558$ , corresponding to behavioral control, as opposed to the third factor  $= .528$ , which corresponded to outcome control. Keeping the items to their corresponding scales would explain 78.4% of the variance, with the Bartlett's significance score of  $< 0,001$  still supporting the assumption that the variables in this model were not correlated with one another. Removing the item from the factor analysis increases the explanatory value of the variables to 81,3% within the model.

To test whether eliminating the item was appropriate, a reliability analysis was done, resulting in a Cronbach Alpha of outcome control  $= .760$ , and if the item 'clear goals are set ... task or projects' were to be deleted, the Cronbach Alpha would become  $= .774$ . This small change was not necessary however, since any value  $> .7$  is acceptable, and deleting an item can be slightly beneficial for reliability, yet damage the validity of the measurement, and was therefore kept in. For behavior control, the Cronbach alpha  $= .898$ , with no benefits in deleting any of the three items. As for people control, the Cronbach alpha  $= .902$ , with also no benefits in deleting any of the four items.

#### 4.1.3 Job performance

Although multiple factor analysis were executed, due to the two-dimensional nature of the job performance measure, all the regressions to test the hypotheses were done on the variable job performance. The dimensional analyses will therefore not be discussed.

Overall, job performance elicited a Cronbach's alpha  $= .848$ , with deleting the second item 'I do my job according to what the organization expects from me' increasing it to  $= .849$ . This increase is small and is therefore not deleted during analysis.

#### 4.1.4 Control Variables

The scales reliability analysis and the factor analysis were then done for the scales of the control variables. They each elicited  $> .7$  Cronbach's alpha (intrinsic motivation  $= .778$ ; extrinsic motivation  $= .953$ ; well-being  $= .735$ ).

For the factor analysis, two factors were initially extracted due to having an Eigenvalue  $> 1$ , with well-being and intrinsic motivation having correspondence to the same factor. Forcing the analysis to provide three factors, elicited a rotated factor analysis results that showed items corresponding to the appropriate factor. Interestingly, however, the items of extrinsic motivation showed signs of a negative correlation with one of the other factors. To test for correlation problems, a bivariate collinearity test was done that indicated the variables of intrinsic motivation and well-being were significantly positively correlated to each other ( $.528$ , sig  $< .001$ ). The variables were measured with only two items each, thus deletion was not a viable option, and a less precise estimation of the variable intrinsic motivation may be expected in later analysis.

## 4.2 Normality, homoskedasticity and multicollinearity

For tests of normality, all variables failed the Shapiro-Wilk test, and the assumption that the data set was normally distributed was therefore not accepted. Most of the variables were positively skewed however, indicating normal distribution characteristics. Nonetheless, the data set cannot be assumed to be normally distributed, and since there was no solution befitting the dataset, the results that are found in this study can therefore be biased.

In the test for homoskedasticity, a scatterplot was made regressing the dependent variable Job Performance on its residuals, of which the visual representation did not lead to suspicion of

heteroskedasticity. The errors seemed to be normally distributed and did not diverge. Yet, the appropriate test was still conducted. Since SPSS does not have a Breusch Pagan test available, this test was executed manually; regressing the squared residuals of Job Performance on all the dependent variables lead to an ANOVA score of .014, indicating heteroskedasticity, causing less precise estimates.

After the moderation variables were computed as described below, a test for multicollinearity was performed. All relevant variables were regressed on job performance, including all hypothesized moderations. This regression gave no reason to assume multicollinearity, with variables all obtaining Variance Inflation Factor, or VIF-scores < 2.5, with scores of 10 or higher usually providing cause to assume severe multicollinearity. A full table of this regression can be found in Appendix 8.

### 4.3 Testing Hypotheses

In order for the hypotheses to be tested, moderator variables of the interaction term between the BFI-S variables and the organizational control variables were created through multiplying their standardized values. For example, the standardized values (Z-scores) of Neuroticism, and Outcome control were calculated and each list of scores was transformed into a new variable 'ZNeuroticism', and 'Zoutcome control'. Thereafter, a multiplication of these two scores was used to create the new moderator variable of the interaction term between the standardized values of outcome control and neuroticism. This method was used for all moderator variables.

These interaction variables should be interpreted as follows: an increase of one standard deviation of neuroticism, or outcome control, given that the other variable is increased by one standard deviation, will change the dependent variable by  $\beta$ .

