

# The use of management controls to enhance the perception of meaningful work – a systematic literature review and conceptual model development

Meaningful  
work and  
management  
controls

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## Abstract

**Purpose** – This study examines the relationship between the use of management controls and the perception of meaningful work. Meaningful work is an important driver of individual performance of managers, and employees and can be enabled by sufficient use of management controls. The purpose of this paper is to address this issue.

**Design/methodology/approach** – Based on bibliometric analyses and a structured literature review of academic research studies from the organizational, management and accounting literature, the authors develop a conceptual model of the relationship between the use of management controls and the perception of meaningful work.

**Findings** – First, the authors propose that the use of formal management controls in a system (i.e. the levers of the control framework) is more powerful than using unrelated formal controls only. Second, they suggest that the interaction of a formal control system together with informal controls working as a control package can even stretch the perception of meaningful work. Third, they argue that the intensity of the control use matters to enhance the perception of meaningful work (inverted u-shaped relationship).

**Originality/value** – This study presents the first conceptual model of the relationship between the use of management controls and the perception of meaningful work. It provides valuable implications for practice and future research in the field of performance management.

**Keywords** Meaningful work, Control use, Formal and informal controls, Control package, Intensity of control use

**Paper type** Research paper

## 1. Introduction

Meaningful work is defined as the assessment that one's work achieves purposeful, valuable or worthwhile goals that are consistent with one's values (Allan *et al.*, 2019), and it is a significant driver of motivation, work engagement (Allan *et al.*, 2019; Barrick *et al.*, 2015; Rich *et al.*, 2010) and individual performance (Gartenberg *et al.*, 2019; Hackman and Oldham, 1980; Wrzesniewski, 2003). Research on meaningful work is growing (Amabile and Pratt, 2016; Bailey *et al.*, 2017; Lysova *et al.*, 2019; Steger *et al.*, 2012). It is still unclear how and under what circumstances meaningful work can be enabled by management (Bailey *et al.*, 2017).

This study aims to address whether and how the use of management controls can influence the perception of meaningful work by managers and employees. First, we draw on insights from the management control literature on control design choices and its use (Bedford, 2020; Gerdin, 2020; Grabner and Moers, 2013; Kruis *et al.*, 2016; Malmi and Brown, 2008) to examine the relationship between management controls and meaningful work as an outcome. We focus on control design choices such as enabling versus coercive uses, considerations of systems or packages, the involvement of informal controls to formal systems and the intensity of use of controls.



Second, we use bibliometric and structured literature review techniques to determine the conceptualization, antecedents and limits of meaningful work. We conduct a citation analysis and a keyword co-occurrence analysis to examine the underlying streams. The citation analysis shows that the literature is highly fragmented and new theories are still emerging. The keyword co-occurrence analysis (van Eck and Waltman, 2014; van Eck *et al.*, 2010) reveals four distinct clusters that are connected to meaningful work. This finding is in line with a few prior meaningful work studies that have also proposed four main dimensions of meaningful work (Bailey *et al.*, 2017; Lips-Wiersma and Wright, 2012; Rosso *et al.*, 2010; Steger *et al.*, 2012). Next to the bibliometric analysis, we gain further insights on antecedents and limits of meaningful work with a structured literature search.

With these findings and the theoretical knowledge from the management control literature, we develop a conceptual model of a non-linear, inverted u-shaped relationship between the use of controls and the perception of meaningful work. We propose that the use of enabling formal controls in a system, rather than used independently, can enhance the perception of meaningful work. Thus, management needs to design and implement control practices that address the different dimensions of meaningful work. We apply the levers of control (LOC) framework (Simons, 1994, 1995). We propose that beliefs and interactive levers may offer shared vision and community, and higher levels of autonomy, skill variety and task significance. Additionally, the diagnostic and boundary levers provide structure, set clear expectations and give resources and feedback.

We also propose that this positive relationship can even be stretched by the interaction of these formal controls with informal controls as an enabling control package. Recent management accounting studies started analysing the interactions of informal controls and formal systems (Evans and Tucker, 2015; Ferreira and Otley, 2009; Gerdin *et al.*, 2019; Pfister and Lukka, 2019). Informal controls are less well-defined practices, routines, social relationships, cultures, links or loose connections between individuals (Chenhall *et al.*, 2010). Especially the worker-centric dimensions of meaningful work can be facilitated by informal interactions (Carton, 2018; Grant, 2007, 2012; Tepper *et al.*, 2018).

The intensity of use of controls is important, as well. We propose that after a certain degree of intensity, the positive relationship between the use of management controls and the perception of meaningful work will decrease. We rely on the too-much-of-a-good-thing (TMGT) effect that suggests that antecedent variables widely accepted as directing to desirable outcomes can lead to negative effects in practice (Pierce and Aguinis, 2013). The meaningful work literature notices that the perception of meaningful work can quickly shift to meaningless work when employees perceive a lack of self-control (Cartwright and Holmes, 2006; Lips-Wiersma and Wright, 2012), feel monitored (Stein *et al.*, 2019) or pressured (Amabile and Pratt, 2016; Bunderson and Thompson, 2009).

Our study contributes to the literature in several ways. We contribute to the research stream that suggests that it matters how controls are perceived by employees to influence behavioural outcomes (Mahama and Cheng, 2013; Speklé *et al.*, 2017; Tessier and Otley, 2012). Especially, we contribute to the stream that regards enabling control configurations (Ahrens and Chapman, 2004; Franco-Santos and Doherty, 2017; Wouters and Wilderom, 2008). Further, we contribute to the management accounting literature that examines the LOC framework (Kruis *et al.*, 2016; Speklé *et al.*, 2017; Widener, 2007). We also add knowledge to research that focusses on the configurations of formal and informal controls as a package (Evans and Tucker, 2015; Ferreira and Otley, 2009; Gerdin *et al.*, 2019; Malmi and Brown, 2008; Pfister and Lukka, 2019). Besides, we follow calls of the recent management accounting literature to consider capturing non-linear models (Bedford, 2020; Burkert *et al.*, 2014; Luft and Shields, 2003), and thereby, we contribute to a small but growing stream of the accounting literature that focusses on non-linear relationships (Gordon and Smith, 1992; Heggen and Sridharan, 2021; Sturman, 2003; Voußem *et al.*, 2016).

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This paper proceeds as follows. In [Section 2](#), we discuss the theoretical basis of design choices and use of management controls. [Section 3](#) explains the methodology to review the meaningful work construct. In [Section 4](#), we present the findings of our reviews and outline organizational mechanisms that drive or trouble the perception of meaningful work. In [Section 5](#), we develop a conceptual model of how management controls affect the perception of meaningful work and pose our propositions. In [Section 6](#), we discuss the findings along with implications, limitations and suggestions for further research.

## 2. Background of management control designs and use

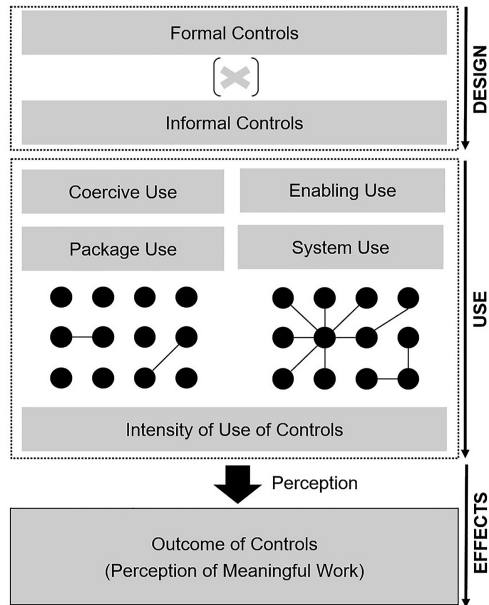
Organizations can articulate how work serves a valued purpose ([Pratt and Ashforth, 2003](#), p. 321). By promoting a clear corporate purpose, organizations give employees a system of values ([Rosso et al., 2010](#), p. 111), job design initiatives ([Hackman and Oldham, 1980](#)) and regular feedback on their performance ([Bailey et al., 2017](#)), and they make clear how employees' work have an impact on others ([De Boeck et al., 2019](#), p. 553). So, a well matched set of controls can form the organizational environment to enhance meaningful work. [Busco et al. \(2018\)](#) suggest that management accountants can use management controls as a powerful and positive tool for aligning a meaningful purpose with sustainable, value creating business models if these controls are well designed.

One central aspect in the management control literature lies on control design attributes to enhance the effect and quality of controls ([Bedford, 2020](#); [Gerdin, 2020](#); [Grabner and Moers, 2013](#); [Kruis et al., 2016](#); [Malmi and Brown, 2008](#)). From a contingency perspective ([Otley, 1980, 1999](#)), there is no universally applicable management control formulation. The theory argues that the choice of appropriate control techniques is determined by contextual factors, and each organization needs to design own control configurations to avoid a loss of control and unintended consequences – e.g. the loss of meaningful work ([Bedford et al., 2016](#); [Chenhall, 2003](#); [Franco-Santos and Otley, 2018](#); [Gerdin, 2005](#)). Next to the design of certain management control practices, their introduction and daily use by management is of central importance ([Ferreira and Otley, 2009](#); [Merchant and Otley, 2020](#); [Wouters and Wilderom, 2008](#)). We therefore define design as the plan (“the What”) and use as the implementation (“the How”) of controls.

[Figure 1](#) provides a conceptual framework of management control design and use choices that are often discussed in the management control research stream. This framework might not be complete to consider all aspects, but it aims to be used as a typology for enabling the perception of meaningful work.

First, formal control mechanisms include formal organizational practices – e.g. comprehensive performance measurement and evaluation processes, incentive compensation systems, behavioural constraints or detailed standard operating procedures ([Merchant and Van der Stede, 2012](#)). The LOC framework by [Simons \(1994, 1995\)](#) is a holistic system of formal management controls and a prominent approach that is frequently cited ([Heinicke et al., 2016](#); [Kruis et al., 2016](#); [Mundy, 2010](#); [Speklé et al., 2017](#); [Tessier and Otley, 2012](#); [Widener, 2007](#)).