To test all the hypotheses, all three types of managerial control were regressed separately with regards to the moderating variables. First, the conventional model is tested, in which the three forms of managerial controls, as well as the control variables are regressed on the dependent variable *job performance*. Then, for the second step, the personality traits are added to test for a potential direct effect of these variables on job performance. Finally, the moderating variables are added to test whether the inclusion of these moderations can be justified based on the increase in the explanatory power of the model, measured by the increase in R-squared.

#### 4.3.1 Outcome control and employee personality

Table 2 suggests that there is a positive relation between outcome control and job performance (step 1). When the five personality traits are added to the model, a notable increase is measured in the R2 of the model, and thus the explanatory value increases. Furthermore, a positive relationship between conscientiousness and job performance is measured.

With regards to the hypotheses stated by this study, it cannot be found that a person's level of neuroticism attenuates the positive effects of outcome control on job performance (sig = .132; n.s.), and hypothesis 1a is therefore not supported. Secondly, it cannot be found that a person's level of extraversion amplifies the positive effects of outcome control on job performance (sig = .334; n.s.), and hypothesis 2a is therefore not supported. Thirdly, it cannot be found that a person's level of conscientiousness amplifies the positive effects of outcome controls on job performance. In contrast, a significant negative relation between the two was found (sig = .069), suggesting that a person's level of conscientiousness attenuates the positive effects of outcome control on job performance. Therefore, hypothesis 4b is not supported. The relation will be discussed more elaborately in the discussion section. Finally, it cannot be found that a person's level of agreeableness attenuates the positive effects of outcome controls on job performance, with the data suggesting an *insignificant* positive relationship between the two (sig = .164; n.s.), and hypothesis 5a is therefore not supported.

As for the control variables, intrinsic motivation seems to be the only variable influencing job performance with statistical significance, and has the strongest effect across analyses ( $\beta = .216 - .302$ ).

Furthermore, a person's level of conscientiousness, regardless of the interaction with a type of organizational control, has also been found to be positively related to job performance (sig = .003).

**Table 2. Results (coefficients) of the regression analysis of outcome control on Job Performance, moderated by the Big Five personality traits**

<i>Independent variables</i>	Step 1	Step 2	Step 3
<i>Control variables</i>			
Intrinsic motivation	.302**	.219*	.264**
Extrinsic motivation	.011	.002	.010
Well being	-.024	-.010	.007
Tenure	.036	-.003	.001
<i>MCS</i>			
Outcome control	.092*	.073	.059
Behavior control	-.057	-.053	-.050
People control	.005	-.013	-.023
<i>BFI-S</i>			
Neuroticism		.028	.021
Extraversion		-.017	-.013
Openness		.061	.053
Conscientiousness		.249**	.209**
Agreeableness		-.001	.001
<i>Moderators</i>			
Neuroticism * Outcome control			-.084
Extraversion * Outcome control			.051
Openness * Outcome control			-.047
Conscientiousness * Outcome control			-.094*
Agreeableness * Outcome control			.076
<i>R</i> <sup>2</sup>	.216	.323	.398
<i>F</i> -Statistic	4,122**	3,978**	3,694**
<i>R</i> <sup>2</sup> change		.107	.075

*n* = 114 \*\**p* < .01. \**p* < .05.

#### 4.2.2 Behavioral control and employee personality

The first two steps in Table 3 are exactly the same as in Table 2. The results from step 1 suggest that behavioral control is negatively related to job performance, yet this relation is *not significant* (sig = .123). Therefore, this relation will not be interpreted and the formulation of the hypotheses remains the same, in that a positive effect of behavioral control on job performance is assumed.

With regards to the hypotheses, it cannot be found that the positive effect of behavior controls on job performance, is amplified by a person's level of neuroticism, with statistically *insignificant* results supposing the opposite effect (sig = .206; n.s.), and therefore hypothesis 1b is not supported. Secondly, it cannot be found that the positive effect of behavioral controls on job performance is attenuated by a person's level of extraversion, with statistically *insignificant* results supposing the opposite effect (sig = .217; n.s.), and hypothesis 2b is therefore not supported. Thirdly, it cannot be found that the positive effect of behavioral controls on job performance, is attenuated by a person's openness to experience, (sig = .145; n.s.), and therefore hypothesis 3a is not supported. Then, it cannot be found that the negative effect of behavioral controls on job performance is attenuated by a person's level of conscientiousness (sig = .657; n.s.), and therefore hypothesis 4a is not supported. Finally, it cannot be found that the negative effect of behavioral control on job performance is

attenuated by a person's level of agreeableness, with statistically *insignificant* results supposing the opposite effect (sig = .451; n.s.), and hypothesis 5b is therefore not supported.