The framework consists of beliefs, boundary, diagnostic and interactive systems. Beliefs systems are “the explicit set of organizational definitions that senior managers communicate formally and reinforce systematically to provide basic values, purpose, and direction for the organization” ([Simons, 1995](#), p. 34). Beliefs systems signal core values to employees to inspire and motivate them to take the initiative to seek opportunities, make decisions and find solutions to problems that are consistent with the organization's values ([Mundy, 2010](#)). Interactive systems are intended to help the organization to search for new ways to strategically position itself in a dynamic marketplace ([Simons, 1995](#)). They communicate the concerns of top managers throughout the organization ([Adler and Chen, 2011](#)).



**Figure 1.**  
Management control  
design choices

Employees become aware of where potential opportunities and threats may arise and are motivated to proactively seek new opportunities and guarding against threats (Ferreira and Otley, 2009). In contrast, boundary and diagnostic systems communicate expectations of behaviour, set limits on what is acceptable behaviour and provide feedback (Simons, 1995). Boundary controls set restrictions or minimum requirements on employee behaviour to focus the attention and motivation to critical operations (Adler and Chen, 2011). Diagnostic controls communicate targets on critical performance measures that serve to guide behaviours and provide feedback to facilitate employee learning (Simons, 1995). These systems are intended to give employees structure which influences their feelings of competence (Speklé et al., 2017).

It is noted that the power of the LOC resides not in how they are used in isolation but rather in how they complement each other when used together (Simons et al., 2000). Kruis et al. (2016) suggest that different types of balances amongst the LOCs are required based on the strategic type of the firm. Prior empirical research provided evidence that firms which jointly use all four levers are associated to have desirable organizational outcomes such as learning (Widener, 2007), development of organizational capabilities (Mundy, 2010) and creativity (Speklé et al., 2017). Therefore, the use of the LOC framework might be a way to enhance the perception of meaningful work.

Despite the theoretical prominence of the LOC, some studies noted limitations of the framework (Ferreira and Otley, 2009; Tessier and Otley, 2012) and began to examine informal controls that incorporate with formal management control systems working together as a control package (Evans and Tucker, 2015; Ferreira and Otley, 2009; Malmi and Brown, 2008; Otley, 1999). Informal controls are characterized by less clearly defined practices, social relationships, connections or loose links between individuals that facilitate free-flowing, open and flexible communication, structures and decision-making processes (Chenhall et al., 2010). Thereby, different formal and informal control configurations can be used simultaneously within an organization (Bedford, 2020; Ferreira and Otley, 2009). Prior research noted how

cultural controls (Malmi and Brown, 2008) like organizational culture (Evans and Tucker, 2015; Heinicke *et al.*, 2016; Henri, 2006) or personnel controls (Gerdin *et al.*, 2019; Pfister and Lukka, 2019) positively interact with formal systems. The influence of organizational culture and leadership practices as informal controls may also enhance meaningful work perceptions.

Building on Adler and Borys (1996), many studies focus on enabling rather than on coercive uses of controls (Ahrens and Chapman, 2004; Burney *et al.*, 2017; Franco-Santos and Doherty, 2017; Heggen and Sridharan, 2021; Mahama and Cheng, 2013; Wouters and Wilderom, 2008). Coercive controls aim to force employees' compliance, while enabling controls aim employees to feel facilitated or motivated by the rules and the systems in place (Wouters and Wilderom, 2008).

Furthermore, two distinct perspectives of the control design evolved in the literature. The system approach claims that control practices form a control system, when these practices are interdependent and the design choice has taken the interdependencies, i.e. complements and substitutes into account given a certain control problem (Grabner and Moers, 2013). The package approach begins with an aggregate examination of management control practices to determine which practices are more likely to be complements or substitutes, and then places these controls independently as a control package (Bedford *et al.*, 2016; Malmi and Brown, 2008).

Finally, some studies started to analyse the intensity of the use of controls and its outcomes on individuals (Widener, 2007; Mahama and Cheng, 2013; Bedford *et al.*, 2016; Kruis *et al.*, 2016; Speklé *et al.*, 2017). A growing body of management studies suggest that antecedent variables widely accepted as directing to desirable consequences (e.g. an enabling work environment that might enhance the meaning of work) can lead to negative outcomes in practice (loss of meaning of work) which often represent counter-intuitive findings. This is called the TMGT effect (Pierce and Aguinis, 2013). A few recent management control studies integrated such non-linear relationships into their research models (Heggen and Sridharan, 2021; Vouřem *et al.*, 2016). For example, Heggen and Sridharan (2021) indicate an inverted u-shaped association between an enabling control approach and environmental performance. The prior literature also argues that it matters how controls are perceived by employees to influence behavioural outcomes (Mahama and Cheng, 2013; Speklé *et al.*, 2017; Tessier and Otley, 2012). Thus, the design, interactions and intensity of the use of management controls can have important effects to enhance the perception of meaningful work which becomes more and more important in organizational practice. The preceding overview discusses diverse aspects of the control design and use from the selected literature. It does not seek to be complete but rather intends to assist drawing the relationship between the design of management controls and the perception of meaningful work to develop the conceptual model later in this study.

### 3. Review methods to assess meaningful work literature

We examine the most influential articles that have dealt with meaningful work in order to reveal interactions with the use of controls. We apply bibliometric techniques such as citation and keyword co-occurrence analyses combined with a cluster analysis. We also conduct a structured literature review following the recommendation of van Eck and Waltman (2014) to use bibliometric techniques as a complement to other review methods.

#### 3.1 Bibliometric analyses

We collected our data from the Scopus database. Since we were primarily interested in the field of general business research, we limited the query to the subject area "Business, Management, and Accounting" which is a filter criterion in the database covering also other management disciplines. In addition, we focussed on English-language publications and included only published articles, press articles, conference papers, reviews, books and book

chapters, which is the most promising selection of document types in the database for our search term “meaningful work” which we entered in the fields of title, abstract and keywords of documents published from 1976 (as in this year the first match for meaningful work occurred in Scopus) until 2021, inclusively. Our initial search resulted in 384 hits for each of which we downloaded the full bibliographic record. We found 319 journal articles, 45 book sections, ten books and ten conference proceedings. Within these 384 publications in total 10,261 citations were found. We summarized these publications, including citations, by four publication periods in [Appendix 1](#). Past studies have noticed that it is most valuable to assess the impact of publications that have been cited heavily over time, since they can be regarded as certified knowledge, even if there are thousands of studies in a field ([Ramos-Rodríguez and Ruíz-Navarro, 2004](#)). Therefore, we conducted a citation analysis to identify the 100 most cited articles on the topic of meaningful work. Furthermore, we applied a keyword co-occurrence analysis that indicates relevant objects closely related to meaningful work. We used the text mining functionality of the bibliometric visualization tool VOSviewer [1] ([van Eck and Waltman, 2014](#); [van Eck et al., 2010](#)) that extracts textual data from titles and abstracts of publications. VOSviewer provides distance-based visualizations of bibliometric networks ([van Eck and Waltman, 2014](#)). It applies the association strength normalization to normalize for differences between nodes in the number of edges ([van Eck and Waltman, 2009](#)). The mapping and clustering techniques use a variant of the Scaling by MAjorizing a COmplicated Function (SMACOF) algorithm [2] ([van Eck et al., 2010](#); [Waltman et al., 2010](#)).

### 3.2 Structured literature review

A limitation of bibliometric techniques is a potential loss of information ([van Eck and Waltman, 2014](#)). Therefore, a structured literature review has been applied in this study as a second literature review technique. First, we read an *ad hoc* list of academic papers that focus on meaningful work aspects and management controls that might be relevant in association to meaningful work. That step of the literature review process is meant to identify the key sources of research, the type of evidence available and the main keywords required to find relevant studies. The list includes organizational behaviour and management control studies of [Barrick et al. \(2015\)](#), [Bunderson and Thompson \(2009\)](#), [Gartenberg et al. \(2019\)](#), [Henderson and Van den Steen \(2015\)](#), [Hollensbe et al. \(2014\)](#), [Kempster et al. \(2011\)](#), [Lips-Wiersma and Wright \(2012\)](#), [Malmi and Brown \(2008\)](#), [Martela and Pessi \(2018\)](#), [Pratt and Ashforth \(2003\)](#), [Rich et al. \(2010\)](#), [Rosso et al. \(2010\)](#), [Simons \(1994\)](#) and [Thakor and Quinn \(2013\)](#). After analysing the papers and their references, we found that the constructs’ meaningful work and purpose (which are often used synonymously) are mostly researched in the disciplines of organizational behaviour and strategic management. To capture management control aspects related to meaningful work, we also consider the management accounting literature. We defined following keywords for the further literature review: “beliefs systems,” “corporate purpose,” “meaningful work” and “value-based controls”. Especially “beliefs systems” and “value-based controls” are terms that are used when considering management controls on behavioural aspects in the management accounting field. The keywords aim to guide the search of relevant articles for the structured literature review.