**Table 3. Results (coefficients) of the regression analysis of behavioral control on Job Performance, moderated by the Big Five personality traits**

<i>Independent variables</i>	Step 1	Step 2	Step 3
<i>Control variables</i>			
Intrinsic motivation	.302**	.219*	.262**
Extrinsic motivation	.011	.002	.047
Well being	-.024	-.010	-.014
Tenure	.036	-.003	-.012
<i>MCS</i>			
Outcome control	.092*	.073	.074
Behavior control	-.057	-.053	-.061
People control	.005	-.013	.001
<i>BFI-S</i>			
Neuroticism		.028	.027
Extraversion		-.017	-.020
Openness		.061	.071
Conscientiousness		.249**	.232**
Agreeableness		-.001	-.023
<i>Moderators</i>			
Neuroticism * Behavioral control			-.081
Extraversion * Behavioral control			.068
Openness * Behavioral control			-.085
Conscientiousness * Behavioral control			-.045
Agreeableness * Behavioral control			.026
<i>R</i> <sup>2</sup>	.216	.323	.367
<i>F</i> -Statistic	4,122**	3,978**	3,237**
<i>R</i> <sup>2</sup> change		.107	.044

*n* = 114 \*\**p* < .01. \**p* < .05.

#### 4.2.3 People control and employee personality

In table 4, the first two steps are exactly the same as in table 2 and 3. In the third step, outcome control and conscientiousness, as well as intrinsic motivation still have a statistically significant relation with job performance. As was the case with behavioral control, people control has also been found to be (*statistically insignificant*) negatively related in the regression analysis. Due to the insignificance of the effect, the formulation of the hypotheses remains the same, and a positive effect of people control on job performance is assumed.

Table 4 shows that it cannot be found that the positive effects of people control are amplified by a person's level of neuroticism, with statistically *insignificant* results even supposing the opposite effect (sig = .086; n.s.), and therefore hypothesis 1c is not supported. Secondly, it cannot be found that the positive effect of people control is amplified by a person's level of extraversion, with statistically *insignificant* results even supposing the opposite effect (sig = .786; n.s.), and hypothesis 2c is therefore not supported. Finally, it cannot be found that the positive effect of people control are attenuated by a person's level of openness to experience, with statistically *insignificant* results even supposing the opposite effect (sig = .382; n.s.), and hypothesis 3b is therefore not supported.

Aside from testing the hypotheses, a relation was found between the moderation of conscientiousness and people control (sig = .011). This relation was not expected, and will be discussed in the discussion.

**Table 4. Results (coefficients) of the regression analysis of people control on Job Performance, moderated by the Big Five personality traits**

<i>Independent variables</i>	Step 1	Step 2	Step 3
<i>Control variables</i>			
Intrinsic motivation	.302**	.219*	.274**
Extrinsic motivation	.011	.002	-.007
Well being	-.024	-.010	.009
Tenure	.036	-.003	.008
<i>MCS</i>			
Outcome control	.092*	.073	.069
Behavior control	-.057	-.053	-.042
People control	.005	-.013	-.024
<i>BFI-S</i>			
Neuroticism		.028	.017
Extraversion		-.017	-.005
Openness		.061	.075
Conscientiousness		.249**	.204**
Agreeableness		-.001	-.006
<i>Moderators</i>			
Neuroticism * People control			-.084
Extraversion * People control			-.015
Openness * People control			-.048
Conscientiousness * People control			-.145*
Agreeableness * People control			.048
<i>R</i> <sup>2</sup>	.216	.323	.384
<i>F-Statistic</i>	4,122**	3,978**	3,482**
<i>R</i> <sup>2</sup> change		.107	.061

*n*=114 \*\**p*<.01. \**p*<.05.

Based on the analyses of the results, the following hypotheses are thereby not supported, as shown in Table 5. Due to the absence of any significant findings on the hypotheses that were set, and therefore the absence of relevant interpretations on the beta coefficients of the variables, no regression equation is provided.