We chose additional criteria to narrow the scope of the review. We reviewed key journals in organizational behaviour: *Journal of Organizational Behavior*, *Organization Science*, *Research in Organizational Behavior*, *Group and Organization Management*, *Journal of Applied Psychology*; key journals in strategy and general management: *Academy of Management Journal*, *Academy of Management Review*, *Administrative Science Quarterly*, *Strategic Management Journal* and *Journal of Management Studies*; and key journals in accounting: *Accounting, Organizations and Society*, *The Accounting Review*, *Management Accounting Research*, *Behavioral Research in Accounting*, *Journal of Accounting Literature* and *Journal of*

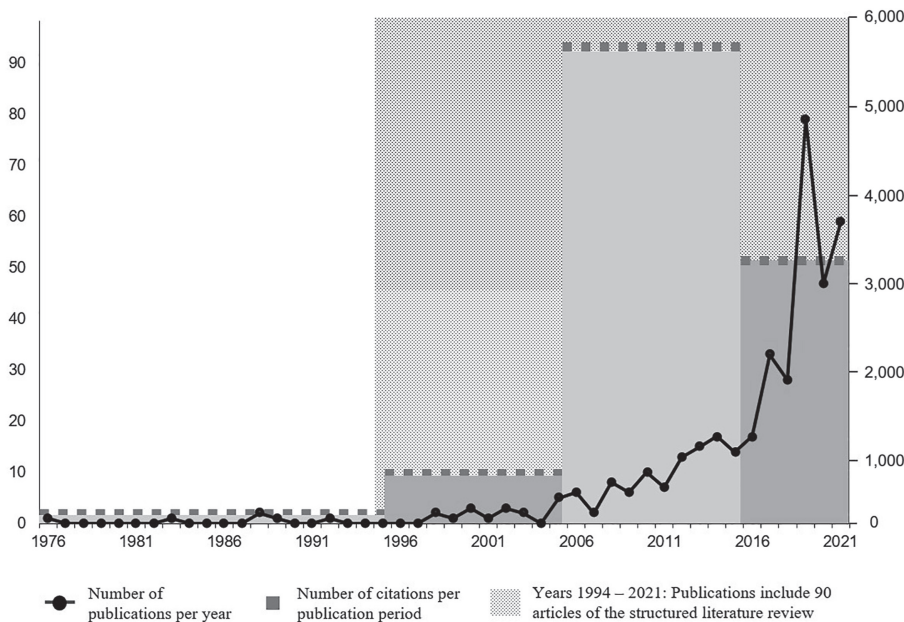
*Management Accounting Research*. Selected studies can also come from the references included in any of the above-mentioned journals to avoid missing relevant studies. However, to ensure the quality of the additional studies we only included studies at a minimum B ranking according to German VHB (Verband der Hochschullehrer für Betriebswirtschaft) rating.

The review involves studies published between 1994 and 2021. We chose 1994 because of the first call for scholars to consider purpose as the essential lever to effective strategic management initiated by Bartlett and Ghoshal (1994). The authors found after extensively researching the largest companies in Europe, the USA and Japan that the most successful ones create environments which share a sense of purpose and members perceive their work as meaningful (Bartlett and Ghoshal, 1994). This article sets a mind shift for “purpose, process, and people” (Bartlett and Ghoshal, 1994, p. 80) and generated an increasing interest of academic research on meaningful work (see Figure 2 in the next section).

We conducted an electronic search to cover the academic literature in the chosen journals, using EBSCOhost, Web of Science, Scopus, JSTOR and WISO. We found 90 papers that met our review selection criteria. All academic sources are systematically reviewed to acquire knowledge for answering the illustrated research question (see Appendix 2).

#### 4. Findings

The bibliometric and the structured literature reviews indicate that research on meaningful work related to business and management publications is growing in attention. Figure 2 shows the distribution of publications over the last decades from 1976 to 2021 using the



**Figure 2.** Number of publications on “meaningful work” in the management literature from 1976 to 2021 (384 articles from Scopus database)

**Note(s):** We use the visualization of similarities (VOS) approach with VOSviewer Version 1.6.14 (van Eck & Waltman, 2014; van Eck *et al.*, 2010). We apply a key word co-occurrence analysis using the full counting method and four co-occurrences as the minimum number. Out of 1,032 keywords 28 met the threshold. The graphic shows similarities by using different colour nodes which build four clusters

output of the bibliometric search from the Scopus database. The number of studies increased considerably from the early 2000s. Most articles about meaningful work have been published in 2019 with a count of 79 publications. Most citations arise from the publication period between 2006 and 2015 with 5,802 citations.

#### *4.1 Citation analysis of meaningful work research*

[Table 1](#) portrays the list of the 100 most influential articles in the meaningful work literature resulting from the citation analysis of the output from the Scopus database. These 100 most cited articles account for 87% of the total number of citations. This high percentage of citation coverage suggests that the origins of the research on “meaningful work” are largely captured. The 100 most influential articles on meaningful work illustrate that the research is mostly embedded in research streams of business ethics, human resources, management, psychology and organizational behaviour, as these appear amongst the highest positions. Furthermore, 88% of the research articles have been published from 2010, including 15 studies out of the 20 most cited articles. This indicates a relatively recent interest in meaningful work in the academic field of business and organizational research and can be explained by the changing awareness of the role of employees in the organization ([Ghoshal, 2005](#); [Luthans, 2002](#); [Quinn et al., 2003](#)).

The most cited article in this sample is from [Rosso et al. \(2010\)](#). The study focusses on the underlying mechanisms of meaningful work by reviewing the literature and developing a theoretical scheme of main pathways by which meaningful work is created and maintained: individuation (self-agency), contribution (other agency), self-connection (self-communion) and unification (other communion). The second-most-cited article adds knowledge to the growing literature by developing a meaningful work scale ([Steger et al., 2012](#)). Based on a survey with employees of a US American university, the authors find that meaningful work appears to be important to workers’ well-being, job satisfaction and contentment with their organization. The third-most-cited study by [Amabile and Pratt \(2016\)](#) develops a model on creativity and innovation in organizations (revision of their model from 1988). In this article the authors focus primarily on the individual level psychological processes like meaningful work that enhances individual creativity ([Amabile and Pratt, 2016](#)).

#### *4.2 Keyword co-occurrence analysis of meaningful work research*

Over the last decades, several management scholars have recognized the importance of meaningful work ([Allan et al., 2019](#); [De Boeck et al., 2019](#); [Lips-Wiersma and Wright, 2012](#); [Martela and Pessi, 2018](#); [Rosso et al., 2010](#)). However, some boundaries and definitions concerning the construct remain unclear, which is shown by the citation analysis in the last section. Therefore, we use the bibliographic record of the 384 hits from the Scopus database as inputs for a network analysis. [Figure 3](#) shows the bibliographic co-occurrences of the bibliographic record using the VOSviewer mapping technique. A keyword co-occurrence analysis analyses all keywords of the chosen publications and indicates similarities which are shown by proximity, colour and strength of the nodes, revealing clusters. The analysis indicates four clusters which are represented by different node colours. We briefly describe each cluster using the gained knowledge from the reviewed literature in [Appendix 3](#). The structure of the network reflects the current understanding of the main antecedents of meaningful work. It further represents the categorization of meaningful work in meaningfulness at work and in working from [Pratt and Ashforth \(2003\)](#) that has either a work-centric or worker-centric focus ([Michaelson et al., 2014](#); [Pratt and Ashforth, 2003](#); [Wrzesniewski, 2003](#)).

#### *4.3 Antecedents and categorization of meaningful work*

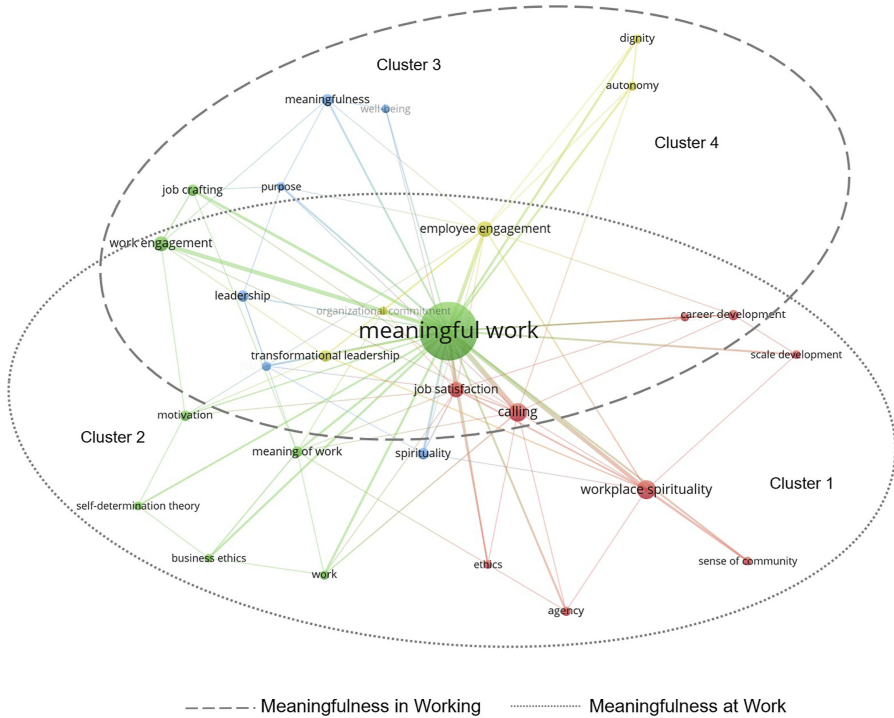
The term meaningful work contains an implicit positive bias from the individual’s perspective ([Bailey et al., 2017](#)). [Pratt and Ashforth \(2003\)](#) argue that any task, job or organization can be



No	Article	Cited by	No	Article	Cited by
1	Rosso <i>et al.</i> (2010)	853	51	Mitra and Buzzanell (2017)	53
2	Steger <i>et al.</i> (2012)	499	52	Faro Albuquerque <i>et al.</i> (2014)	53
3	Amabile and Pratt (2016)	389	53	Lips-Wiersma <i>et al.</i> (2016)	52
4	Duchon and Plowman (2005)	387	54	Sharabi and Harpaz (2010)	49
5	Cartwright and Holmes (2006)	295	55	Kim <i>et al.</i> (2019)	48
6	Tims <i>et al.</i> (2016)	242	56	Munn (2013)	47
7	Dik <i>et al.</i> (2012)	193	57	Korek <i>et al.</i> (2010)	45
8	Phelps (2013)	179	58	Sparrow (2000)	45
9	Rodell (2013)	178	59	Kim and Beehr (2018)	44
10	Michaelson <i>et al.</i> (2014)	174	60	Scroggins (2008)	42
11	Chalofsky and Krishna (2009)	161	61	Guindon and Hanna (2002)	42
12	Chalofsky (2003)	159	62	Hudson (2002)	42
13	de Hauw and de Vos (2010)	158	63	Wesner and Miller (2008)	41
14	Fairlie (2011)	157	64	Daniel Ayala (2015)	40
15	Lips-Wiersma and Morris (2009)	157	65	Albrecht (2013)	38
16	Dempsey and Sanders (2010)	145	66	Dik and Shimizu (2019)	36
17	Lips-Wiersma and Wright (2012)	137	67	Pasmore <i>et al.</i> (2019)	36
18	Colbert <i>et al.</i> (2016)	130	68	Allan <i>et al.</i> (2016)	36
19	Steger <i>et al.</i> (2010)	127	69	Anser <i>et al.</i> (2021)	35
20	Gupta <i>et al.</i> (2014)	123	70	Bailey <i>et al.</i> (2019)	35
21	Bowie (1998)	120	71	Jiang and Johnson (2018)	35
22	Purvanova <i>et al.</i> (2006)	118	72	Dobernig and Stagl (2015)	35
23	Rafferty and Restubog (2011)	111	73	Buzzanell <i>et al.</i> (2015)	35
24	Yeoman (2014)	105	74	Ruhanen <i>et al.</i> (2013)	35
25	Tummers and Knies (2013)	102	75	Bowie (2017)	34
26	Raub and Blunschi (2014)	101	76	Hassan <i>et al.</i> (2016)	34
27	Tolbert and Moen (1998)	94	77	Weinberg and Locander (2014)	31
28	Soane <i>et al.</i> (2013)	92	78	Word (2012)	30
29	Allan <i>et al.</i> (2019)	87	79	Allan <i>et al.</i> (2018)	29
30	Lysova <i>et al.</i> (2019)	87	80	Pradhan and Jena (2017)	29
31	Petchsawang and Duchon (2009)	87	81	Holmes (2006)	29
32	Miller and Wheeler (1992)	83	82	Martin (2002)	27
33	Steger <i>et al.</i> (2013)	82	83	Allan <i>et al.</i> (2019)	26
34	Jung and Yoon (2016)	80	84	Chen <i>et al.</i> (2018)	26
35	Shockley <i>et al.</i> (2016)	80	85	Tummers and Bronkhorst (2014)	26
36	Bailey and Madden (2017)	78	86	Perko <i>et al.</i> (2014)	26
37	Beadle and Knight (2012)	78	87	Li <i>et al.</i> (2015)	25
38	Lepisto and Pratt (2017)	76	88	Chalofsky and Cavallaro (2013)	25
39	Nair and Vohra (2010)	75	89	Weeks and Schaffert (2019)	24
40	Demirtas <i>et al.</i> (2017)	73	90	Pradhan and Pradhan (2016)	24
41	Tepper <i>et al.</i> (2018)	71	91	May <i>et al.</i> (2014)	24
42	Bailey <i>et al.</i> (2017)	69	92	Oelberger (2019)	23
43	Kinjerski and Skrypnik (2006)	69	93	Florian <i>et al.</i> (2019)	23
44	Bailey <i>et al.</i> (2019)	67	94	Allan (2017)	23
45	Grady and McCarthy (2008)	62	95	Thory (2016)	22
46	Supanti and Butcher (2019)	58	96	McClure and Brown (2008)	21
47	Shuck and Rose (2013)	57	97	Newstead <i>et al.</i> (2018)	20
48	Berkelaar and Buzzanell (2015)	55	98	Asik-Dizdar and Esen (2016)	20
49	Allan <i>et al.</i> (2014)	55	99	Brieger <i>et al.</i> (2020)	19
50	Yeoman (2014)	54	100	Lips-Wiersma <i>et al.</i> (2020)	19

**Table 1.**  
100 most influential  
articles on  
meaningful work

imbued with meaningfulness and such words as “fit”, “match” and “alignment” are often used to explain how and why members see their work as meaningful. Previous research has conceptualized meaningful work in various ways. It is argued that meaningful work scales



**Figure 3.** Network visualization of keyword co-occurrences of meaningful work

concerning its significance (Martela and Pessi, 2018) or within several dimensions that are in balance to each other (Bailey *et al.*, 2017; Lips-Wiersma and Wright, 2012; Rosso *et al.*, 2010; Steger *et al.*, 2012) which is shown in Figure 3 in the previous section. Appendix 3 shows further a summary of meaningful work antecedents based on the cluster analysis of the previous section.

Many studies propose that meaningful work correlates with the constructs of “self”, in terms of work that is satisfying and fulfilling to the individual, and “other”, in terms of work that is of service to a wider cause or gives rise to a sense of belonging to a broader group (Bailey *et al.*, 2017; Lips-Wiersma and Wright, 2012; Pratt and Ashforth, 2003; Robertson *et al.*, 2020; Rosso *et al.*, 2010). According to empirical findings of Lips-Wiersma and Wright (2012), meaningful work consists of the four dimensions developing the inner self, unity with others, service to others and expressing full potential. This concept has recently been updated to seven dimensions with facing reality, inspiration and balancing tensions as three new dimensions to conceptualize meaningful work (Lips-Wiersma *et al.*, 2020).

A rather broader and highly prominent conceptualization is the classification of meaningful work proposed by Pratt and Ashforth (2003). They divide the construct in meaningfulness in working and meaningfulness at work. The former focusses on enriching tasks, providing autonomy, offering feedback and facilitate learning, e.g. job design practices (Hackman and Oldham, 1980). The later focusses on enriching membership by building cultures and identities or visionary, charismatic or transformational leadership practices

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(Grant, 2012; Tepper *et al.*, 2018). Research further proposes to allow a sense of balance between work and worker-centric elements (Bailey *et al.*, 2017; Cartwright and Holmes, 2006).

#### 4.4 Limits of meaningful work

A growing number of recent studies focusses on limits of the perception of meaningful work (Amabile and Pratt, 2016; Bailey *et al.*, 2017; Cartwright and Holmes, 2006; Iatridis *et al.*, 2021). Hereby, the management of meaningfulness can have drawbacks in case of manipulative or unethical behaviours of the employer that might cause employee cynicism (Cartwright and Holmes, 2006; Michaelson *et al.*, 2014). The literature shows that inauthenticity will lead to negative outcomes such as a loss of meaningful work when organizations seek to manage employees' experienced meaningfulness through processes of pressure (Fineman, 2006; Lips-Wiersma and Morris, 2009). Although organizational values provide an important source of meaningfulness (Rosso *et al.*, 2010), the lack of authenticity or dishonesty can lead to negative responses such as anger or stress (Bailey *et al.*, 2017; Cartwright and Holmes, 2006; Lips-Wiersma and Morris, 2009).

Besides, when people cannot regulate their action when working towards a higher goal, purpose or ideal, they experience hopelessness or existential despair (Brieger *et al.*, 2020; Florian *et al.*, 2019; Lips-Wiersma and Wright, 2012). Bunderson and Thompson (2009) show that the notion of "calling" can be used as a form of normative social control to increase the experienced meaningfulness of work. This encourages exploitation of workers through low wages, long hours and even damage to their physical and mental health. The authors interviewed zookeepers and found that the benefits of a calling do not come without a cost, as a sense of calling complicates the relationship between zookeepers and their work. On the one hand, it fosters a sense of professional identification, meaning and importance. On the other hand, it is associated with unbending duty, personal sacrifice and heightened vigilance.

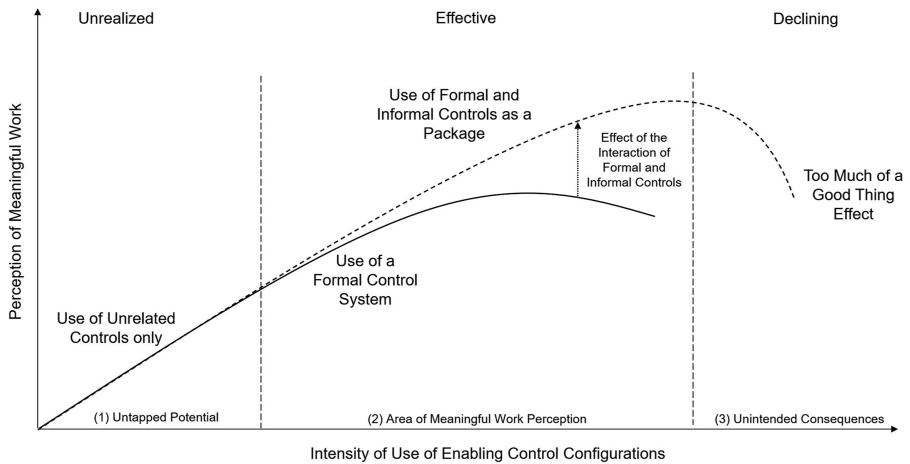
Florian *et al.* (2019) explored the influence of shifting societal and organizational contexts on individuals' experience of meaningfulness when task becomes "too much" meaningful. The authors find that shifting contexts can lead to exploitation or feelings of imbalance and cause a loss of meaningfulness.

Moreover, the perception of meaningful work can be hindered when employees are not given enough autonomy in doing their work (Hackman and Oldham, 1980; Ryan and Deci, 2000). This is the case when management sets limits in how to meet project goals, restricts the idea flow or overreacts to problems (Amabile and Pratt, 2016). The negative experience of untapped potential can also lead to meaningless work (Amabile and Pratt, 2016; De Boeck *et al.*, 2019). Untapped potential occurs when employees are not given the right or insufficient resources, by unclear or shifting goals, an overemphasis on the status quo or by ignoring problems (Amabile and Pratt, 2016).

## 5. Conceptual model development

In this section, we will link the insight of the design and use of management controls and findings of the literature analysis about the perception of meaningful work. The literature review indicates that meaningful work is socially constructed and the meaning creation is seen as a type of sensemaking (Pratt and Ashforth, 2003). Hence, organizations have the power to influence whether and how members interpret their work as meaningful. According to Stein *et al.* (2019), it even becomes the responsibility of organizations to customize control systems to encourage a meaningful work experience. By capturing the insights on meaningful work antecedents and limits, we provide a conceptual model of the configuration and intensity of use of management controls to facilitate the perception of meaningful work (see Figure 4).

**Figure 4.**  
Influence of  
management controls  
on meaningful work



As indicated in Area 1 of Figure 4 the knowledge about the meaning of one's work is limited if controls are unrelately used. Further, inappropriate resource allocations, unclear goals or a destructive work culture may not facilitate one's personal growth and may lead to the negative experience of untapped potential, where the perception of meaningful work is not realized (De Boeck *et al.*, 2019).