**Table 5: Summary of testing the hypotheses**

	<i>Hypothesis</i>	<i>Result</i>
<b>H<sub>1a</sub></b>	<i>The positive effect of outcome controls on job performance is attenuated by the employee's level of neuroticism</i>	Not supported
<b>H<sub>1b</sub></b>	<i>The positive effect of behavior controls on job performance is amplified by the employee's level of neuroticism</i>	Not supported
<b>H<sub>1c</sub></b>	<i>The positive effect of people controls on job performance is amplified by the employee's level of neuroticism</i>	Not supported
<b>H<sub>2a</sub></b>	<i>The positive effect of outcome controls on job performance is amplified by the employee's level of extraversion</i>	Not supported
<b>H<sub>2b</sub></b>	<i>The positive effect of behavior controls on job performance is attenuated by the employee's level of extraversion</i>	Not supported
<b>H<sub>2c</sub></b>	<i>The positive effect of people controls on job performance are amplified by the employee's level of extraversion</i>	Not supported
<b>H<sub>3a</sub></b>	<i>The positive effects of behavior controls on job performance are attenuated by the employee's level of openness to experience</i>	Not supported
<b>H<sub>3b</sub></b>	<i>The positive effects of people controls on job performance are amplified by the employee's level of openness to experience</i>	Not supported
<b>H<sub>4a</sub></b>	<i>The positive effects of behavior controls on job performance are amplified by the employee's level of conscientiousness</i>	Not supported
<b>H<sub>4b</sub></b>	<i>The positive effects of outcome controls on job performance are amplified by the employee's level of conscientiousness</i>	Not supported
<b>H<sub>5a</sub></b>	<i>The positive effect of outcome controls on job performance is attenuated by the employee's level of agreeableness</i>	Not supported
<b>H<sub>5b</sub></b>	<i>The positive effect of behavior controls on job performance is amplified by the employee's level of agreeableness</i>	Not supported

## 5. Discussion and conclusion

### 5.1 Theoretical contribution

The results from this research contribute to the existing knowledge in a number of ways.

Firstly, the effect of personality traits on the relation between organizational controls and job performance had not been researched yet. This link is established by the current study, and therefore provides a pathway for future research. Although the hypotheses are not supported, they do often point in a certain direction, with sometimes missing statistical significance by small margins. Where personality traits in general were found to influence job performance in many studies, this study found this only to be true for conscientiousness, and generally attributed higher statistical significance (*not statistically significant*) to the effect of the moderation variables on job performance as opposed to the personality traits themselves.

Although this does not provide enough reason to assume that such effects are more prominent, it does indicate that gaps exist in our knowledge on how job performance is affected by the interaction of employee personality and organizational controls. For instance, people control and behavioral control have been found to increase job performance by many studies as well (Sihag & Rijdsdijk, 2018). Yet, although this study used tested, reliable scales, this relation was only supported for the variable outcome control, whereas moderation variables sometimes elicited a stronger statistically significant effect on job performance; such as the interaction between outcome control and conscientiousness, the interaction between neuroticism and people control, the interaction between openness to experience and behavioral control, and so on and so forth. This indicates that some relationships may exist, but could not be supported by the data used analyzed this study.

The hypotheses of this study were set based on the literature, combined with logical reasoning. Although none of the hypotheses were supported, one statistically significant relations was found between a moderation variable and job performance.

The moderation of conscientiousness on the link between people control and job performance was negative ( $\text{sig} = 0.011$ ). Generalizing this finding would mean that the positive effect of people control on job performance – which was not found by this study, but has been established by other studies – would be expected to decrease when a person's conscientiousness were to increase. Although hindsight reasoning is unpopular for good reason, one explanation for this relation could be that the social aspects of people control, such as lunches, parties, or any type of managerial effort to increase group or team cohesion, can form an obstruction to the conscientious person's tendency to be focused, and determined in approaching their work in a planned and organized manner. Meaning that in such cases, people control would thus mainly form a distraction, and get in the way of job performance.

The explanation on what the reason could be for this relations are speculative. However, they are based on what the literature says about the personality traits, and organizational control. The two concepts remain complex, and one could speculate endlessly on possible interaction effects. The relations between them should therefore be researched further in future studies. Recommendations with regards to such efforts are described in the section below.

### 5.2 Limitations and recommendations

This study possesses a number of limitations that need attention in future research.

Firstly, although the goal of a minimum of 100 participants was met, the sample size of this study was still quite small for social science standards. Combining this with the large amount of hypothesized relations, and the nature of interaction terms being slightly more restricted in their tendency to provide statistical significant results, this may have been the cause for difficulties in supporting hypotheses. Therefore, it is recommended that careful considerations should be done for the size and scope of the research. If a smaller sample size is to be expected, a smaller scope of the



study is recommended. If a larger sample size is expected to be achieved, the scope may also become larger.