On the other hand, too intensely used formal and informal controls (even if they are meant to be enabling) may reduce the meaningful work perception, if individuals feel monitored (Stein *et al.*, 2019) or pressured (Bunderson and Thompson, 2009), see Area 3 of Figure 4. According to the model, there is a "perfect medium" of control uses where people perceive meaningful work the most; see Area 2 of Figure 4. We see especially the LOC framework as a helpful ordering approach to enable meaningfulness, as it systematically combines formal controls. We also emphasize the importance of informal controls that interact with this formal system to build a control package. In the following sections, we derive five propositions from the findings that guide practitioners as well as future research in the adequate application of controls to increase meaningfulness of work.

### 5.1 Influence of enabling controls on the perception of meaningful work

Research of Amabile and Pratt (2016) discusses elements of a work environment that enhance meaningful work. They highlight clear goals, support for reasoned risk-taking, sufficient resources, frequent and constructive feedback, collaboration and fair reward and recognition. When management controls align those practices, then they might enhance the perception of meaningful work. The prior literature regarding the use of controls as either enabling or coercive suggests that an enabling system is one that is flexible and allows employees to determine the best way to achieve or exceed multiple goals. In a coercive system, employees are given multiple goals; they are instructed how to achieve them and should not deviate from them (Ahrens and Chapman, 2004; Mundy, 2010; Wouters and Wilderom, 2008). Coercive control systems might produce strategic behaviours or gaming and lead to decreased well-being (Franco-Santos and Doherty, 2017; Van De Voorde *et al.*, 2012), stress (Fogarty *et al.*, 2000), mistrust, unfairness or inequalities (Franco-Santos and Otley, 2018). Employees in an enabling system feel more empowered and committed to their goals than employees in a coercive system. As a result, they derive more meaning from their jobs (Burney *et al.*, 2017).

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Following this argumentation and reflecting the recent discussion about unintended consequences of coercive control systems we raise our first proposition.

*Proposition 1.* The use of enabling controls will enhance the perception of meaningful work.

### *5.2 Influence of formal controls on the perception of meaningful work*

In terms of formal controls, this study draws on the LOC framework as it offers a broad typology for alternative uses of formal control systems by considering a range of controls and how they are used by management (Ferreira and Otley, 2009; Widener, 2007). Simons' beliefs controls are defined as enabling management controls (Mundy, 2010; Simons, 1995). They are intended to positively affect motivation and task coordination of individuals through the internalization of organizational values and purpose (Adler and Chen, 2011; Widener, 2007). However, there is substantive evidence that belief systems may not be effective unless strongly supported by alternative mechanisms like the other LOC (Kruis *et al.*, 2016; Speklé *et al.*, 2017). The meaningful work literature argues that the perception of meaningful work is not fully realized unless management implements a variety of control practices that interact to enhance all aspects of meaningful work (Amabile and Pratt, 2016; Bailey *et al.*, 2017; Cartwright and Holmes, 2006). It is noted that limited knowledge about the contribution of one's work, not getting the appropriate resources and clear goals, a destructive work culture, an overemphasis on the status quo or the disregard of problems can hinder one's personal growth (Amabile and Pratt, 2016). This might lead to the negative experience of untapped potential which is related to meaninglessness of work (De Boeck *et al.*, 2019). Even if the provision of freedom is intended by management, it can be perceived as too much flexibility and may result in inefficiencies, resource wastage, stress due to unclear priorities and ultimately a decline of motivation and performance (Heggen and Sridharan, 2021). Formally stated

*Proposition 2.* The use of unrelated formal control levers will not enhance the perception of meaningful work.

Diverse mechanisms are needed to enable the perception of meaningful work (Amabile and Pratt, 2016). The complementary use of all LOC as a management control system might positively affect the perception of meaningful work. The literature suggests that the power of the LOC resides in how they complement each other when used together in a balance according to the organizational contingencies and the control targets (Kruis *et al.*, 2016; Mundy, 2010; Simons *et al.*, 2000). As mentioned earlier, the meaningful work construct is usually categorized in either meaningfulness at work as work-centric meaningfulness or meaningfulness in working as worker-centric meaningfulness (Michaelson *et al.*, 2014; Pratt and Ashforth, 2003; Wrzesniewski, 2003). The LOC framework might support meaningfulness at work and meaningfulness in working. On the one hand, the beliefs and interactive levers offer shared vision and community, higher levels of autonomy, skill variety and task significance by allowing employees a freedom of choice in selecting their courses of action. On the other hand, the diagnostic and boundary levers provide structure by placing limits on inappropriate behaviours, setting clear expectations and giving resources and feedback. Thus, we expect that the interdependent use of all four LOC will enhance the employee's perception of meaningful work.

*Proposition 3.* The use of the LOC can enhance the perception of meaningful work.

### *5.3 Influence of informal controls on the perception of meaningful work*

Simons' LOC framework offers a broad perspective how different controls work together (Kruis *et al.*, 2016; Mundy, 2010; Widener, 2007). However, it has been criticized for not giving

sufficient emphasis to informal controls (Ferreira and Otley, 2009). Therefore, it is unlikely that the LOC framework, as a formal control system, can explain all the mechanisms that are needed to fully enhance the perception of meaningful work. Informal controls are less well-defined practices, routines, social relationships, culture, links or loose connections between individuals that facilitate free-flowing open and flexible communication, structures and decision processes (Chenhall *et al.*, 2010). Widener (2007) already mentioned that the combined use of the LOC is more likely to be powerful when there is a consensus amongst members on the fundamental values and purpose of the organization. Other scholars see the use of formal and informal controls as a package as most effective (Ferreira and Otley, 2009; Gerdin *et al.*, 2019; Malmi and Brown, 2008). In a package of controls, both control categories are used simultaneously, loosely coupled within an organization and are even able to stretch positive outcomes (Pfister and Lukka, 2019). A concrete example is mentioned by Evans and Tucker (2015) in case of beliefs controls. Beliefs controls are the formal controls like the vision, mission or value statements to encourage a certain behaviour. However, they are not entirely effective, if these beliefs are not or insufficiently proclaimed by management in their daily interactions with employees. The meaningful work literature states as well that meaningful work is strongly influenced by authentic and transformational leaders (Grant, 2012) as well as an empowering organizational culture (Ashforth *et al.*, 2016; Bailey *et al.*, 2017). Thus, we raise our next proposition:

*Proposition 4.* The package use of the LOC (formal controls) and informal enabling controls (such as organizational culture) can stretch the perception of meaningful work.

#### *5.4 Influence of the intensity of the used controls on the perception of meaningful work*

Research on meaningful work has shown that meaningfulness can shift into meaninglessness under certain circumstances (Bailey *et al.*, 2017; Cartwright and Holmes, 2006; De Boeck *et al.*, 2019; Lips-Wiersma and Morris, 2009). Therefore, the enhanced relationship between management controls and the perception of meaningful work may have a limit when controls are used too intensely (even if they are meant to be enabling), as indicated by the inverted u-shaped relationship in Figure 4. If individuals are overwhelmed by the volume and scale of the control environment, they are likely to perceive a lack of self-control over their situation (Lips-Wiersma and Wright, 2012), feel monitored (Stein *et al.*, 2019) or pressured (Bunderson and Thompson, 2009). This leads to a TMGT effect (Pierce and Aguinis, 2013), that comes with a trade-off between the benefits and drawbacks of the control use and causes a shift from meaningful to meaningless work [3]. For example, Tessier and Otley (2012) stated that beliefs controls can be perceived as enabling, but they can also be used by management as constraints (integrity, honesty, transparency, etc.). Thus, we deviate the following proposition:

*Proposition 5.* The enabling interaction effect of formal and informal controls to enhance the perception of meaningful work decreases after a certain intensity of their use (TMGT effect).

## **6. Discussion and conclusion**

We view this research as a first attempt to investigate the relationship between the use of management controls and the perception of meaningful work. We illustrate in a conceptual model, that a package use of enabling formal and informal controls is most suitable to fully enhance the perception of meaningful work, which in turn can contribute to achieve organizational goals. On the contrary, meaningful work can shift to meaningless work when

the management control use is not effective. Therefore, the design as well as the intensity of use of management controls is of particular importance.

Understanding how management controls are most effective is an important managerial as well as research issue as usually high investments are required to design them. First, our findings reveal that the meaningful work perception can be managed using sufficient interactions of enabling management controls. The perception of meaningful work will not be realized if controls are unrelated and specific practices are not executed by management. This happens when employees are not getting the appropriate resources or clear goals, when a destructive work culture ignores problems or when management sets an overemphasis on the status quo (Amabile and Pratt, 2016; De Boeck *et al.*, 2019). This hinders one's personal growth and might lead to the negative experience of untapped potential by employees.

Second, the interaction of formal and informal controls used in a control package may fully empower the perception of meaningful work and even stretch the effects of the mere use of a formal control system. The relevance of informal controls is increasingly highlighted in the management accounting literature (Evans and Tucker, 2015; Gerdin *et al.*, 2019; Pfister and Lukka, 2019). The meaningful work literature also emphasizes the relevance of organizational culture and leadership aspects to enable meaningful work (Bailey *et al.*, 2017). Practitioners should therefore reflect on which informal control practices could be activated to support formal control systems to fully enhance the employee's perception of meaningful work.

Third, our findings reveal that meaningful work has limits and a too intense control use might impair the perception of meaningful work. That happens if individuals cannot regulate their responses to set controls (Lips-Wiersma and Wright, 2012, p. 661) i.e. feel monitored (Stein *et al.*, 2019), have restricted autonomy (Ryan and Deci, 2000) or feel pressured (Amabile and Pratt, 2016; Bunderson and Thompson, 2009). We illustrate that the perception of meaningful work can decrease after a specific peak leading to a TMGT effect, even when management controls are intended to enable meaningful work. The control use needs to be flexibly adapted to prevent unintended consequences, if practitioners mention a decrease of work meaningfulness,

This study is not free of limitations. First, to examine the meaningful work concept, we used bibliometric analyses and a structured literature review method. Bibliometric analyses rely on high levels of abstraction and require the judgement of the researcher in determining the technical parameters of the output. Moreover, bibliographic methods quantify citations without concerning the intention of the authors' citation behaviour, as there is no distinction between confirmative or critical citations (van Eck and Waltman, 2014). The second limitation lies in the use of the Scopus database, which might not capture all work, relevant for the topic. Regarding the structured literature review, we might have missed some relevant work, e.g. articles that have been published in a journal outside of our list of selected journals. Third, the discussion about management control design choices might be not complete, and we might have missed important research streams that influence the development of our conceptual model and the propositions. For example, in case of formal controls, we only rely on the LOC framework and omit other frameworks from the management accounting literature (Merchant and Van der Stede, 2012; Otley, 1999; Ouchi, 1979).

This study offers avenues for future research. The development of our conceptual model is based on the findings from the literature review. A future study could examine how management control design and use choices affect the perception of meaningful work empirically. Further research could also involve cultural differences that might influence the relationship between the use of management controls and the perception of meaningful work. Malmi *et al.* (2020) recently demonstrate that cultural values and preferences significantly influence the management control use. The authors find differences even in Western cultural

regions. Therefore, more caution is needed when making cross-cultural generalizations about the design and the intended effects of management controls. Concerning the current development to big data and quantification in the professional and private life (Mennicken and Espeland, 2019), it is important to further study these effects on the perception of meaningful work, as well. A recent study from Stein *et al.* (2019) makes a first attempt to investigate data-driven approaches and their consequences on the meaningful work perception of employees. The authors find amongst others that if management has only a narrow understanding of datafication and the design of appropriate accountability systems, then the perception of meaningful work is likely to be hindered (Stein *et al.*, 2019). We did not capture the aspects of datafication in this study. However, we see a huge demand for future studies in this field to examine the monitoring, transparency and governance aspects of the use of big data in relation to the perception of meaningful work.

### Notes

1. VOS (which stands for “visualization of similarities”) is a mapping technique for constructing and visualizing bibliometric networks (van Eck *et al.*, 2010). The VOSviewer takes a distance-based approach which allows the visualization of any type of bibliometric network (van Eck and Waltman, 2014).
2. The SMACOF algorithm is a multidimensional scaling algorithm (Borg and Groenen, 2005).
3. The TMGT effect suggests that antecedent variables widely accepted as directing to desirable outcomes can lead to negative effects in practice (Pierce and Aguinis, 2013).

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**Appendix 1**

The publication period	Publication count	Citations
<i>1976–1995</i>	6	107
<i>Journal of Organizational Behavior</i>	1	83
<i>Journal of Management</i>	1	10
<i>Futures</i>	1	6
<i>Journal of Personal Selling and Sales Management</i>	1	5
<i>Information and Management</i>	1	3
<i>Employee Responsibilities and Rights Journal</i>	1	0
<i>1996–2005</i>	17	964
<i>Queensland University of Technology Research Week International Conference, QUT Research Week 2005 – Conference Proceedings</i>	2	2
<i>Work and Occupations</i>	2	136
<i>Career Development Quarterly</i>	1	42
<i>Human Resource Development International</i>	1	159
<i>The International Labour Review</i>	1	14
<i>Journal of Business Ethics</i>	1	120
<i>Journal of Career Development</i>	1	8
<i>Journal of Managerial Psychology</i>	1	45
<i>The Leadership Quarterly</i>	1	387
<i>Organization</i>	1	2
<i>Presstime</i>	1	0
<i>Research in Ethical Issues in Organizations</i>	1	1
<i>Research in the Sociology of Organizations</i>	1	15
<i>Science and Engineering Ethics</i>	1	27
<i>T and D</i>	1	6
<i>2006–2015</i>	98	5,802
<i>Journal of Business Ethics</i>	7	610
<i>Advances in Developing Human Resources</i>	6	450
<i>Journal of Career Assessment</i>	6	961
<i>Kantian Business Ethics: Critical Perspectives</i>	4	26
<i>Human Resource Development International</i>	3	157
<i>Human Resource Management International Digest</i>	3	4
<i>Employee Responsibilities and Rights Journal</i>	2	44
<i>Journal of Management, Spirituality and Religion</i>	2	46
<i>Journal of Managerial Psychology</i>	2	71
<i>Nordic Journal of Working Life Studies</i>	2	14
<i>Academy of Management 2006 Annual Meeting: Knowledge, Action and the Public Concern, AOM 2006</i>	1	69
<i>Academy of Management Journal</i>	1	178
<i>Action Learning: Research and Practice</i>	1	6
<i>Advances in Positive Organizational Psychology</i>	1	38
<i>British Journal of Management</i>	1	111
<i>Business Ethics Quarterly</i>	1	78
<i>Colourage</i>	1	0
<i>Cornell Hospitality Quarterly</i>	1	101

**Table A1.**  
Publications on  
meaningful work

(continued)

The publication period	Publication count	Citations
<i>Critical Perspectives on Accounting</i>	1	2
<i>Development and Learning in Organisations</i>	1	0
<i>Development and Learning in Organizations</i>	1	0
<i>Educational Management Administration and Leadership</i>	1	4
<i>European Journal of Work and Organizational Psychology</i>	1	45
<i>Gender, Work and Organization</i>	1	16
<i>Group and Organization Management</i>	1	137
<i>Handbook of Faith and Spirituality in the Workplace: Emerging Research and Practice</i>	1	1
<i>Handbook of Research on Sustainable Careers</i>	1	8
<i>Harvard Business Review</i>	1	4
<i>Hospitality and Society</i>	1	16
<i>Human Performance</i>	1	118
<i>Human Relations</i>	1	55
<i>Human Resource Management</i>	1	92
<i>Human Resource Management Review</i>	1	295
<i>Innovation Management in Robot Society</i>	1	1
<i>International Journal of Business and Management Science</i>	1	6
<i>International Journal of Consumer Studies</i>	1	35
<i>International Journal of Contemporary Hospitality Management</i>	1	15
<i>International Journal of Production Research</i>	1	25
<i>Issues in Business Ethics</i>	1	0
<i>Journal of Business and Psychology</i>	1	158
<i>Journal of Career Development</i>	1	2
<i>Journal of Employment Counseling</i>	1	11
<i>Journal of Enterprising Communities</i>	1	9
<i>Journal of Hospitality, Leisure, Sport and Tourism Education</i>	1	35
<i>Journal of Management Development</i>	1	18
<i>Journal of Management Inquiry</i>	1	5
<i>Journal of Organizational Change Management</i>	1	53
<i>Journal of Organizational Effectiveness</i>	1	12
<i>Journal of Teaching in Travel and Tourism</i>	1	5
<i>Leadership and Organization Development Journal</i>	1	26
<i>The Leadership Quarterly</i>	1	31
<i>Management Communication Quarterly</i>	1	35
<i>Management Decision</i>	1	75
<i>Management Research Review</i>	1	40
<i>Mass Flourishing: How Grassroots Innovation Created Jobs, Challenge, and Change</i>	1	179
<i>Meaningful Work and Workplace Democracy: A Philosophy of Work and a Politics of Meaningfulness</i>	1	54
<i>Museum Management and Curatorship</i>	1	29
<i>Organization</i>	1	145
<i>The Organization Development Journal</i>	1	41
<i>Personnel Review</i>	1	26
<i>Philosophy of Management</i>	1	3
<i>PICMET 2014 – Portland International Center for Management of Engineering and Technology, Proceedings: Infrastructure and Service Integration</i>	1	0
<i>Proceeding of the International Conference on e-Education Entertainment and e-Management, ICEEE 2011</i>	1	0
<i>The Psychologist-Manager Journal</i>	1	11
<i>Public Administration Review</i>	1	102
<i>Research in Organizational Behavior</i>	1	853
<i>Research on Emotion in Organizations</i>	1	0

(continued)

Table A1.

The publication period	Publication count	Citations
<i>Research Technology Management</i>	1	0
<i>Social Innovation: Solutions for a Sustainable Future</i>	1	2
<i>Storytelling and the Future of Organizations: An Antenarrative Handbook</i>	1	0
<i>Work, Employment and Society</i>	1	3
2016–2021	263	3,388
<i>The Oxford Handbook of Meaningful Work</i>	27	85
<i>Journal of Career Assessment</i>	14	198
<i>Journal of Business Ethics</i>	12	174
<i>Journal of Management Studies</i>	7	211
<i>Journal of Vocational Behavior</i>	7	387
<i>Work, Employment and Society</i>	7	92
<i>Journal of Career Development</i>	6	49
<i>Development and Learning in Organizations</i>	4	1
<i>Employee Relations</i>	4	22
<i>Academy of Management Journal</i>	3	206
<i>Career Development International</i>	3	64
<i>International Journal of Human Resource Management</i>	3	13
<i>International Journal of Organizational Analysis</i>	3	50
<i>Journal of Business and Psychology</i>	3	50
<i>Persomnel Review</i>	3	31
<i>Advances in Developing Human Resources</i>	2	11
<i>Asian Academy of Management Journal</i>	2	4
<i>Business Ethics Quarterly</i>	2	1
<i>Group and Organization Management</i>	2	16
<i>Human Resource Development International</i>	2	2
<i>Human Resource Management International Digest</i>	2	0
<i>Human Resource Management Review</i>	2	71
<i>IIMB Management Review</i>	2	12
<i>International Journal of Hospitality Management</i>	2	138
<i>International Journal of Process Management and Benchmarking</i>	2	14
<i>International Journal of Productivity and Performance Management</i>	2	4
<i>International Journal of Stress Management</i>	2	15
<i>International Journal of Training and Development</i>	2	28
<i>International Public Management Journal</i>	2	8
<i>Journal of Asia Business Studies</i>	2	16
<i>Journal of Human Values</i>	2	34
<i>Journal of Management and Organization</i>	2	2
<i>The Journal of Occupational and Organizational Psychology</i>	2	21
<i>Journal of Organizational Behavior</i>	2	86
<i>Management Research Review</i>	2	7
<i>Management Revue</i>	2	0
<i>Organizational Behavior and Human Decision Processes</i>	2	6
<i>Purushartha</i>	2	4
<i>Sport Management Review</i>	2	50
<i>The Palgrave Handbook of Workplace Spirituality and Fulfillment</i>	2	1
<i>Vocational Interests in the Workplace: Rethinking Behavior at Work</i>	2	2
<i>Technology and Engineering Management Society Conference, 2017</i>	1	0
<i>78th Annual Meeting of the Academy of Management, AOM 2018</i>	1	0
<i>Academy of Management Perspectives</i>	1	20
<i>Asian Journal of Business Ethics</i>	1	3
<i>Biblical Perspectives on Leadership and Organizations</i>	1	4
<i>Business Ethics and Care in Organizations</i>	1	0

Table A1.