Secondly, the questionnaire that was developed for this study, mainly consisted of three separate scales that were all tested, and elicited acceptable reliability and validity. However, the nature of self-report scales can cause a number of issues that could be prevented if another research methodology was applied. It would be valuable for this research domain if future research could apply a more concrete approach, without a heavy reliance on self-report scales. For instance, job performance can be measured much more accurately if external information were available. This would also benefit the reliability of the findings, since the concepts of conscientiousness and job performance have some similarities between them, making it very likely that the items used to measure them are positively related.

Finally, since this study established a link that had not been applied before, it would be interesting to see whether qualitative research could provide more insight towards the relation between personality traits and organizational control preference. Interviews can be much more explorative than online questionnaires, and participants of interviews may provide insights that were not directly recognized from the literature by the current study.

### 5.3 Practical contribution

Although the current study is unable to support the hypotheses set, it remains advisable for managers in practice that they carefully consider personal differences among personnel when organizational controls are used to increase their job performance. One practical implication from this study would be to ensure that the methods of people control do not obstruct the tendencies of conscientious people to be determined and focused in their approach to work.

Moreover, based on the results of this study, it is recommended for managers to select their personnel based on their level of conscientiousness and their intrinsic job motivation. It is not uncommon for managers to have job applicants fill in a short survey before the initial interview. On the other hand, this strategy does have issues (Morgeson et al., 2007). It may therefore be more appropriate to use personal intuition and good questioning to rate a person's conscientiousness, their intrinsic motivation, and naturally their overall fit with the job and organization itself.

### 5.4 Conclusion

This research paper examines the moderating effect of employee personality on the relationship between organizational controls and employee job performance. Through the use of an online questionnaire, 114 respondents were asked to answer questions on their personality traits, on the use of organizational controls of their manager, and on their job performance. Results suggested that none of the hypotheses could be supported by the data analysis. However, one relation outside of the hypotheses was found, indicating that the positive effects of people control are attenuated by a person's level of conscientiousness ( $\text{sig} = .011$ ). It is therefore advisable for managers to ensure that people control methods cause minimal obstruction for conscientious people to work planned and organized. As for the remaining variables, a direct positive relation was found between 1) conscientiousness and job performance 2) outcome control and job performance, and 3) intrinsic motivation and job performance. Although the current study is unable to support the hypotheses set, it remains advisable for managers in practice that they carefully consider personal differences among personnel when organizational controls are used to increase their job performance.

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## Appendixes

### Appendix 1

JP Scale copied from Andrade, Queiroga, and Valentini (2020).

**Table 2.** Non-standardized factor loadings of items of Self-Assessment Scale of Job Performance (short version).

Items	Description	Factor loadings (Standard error)			
		General Factor	Task	Context	
Item 1	I perform hard tasks properly.	.59 (.02)	n.s.		
Item 2	I try to update my technical knowledge to do my job.	.67 (.02)		.09 (.04)	
Item 3	I do my job according to what the organization expects from me.	.69 (.02)	.06 (.03)		
Item 4	I plan the execution of my job by defining actions, deadlines and priorities.	.67 (.02)	.67 (.14)		
Item 5	I plan actions according to my tasks and organizational routines.	.69 (.02)	.52 (.11)		
Item 6	I take initiatives to improve my results at work.	.82 (.01)		n.s.	
Item 7	I seek new solutions for problems that may come up in my job.	.75 (.02)		.32 (.04)	
Item 8	I work hard to do the tasks designated to me.	.70 (.02)		.32 (.04)	
Item 9	I execute my tasks foreseeing their results.	.78 (.02)		.32 (.04)	
Item 10	I seize opportunities that can improve my results at work.	.72 (.02)	n.s.		
Goodness of fit					
$\chi^2$ (df) = 201.3 (28)					
TLI = 0.98                      CFI = 0.99					
RMSEA (90% CI) = 0.06 (0.05 – 0.07)					
		CR	.91	.41	.23
		$\omega_h$	.88	.02	.02

*Notes.* n.s. = not statistically significant ( $p < 0.05$ ); The empty cells indicate that the factor loading was constrained to zero; CR = Composite Reliability;  $\omega_h$  = Hierarchical Omega.

### Appendix 2

Scale by Rijdsijk & van den Ende (2011).

Construct and Source	Items	Factor Loadings
Outcome control <sup>1</sup> (Sources: Atuahene-Gima and Li, 2006; Bonner et al., 2002; Kirsch, 1996; Snell, 1992)	( $\alpha = .76$ CR = .77 AVE = .52) (1 = strongly disagree, 7 = strongly agree) 1. I monitored the degree to which the team achieved specific goals 2. I evaluated the degree to which the team adhered to predetermined costs 3. I set clear goals for the project team concerning the cycle time of the project	0.72 0.71 0.74
Process control (based on Bonner et al., 2002; Carson, 2007; Snell, 1992)	( $\alpha = .76$ CR = .83 AVE = .62) (1 = strongly disagree, 7 = strongly agree) 1. I formulated detailed and comprehensive specifications for the procedures that the project team needed to follow 2. I specified the processes and methods by which the team had to operate 3. I monitored the project team on whether it worked according to prescribed methods	0.82 0.81 0.73
Clan control (based on Kirsch, 1996)	( $\alpha = .83$ CR = .71 AVE = .49) (1 = strongly disagree, 7 = strongly agree) 1. I tried to achieve a sense of unity among myself and the different members of the project team 2. I ensured that the project team members strongly felt part of the project 3. There was a strong community feeling between myself and the team members 4. I tried my best to be on good terms with the team members	0.76 0.64 0.53 0.52

## Appendix 3

Scale by Rijdsijk & van den Ende (2011), adapted into perspective of controlee.

Please indicate to what extent you agree with the following statements on the management style of your manager. (1= totally disagree, 2= disagree, 3 = slightly disagree, 4= neutral, 5= slightly agree, 6= agree, 7= totally agree.)

Variable	Item
Outcome control	1 The degree to which I achieve specific goals is monitored by my manager
	2 The degree to which I adhere to predetermined costs (stayed within budget) are evaluated by my manager
	3 Clear goals are set by my manager concerning my time for different tasks and / or projects
Behavior control	1 Detailed and comprehensive specifications for the procedures that I need to follow are formulated by my manager
	2 The methods and processes by which I have to operate, are specified by my manager
	3 Whether I work according to prescribed methods is monitored by my manager
People control	1 Efforts by my manager are made towards achieving a sense of unity among the different members of the team / department and the manager
	2 Efforts by my manager are made towards ensuring all team / department members feel part of the organization
	3 There is a strong community feeling between the team / department and the manager
	4 The manager tries his best to be on good terms with the team department members

**Changes: written from the point of view of the controlee (employee) instead of the controller (manager). Secondly, 'project' is changed to 'organization', and 'team' is changed to 'team / department'. Thirdly, where past tense was sometimes originally used, it is changed into present tense.**

## Appendix 4

The shortened BFI (BFI-S), adapted from Hahn, Gottschling, and Spinath (2012).