(continued)

The publication period	Publication count	Citations
<i>Business Ethics, Environment and Responsibility</i>	1	0
<i>Business Ethics: A Kantian Perspective: Second Edition</i>	1	34
<i>Business: Theory and Practice</i>	1	8
<i>California Management Review</i>	1	8
<i>Career Development Quarterly</i>	1	3
<i>Cogent Business and Management</i>	1	34
<i>Contemporary Work and the Future of Employment in Developed Countries</i>	1	0
<i>Digital Nomads: In Search of Meaningful Work in the New Economy</i>	1	2
<i>DLSU Business and Economics Review</i>	1	3
<i>The Economic and Labour Relations Review</i>	1	2
<i>Emerald Emerging Markets Case Studies</i>	1	0
<i>Employees and Employers in Service Organizations: Emerging Challenges and Opportunities</i>	1	3
<i>Enhancing Employee Engagement: An Evidence-Based Approach</i>	1	16
<i>The Enterprise Engineering Series</i>	1	0
<i>European Journal of Innovation Management</i>	1	0
<i>European Journal of Training and Development</i>	1	4
<i>European Journal of Work and Organizational Psychology</i>	1	0
<i>European Management Journal</i>	1	3
<i>Foresight and STI Governance</i>	1	3
<i>Fostering Employee Buy-in Through Effective Leadership Communication</i>	1	1
<i>Gender in Management</i>	1	2
<i>Global Business Review</i>	1	24
<i>Harnessing Human Capital Analytics for Competitive Advantage</i>	1	3
<i>Health Care Management Review</i>	1	4
<i>Human Relations</i>	1	53
<i>Human Resource Development Review</i>	1	67
<i>International Journal of Action Research</i>	1	1
<i>International Journal of Applied Business and Economic Research</i>	1	8
<i>International Journal of Contemporary Hospitality Management</i>	1	16
<i>International Journal of Economics and Management</i>	1	0
<i>International Journal of Management Reviews</i>	1	1
<i>International Journal of Public Sector Performance Management</i>	1	2
<i>International Journal of Recent Technology and Engineering</i>	1	0
<i>International Journal of Scientific and Technology Research</i>	1	5
<i>International Journal of Workplace Health Management</i>	1	1
<i>Journal of Advances in Management Research</i>	1	10
<i>Journal of Business Research</i>	1	8
<i>Journal of Business Venturing Insights</i>	1	3
<i>Journal of Change Management</i>	1	36
<i>Journal of East European Management Studies</i>	1	1
<i>Journal of Education and Work</i>	1	5
<i>Journal of Health Organization and Management</i>	1	1
<i>Journal of Leadership and Organizational Studies</i>	1	44
<i>Journal of Management Accounting Research</i>	1	4
<i>Journal of Managerial Psychology</i>	1	8
<i>Journal of Mental Health Training, Education and Practice</i>	1	3
<i>Journal of Organizational Effectiveness</i>	1	1
<i>Journal of Professional Issues in Engineering Education and Practice</i>	1	12
<i>Journal of Quality Assurance in Hospitality and Tourism</i>	1	3
<i>Journal of Service Theory and Practice</i>	1	19
<i>Journal of Strategic Marketing</i>	1	1
<i>Labor Studies Journal</i>	1	1

(continued)

Table A1.

The publication period	Publication count	Citations
<i>Labour Economics</i>	1	17
<i>Leadership and Organization Development Journal</i>	1	3
<i>Leadership in Health Services</i>	1	17
<i>Leading, Managing, Caring: Understanding Leadership and Management in Health and Social Care</i>	1	1
<i>The Management and Labour Studies</i>	1	0
<i>Management and Marketing</i>	1	4
<i>Management Communication Quarterly</i>	1	15
<i>Management Decision</i>	1	0
<i>Management Science Letters</i>	1	9
<i>Managing Sport and Leisure</i>	1	5
<i>Marketing Intelligence and Planning</i>	1	8
<i>Meaningful Work: Viktor Frankl's Legacy for the 21st Century</i>	1	3
<i>Motivation in Organisations: Searching for a Meaningful Work-Life Balance</i>	1	0
<i>New Technology, Work and Employment</i>	1	11
<i>Nonprofit Management and Leadership</i>	1	19
<i>Organization Studies</i>	1	14
<i>Organizational Psychology Review</i>	1	76
<i>Organizing Inclusion: Moving Diversity from Demographics to Communication Processes</i>	1	1
<i>Pertanika Journal of Social Sciences and Humanities</i>	1	0
<i>Philosophy of Management</i>	1	0
<i>Post-Growth Work: Employment and Meaningful Activities within Planetary Boundaries</i>	1	0
<i>Proceedings - 2017 IEEE/ACM 5th International Workshop on Conducting Empirical Studies in Industry, CESI 2017</i>	1	7
<i>Proceedings of the International Conference on Industrial Engineering and Operations Management</i>	1	0
<i>Professional and Practice-based Learning</i>	1	6
<i>Psychology of Retention: Theory, Research and Practice</i>	1	1
<i>Public Administration Review</i>	1	4
<i>Public Organization Review</i>	1	6
<i>Publications</i>	1	3
<i>Research in Organizational Behavior</i>	1	389
<i>Revista de Administracao Mackenzie</i>	1	1
<i>SA Journal of Human Resource Management</i>	1	0
<i>The Scandinavian Journal of Management</i>	1	1
<i>Science and Engineering Ethics</i>	1	5
<i>The Service Industries Journal</i>	1	35
<i>Small Business Economics</i>	1	0
<i>Smart Working: Creating the Next Wave</i>	1	9
<i>Social Enterprise Journal</i>	1	0
<i>Social Responsibility Journal</i>	1	0
<i>South Asian Journal of Human Resources Management</i>	1	1
<i>Sustainability Accounting, Management and Policy Journal</i>	1	2
<i>The Palgrave Handbook of Creativity at Work</i>	1	1
<i>The Palgrave Handbook of Organizational Change Thinkers</i>	1	0
<i>The Positive Side of Occupational Health Psychology</i>	1	1
<i>Proceedings of the 29th International Conference of the International Association for Management of Technology, IAMOT 2020</i>	1	0
<i>Vikalpa</i>	1	15
<i>Voluntas</i>	1	3
<i>Worldwide Hospitality and Tourism Themes</i>	1	11
<b>Total</b>	<b>384</b>	<b>10,261</b>

Table A1.



**Appendix 2**

Table A2 illustrates the sample characteristics of the structured literature review. A summary (Tables A3–A5) of the review illustrates the main attributes and of the 90 found studies including the authors' names, date and the journal the study was published, the area of research, underlying theory or theories used, methods of data collection and the country and industry where the research took place.

	Strategy and general management journals	Organizational behaviour and psychology journals	Accounting journals	Total
Literature Review	6	3	0	9
Archival	3	4	0	7
Conceptual	6	6	2	14
Analytical/ Modelling	2	0	0	2
Survey	12	8	11	31
Experimental	1	1	1	3
Qualitative	9	3	8	20
Mixed Methods	1	1	2	4
<i>Total</i>	<i>40</i>	<i>26</i>	<i>24</i>	<i>90</i>

**Table A2.**  
Sample characteristics:  
the research method  
and journal  
categorization

**Table A3.**  
Summary of selected  
studies in strategy and  
general management  
research

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Allen, Blake <i>et al.</i>	2019	<i>Journal of Management Studies</i>	Meaningful work	The job characteristics theory	Meaningful work outcomes	Meta-analysis		
Ashforth, Blake. <i>et al.</i>	2016	<i>Academy of Management Review</i>	Personal identification in organizations	The organizational behaviour	The relationship between identification and organizational and personal outcomes	Conceptual		
Bailey, C. <i>et al.</i>	2017	<i>Human Resource Management Review</i>	Meaningful work and existential labour	The job characteristics theory and the leadership theory	Job design to perceive meaningful work	Conceptual		
Barrick, Murry <i>et al.</i>	2013	<i>Academy of Management Review</i>	Purposeful work behaviour	Motivation theories	Personality, higher order goals and job characteristics	Conceptual		
Barrick, Murry <i>et al.</i>	2015	<i>Academy of Management Journal</i>	Collective organizational engagement	The job characteristics theory and leadership theories	Performance improvement through organizational engagement	Survey	The USA	The credit unions
Bode, Christiane.; Singh, Jasjit	2018	<i>Strategic Management Journal</i>	Prosocial participation of employees	The self-determination theory	CSR involvement in management strategy	Interviews and survey	Italy	Consulting
Brammer, Stephen; Millington, Andrew	2008	<i>Strategic Management Journal</i>	Financial and corporate social performance	The stakeholder theory	Improvement of financial performance	Archival data	The UK	Different industries
Brammer, Stephen <i>et al.</i>	2015	<i>Group and Organization Management</i>	Effects of CRS on employees	Cognition theories	Influence of corporate ability	Survey	Spain	The communication

(continued)

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Bunderson, Stuart J, Thompson, Jeffery A	2009	<i>Administrative Science Quarterly</i>	Meaningful work and calling	The job characteristics theory and behavioural theories	The positive and negative effects of "calling"	Interviews	The USA and Canada	The zoo
Carton, Andrew M	2018	<i>Administrative Science Quarterly</i>	Sensemaking and meaningful work	The leadership and job characteristics theory	Transformational leadership of day-to-day job activities	Archival data	The USA	NASA
Carton, Andrew M, Lucas, Brian J	2018	<i>Academy of Management Journal</i>	Leadership and vision	Communication theories	Overcoming blurry vision bias	Experiment	The UK	
Cartwright, Susan, Holmes, Nicola	2006	<i>Human Resource Management Review</i>	Meaningful work and employee engagement	The job characteristics theory	The meaningful work framework	Conceptual		
Colbert, Amy, et al.	2016	<i>Academy of Management Journal</i>	Employee motivation	The positive work relationships theory	Work relationships	Survey	The USA	Different industries
De Boeck, Giverny, et al.	2019	<i>Journal of Management Studies</i>	Untapped potential	The job characteristics theory	Opportunities to realize future work selves	Survey	Belgium	Different industries
Dutton, Jane, et al.	2010	<i>Academy of Management Review</i>	Positive work related identities	The identity theory	Organizational influence in positive identity construction	Literature review		
Fineman, Stephen	2006	<i>Academy of Management Review</i>	Positiveness at work	The organizational behaviour theory	Research of positiveness at work and in HR practices	Literature review		
Florjan, Mona et al.	2019	<i>Journal of Management Studies</i>	Meaningful work	The sensemaking theory	Context factors of meaningfulness of work	Case study	Germany	Volunteer work

(continued)

Table A3.