I See Myself as Someone Who ...	Young Adults (N = 6,819)						Middle-Aged Adults (N = 7,982)						Older Adults (N = 5,728)					
	FACE		CATI		SELF		FACE		CATI		SELF		FACE		CATI		SELF	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Worries a lot (N)	4.52	1.72	4.74	1.84	4.64	1.61	4.75	1.66	4.98	1.77	4.83	1.58	4.86	1.70	4.98	1.81	4.89	1.57
Gets nervous easily (N)	3.52	1.67	3.58	1.78	3.73	1.65	3.59	1.77	3.74	1.78	3.79	1.67	3.78	1.84	3.90	1.94	4.02	1.66
Remains calm in tense situations (N, recoded)	3.36	1.50	3.29	1.48	3.58	1.47	3.34	1.52	3.16	1.47	3.58	1.48	3.40	1.54	3.15	1.45	3.53	1.47
Is talkative (E)	5.64	1.30	5.58	1.28	5.45	1.29	5.60	1.32	5.66	1.26	5.42	1.28	5.49	1.42	5.86	1.19	5.26	1.37
Is outgoing, sociable (E)	5.26	1.37	5.26	1.43	5.14	1.40	5.15	1.44	5.25	1.46	4.92	1.43	5.02	1.51	5.53	1.40	4.92	1.48
Is reserved (E, recoded)	4.02	1.62	4.29	1.83	4.17	1.67	3.86	1.63	3.83	1.73	3.99	1.59	3.57	1.59	3.39	1.67	3.66	1.58
Is original, comes up with new ideas (O)	4.78	1.39	5.02	1.21	4.73	1.26	4.65	1.43	4.96	1.31	4.68	1.31	4.18	1.60	4.96	1.50	4.35	1.47
Values artistic, aesthetic experiences (O)	4.07	1.78	4.42	1.78	3.92	1.80	4.21	1.83	4.77	1.71	4.07	1.76	4.24	1.86	5.16	1.59	4.21	1.75
Has an active imagination (O)	5.05	1.44	5.25	1.46	4.98	1.48	4.79	1.50	5.24	1.44	4.73	1.49	4.54	1.63	5.23	1.48	4.63	1.53
Is sometimes rude to others (A, recoded)	5.09	1.67	4.50	1.76	4.79	1.61	5.13	1.66	4.65	1.87	4.93	1.63	5.35	1.67	4.45	2.08	5.07	1.68
Has a forgiving nature (A)	5.50	1.31	5.61	1.35	5.40	1.26	5.56	1.31	5.74	1.27	5.45	1.32	5.61	1.34	5.96	1.21	5.36	1.41
Is considerate and kind to almost everyone (A)	5.81	1.09	5.83	1.07	5.72	1.07	5.81	1.09	5.81	1.10	5.73	1.10	5.91	1.09	6.00	1.10	5.64	1.24
Does a thorough job (C)	6.20	0.99	6.17	0.91	6.07	0.96	6.35	0.92	6.26	0.90	6.26	0.91	6.20	1.10	6.24	0.95	6.09	1.15
Tends to be lazy (C, recoded)	5.65	1.54	5.17	1.76	5.27	1.60	6.05	1.35	5.47	1.76	5.83	1.45	6.09	1.38	5.36	1.87	5.75	1.53
Does things efficiently (C)	5.86	1.07	5.80	1.00	5.76	0.97	5.93	1.08	5.82	1.05	5.80	1.04	5.72	1.26	5.96	1.03	5.66	1.25

Young adults, N (FACE) = 3,164; N (CATI) = 527; N (SELF) = 3,128. Middle-aged adults, N (FACE) = 4,131; N (CATI) = 426; N (SELF) = 3,425. Older adults, N (FACE) = 3,971; N (CATI) = 225; N (SELF) = 1,532. N Neuroticism, E Extraversion, O Openness to experience, A Agreeableness, C Conscientiousness

## Appendix 5

WHO-5 (well-being) Questionnaire copied from Topp, Østergaard, Søndergaard, and Bech (2015). Items 1 and 5 were used in the questionnaire.

The WHO-5 questionnaire						
<b>Instructions:</b>						
Please indicate for each of the 5 statements which is closest to how you have been feeling over the past 2 weeks.						
Over the past 2 weeks...	All of the time	Most of the time	More than half the time	Less than half the time	Some of the time	At no time
1 ... I have felt cheerful and in good spirits	5	4	3	2	1	0
2 ... I have felt calm and relaxed	5	4	3	2	1	0
3 ... I have felt active and vigorous	5	4	3	2	1	0
4 ... I woke up feeling fresh and rested	5	4	3	2	1	0
5 ... my daily life has been filled with things that interest me	5	4	3	2	1	0

Scoring principle: The raw score ranging from 0 to 25 is multiplied by 4 to give the final score from 0 representing the worst imaginable well-being to 100 representing the best imaginable well-being.

## Appendix 6: Factor Analysis of the BFI-S

	Rotated Component Matrix				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
<i>Is outgoing, sociable</i>	.861				
<i>Is talkative</i>	.847				
<i>Is reserved (reversed)</i>	.777				
<i>Gets nervous easily</i>		.807			
<i>Remains calm in tense situations (reversed)</i>		.786			
<i>Worries a lot</i>		.713			
<i>Has an active imagination</i>			.765		
<i>values artistic, aesthetic experiences</i>			.673		
<i>Is original, comes up with new ideas</i>			.639		
<i>Is sometimes rude to others (reversed)</i>				.741	
<i>Is considerate and kind to almost everyone</i>				.712	
<i>Has a forgiving nature</i>				.679	
<i>Does a thorough job</i>					.702
<i>Tends to be lazy (reversed)</i>					.654
<i>Does things efficiently</i>					.589

**Extraction Method: Principal Component Analysis.**  
**Rotation Method: Varimax with Kaiser Normalization.**  
**a. Rotation converged in 5 iterations.**

## Appendix 7 General Factor Analysis

Rotated Component Matrix

	<i>Component</i>											
	1	2	3	4	5	6	7	8	9	10	11	12
Worries a lot				-,305				,716				
Gets nervous easily								,793				
Remains calm in tense situations								-,730				
Is talkative						,826						
Is outgoing, sociable						,865						
Is reserved						-,726						
Is original, comes up with new ideas										-		,486
values artistic, aesthetic experiences										,390		,770
Has an active imagination												,706
Is sometimes rude to others											-	,818
Has a forgiving nature	,340											,542
Is considerate and kind to almost everyone												,613
Does a thorough job					,573				,375			
Tends to be lazy									-,650			
Does things efficiently					,547							
The degree to which I achieve specific goals is monitored by my manager		,307									,776	
The degree to which I adhere to predetermined costs (stayed within budget) are evaluated by my manager											,779	
Clear goals are set by my manager concerning my time for different tasks and / or projects			,633								,430	
Detailed and comprehensive specifications for the procedures that I need to follow are formulated by my manager			,882									

**Appendix 7 (Continued)**

The methods and processes by which I have to operate are specified by my manager	,897		
Whether I work according to prescribed methods is monitored by my manager	,845		
Efforts by my manager are made towards achieving a sense of unity among the different members of the team / department and the manager	,862		
Efforts by my manager are made towards ensuring all team / department members feel part of the organization	,847		
There is a strong community feeling between the team / department and the manager	,794		
The manager tries his best to be on good terms with the team / department members	,817		
I perform hard tasks properly	,342	,726	
I do my job according to what the organization expects from me	,448	,441	
I plan the execution of my job by defining actions, deadlines and priorities			,671
I plan actions according to my tasks and organizational routines	,348		,680
I seize opportunities that can improve my results at work	,675	,370	
I try to update my knowledge to do my job	,846		



**Appendix 7 (Continued)**

I take initiatives to improve my results at work	,859			
I seek new solutions for problems that may come up in my job	,691			
I work hard to do the tasks designated to me	,385		,422	,476
I execute my tasks foreseeing their results	,506			
Over the last two weeks, I have felt cheerful and in good spirits:			,819	
Over the last two weeks, my daily life has been filled with things that interest me:	,347		,653	
I put in effort for my job for the satisfaction that I experience from taking on interesting challenges	,334	,305	,613	
I put in effort for my job for the satisfaction I experience when I am successful at doing difficult tasks			,516	,419
I put in effort for my job because it allows me to earn money				,941
I put in effort for my job for the income it provides me				,934

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

## Appendix 8 Multicollinearity regression

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Toleranc e	VIF
1	(Constant)	3,334	,735		4,535	<,001		
	ModNeurOutcome	-,062	,064	-,100	-,978	,331	,601	1,664
	ModNeurBehav	-,010	,073	-,015	-,139	,890	,521	1,920
	ModNeurPeople	-,054	,052	-,107	-1,023	,309	,579	1,727
	ModExtrOutcome	,069	,063	,119	1,101	,274	,536	1,864
	ModExtrBehav	,016	,062	,026	,259	,796	,608	1,645
	ModExtrPeople	-,026	,058	-,045	-,441	,660	,604	1,656
	ModOpenBehav	-,068	,059	-,106	-1,146	,255	,736	1,358
	ModOpenPeople	-,032	,056	-,057	-,573	,568	,632	1,583
	ModAgreeOutcome	,089	,059	,140	1,516	,133	,734	1,362
	ModAgreeBehav	-,108	,063	-,163	-1,729	,087	,710	1,409
	ModConscOutcome	-,135	,056	-,240	-2,401	,018	,631	1,585
	ModConscBehav	,102	,061	,163	1,662	,100	,652	1,534
	IntrMot	,338	,100	,423	3,392	,001	,405	2,471
	ExtrMot	,041	,057	,068	,714	,477	,695	1,439
	WellBeing	-,013	,076	-,019	-,165	,870	,490	2,039
	Neurot	,011	,047	,022	,230	,818	,710	1,409
	Extr	-,026	,042	-,054	-,612	,542	,794	1,260
	Open	,035	,060	,052	,583	,561	,795	1,258
	Agree	-,033	,069	-,046	-,476	,635	,681	1,469
	Consc	,219	,069	,309	3,188	,002	,667	1,500
	OutcomeControl	,059	,039	,148	1,520	,132	,663	1,507
	BehavioralControl	-,038	,039	-,099	-,977	,331	,616	1,624
	PeopleControl	-,023	,053	-,051	-,444	,658	,474	2,109
	Tenure	,010	,057	,016	,178	,859	,742	1,348

a. Dependent Variable: JobPerf