Table A3.

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Franco-Santos, Monica, Doherty, Noeleen	2017	<i>International Journal of Human Resource Management</i>	Performance management systems	The agency theory and stewardship theory	Well-being through enabling controls	Survey	The UK	Universities
Franco-Santos, Monica, Otle, David	2018	<i>International Journal of Management Reviews</i>	Performance management systems	The agency theory and stewardship theory	Identifying unintended consequences of PMS	Literature review		
Grant, Adam	2007	<i>Academy of Management Review</i>	Job design and employee motivation	The job characteristics theory	Positive contribution effects	Literature review		
Grant, Adam	2012	<i>Academy of Management Journal</i>	Transformational leadership	Leadership theories	Motivation to performance by beneficiary contract	Survey	The USA	Government
Henderson, Rebecca, Van den Steen, Eric	2015	<i>American Economic Review</i>	Corporate purpose	The principal agent theory	Improvement of corporate reputation	Analytical modelling		
Hollensbe, Elaine <i>et al.</i>	2014	<i>Academy of Management Journal</i>	Corporate purpose	Behaviour theories	Research directions to study purpose	Conceptual		
Kempster, Steve <i>et al.</i>	2011	<i>Leadership</i>	Transformational leadership	The sensemaking theory	The role of purpose in leadership	Case study	The USA	The health services
Lin, W., Koopmann, J., and Wang, M	2020	<i>Journal of Management</i>	Extra role behaviour at work	The organizational citizenship behaviour	Psychological conditions and effects of helping behaviour over time	Survey	China	The IT company
Lips-Wiersma, M., Wright, S	2012	<i>Group and Organization Management</i>	Meaningful work scale development	The motivation theory	Fostering meaningful work in organizations	Multiple case studies	New Zealand	Different industries

(continued)

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Martikainen, S.-J., Kudrma, L., and Dolan, P	2021	<i>Group and Organization Management</i>	Narrative investigation of affective <i>eudaimonia</i>	The narrative theory	Narratives of meaningful and meaningless work moments	Interviews	The UK	Different industries
Müller M. <i>et al.</i>	2019	<i>European Management Journal</i>	Meaningful work	The sensemaking theory	Perception of meaningful work without direct contact to beneficiaries	Case study	The European country	The hospital laboratory
Nilsson, Warren	2015	<i>Academy of Management Review</i>	Positive institutional work	The institutional theory	Relationship between institutional work and social purpose	Literature Review		
Rich, Bruce L. <i>et al.</i>	2010	<i>Academy of Management Journal</i>	Job engagement and performance	Motivation theories	Antecedents and effects of job engagement	Survey	The USA	The public authorities
Robertson, K. M. <i>et al.</i>	2020	<i>Academy of Management Review</i>	Meaningful work perception through social relationships	The social networks theory	Model development of three network types (entrepreneurial, clique and community-of-practice)	Conceptual		
Rodell, Jessica B	2013	<i>Academy of Management Journal</i>	Meaningful work	The agency theory	Effects of volunteering	Multiple case studies	The USA	Volunteer
Schaubroeck, John <i>et al.</i>	2012	<i>Academy of Management Journal</i>	Ethical leadership	The organizational culture	Ethical behaviour as a part of corporate culture	Survey	The USA	The US Army
Simons, Robert	1994	<i>Strategic Management Journal</i>	Lever of Control Framework	The contingency theory	Strategic change and organizational renewal	Case Study	The USA	Different industries

(continued)

Table A3.

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Spreitzer, Gretchen M	1996	<i>Academy of Management Journal</i>	Psychological empowerment	The institutional theory	Span of control and psychological empowerment	Survey	Various countries	Different industries
Stein, Mari-Klara <i>et al.</i>	2019	<i>Journal of Management Studies</i>	Meaningful work and datification	The sensemaking theory	Consequences of data-driven management approaches	Multiple case studies	The USA	Universities
Thakor, Anjan V.; Quinn, Robert E	2013	ECGI Working Paper Series in Finance; Finance Working Paper N° 395/2013	Principal agency utility maximization	The principal agent theory	Economic consequences of traditional business goals and a higher purpose	Analytical modelling		
Treppner, Bennet <i>et al.</i>	2018	<i>Academy of Management Journal</i>	Transformational leadership	The person–environment fit	Leadership effects	Survey	The USA	Different industries
Van De Voorde, Karina <i>et al.</i>	2012	<i>International Journal of Management Reviews</i>	Performance management and well-being	The social exchange theory	Organizational performance relationship	Literature review		
Vogel, Ryan <i>et al.</i>	2016	<i>Academy of Management Journal</i>	Value congruence and employee engagement	The job characteristics theory	Job crafting activities	Survey	The USA	Different industries

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Amabile, Teresa M, Pratt, Michael G	2016	<i>Research in Organizational Behavior</i>	Creativity	The sensemaking theory	The conceptual model of creativity in organizations	Conceptual		
Bauman, Christopher W. and Skitka, Linda J	2012	<i>Research in Organizational Behavior</i>	CSR and job satisfaction	The need and behaviour theories	Miro-level influences of CSR	Conceptual		
Brieger, S., <i>et al.</i>	2019	<i>Journal of Business Ethics</i>	CSR and employee work addiction	The social identity theory and social exchange theory	Influence of CSR, org. identification, and meaningfulness on work addiction	Survey (archival)	Switzerland	Different industries
Brieger, S. A. <i>et al.</i>	2020	<i>Journal of Business Ethics</i>	Well-being of entrepreneurs	The social value creation	Creation of social value positively effects work meaningfulness and well-being	Survey (archival)	Germany and Switzerland	Different industries
Deeg, M. D., and May, D. R	2021	<i>Journal of Business Ethics</i>	Effects of ethical (moral) work behaviour	The self-determination theory and affective events theory	Positive benefits for individuals who incorporate professional moral courage	Survey	USA	The nonprofit sector
Foulk, Trevor A. <i>et al.</i>	2019	<i>Journal of Applied Psychology</i>	Purposeful work behaviour	The self-determination theory	Employee motivation	Survey	India	Different industries
Gartenberg, Claudine <i>et al.</i>	2019	<i>Organization Science</i>	Corporate purpose	The principal agent theory and motivation theory	Financial performance improvement by enhancing purpose and clarity	Archival survey data	The USA	Different industries

(continued)

**Table A4.** Summary of selected studies in organizational behaviour and psychology research

Table A4.

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Grant, Adam	2008	<i>Journal of Applied Psychology</i>	Task significance	The expectancy theory and motivation theory	Task significance and performance relationship	Field experiments	The USA	The fundraising lifeguards'
Gregori, P., et al.	2021	<i>Journal of Business Research</i>	Environmental entrepreneurship	The institutional logics and social identity theory	Emotions in identity work and meaningfulness in entrepreneurship	Qualitative	Austria	Different industries
Humphrey, Stephen et al.	2007	<i>Journal of Applied Psychology</i>	Motivational work design features	The job characteristics theory	Work design and job satisfaction	Meta-analysis		
Iatridis, K., et al.	2021	<i>Organization Studies</i>	Meaningful work in emerging professions	The social identity theory	Formation of three distinct professional identities by meaningful work	Qualitative	Greece	CSR consulting
Kristof, Amy L.	1996	Personnel Psychology	Person-organization fit	The principal agent theory	Outcomes of P-O fit	Literature review		
Lips-Wiersma, M. et al.	2020	<i>Journal of Business Ethics</i>	Antecedents of meaningful work	The organizational behaviour	Effects of fairness, leadership and worthy work on meaningful work	Survey	International	Different industries
Lips-Wiersma, Marjolijn; Morris, Lani	2009	<i>Journal of Business Ethics</i>	Management of meaningful work	The need and behaviour theories	Meaningful work categorization	Mixed methods – action research	The USA and Netherlands	Different industries
Martela, Frank Pessi, Anne B	2018	<i>Frontiers in Psychology</i>	Dimensions of meaningful work	Self-determination theory, job characteristics theory	Understanding of meaningful work	Literature review		

(continued)



Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
May, Douglas R. <i>et al.</i>	2004	<i>The Journal of Occupational and Organizational Psychology</i>	Employee engagement	The self-determination theory and job characteristics theory	Antecedents of employee engagement	Survey	USA	The insurance company
Michaelson, Christopher	2021	<i>Journal of Business Ethics</i>	Meaningful work	The normative perspective	An approach of defining meaningful work	Conceptual		
Michaelson, Christopher <i>et al.</i>	2014	<i>Journal of Business Ethics</i>	Meaningful work	The prosocial behaviour	Connection of business ethics with organization studies	Literature review		
Nielsen, J., <i>et al.</i>	2020	<i>Journal of Organizational Behavior</i>	Work-family interface	The identity theory	Role of calling for job and life satisfaction	Survey	The USA and Canada	Different industries
Oerlemans, Wido G. M.; Bakker, Arnold B. Opoku-Dakwa, Akwasi <i>et al.</i>	2018	<i>Journal of Applied Psychology</i>	Motivating job characteristics and happiness at work	The job characteristic theory	Employees' reaction to perceived motivating job characteristics	Survey	The Netherlands	Different industries
	2018	<i>Journal of Organizational Behavior</i>	CSR and employee engagement	The social cognitive theory	Employees as potential agents of social change, enabled by CSR	Conceptual		
Paterson, Ted <i>et al.</i>	2014	<i>Journal of Organizational Behavior</i>	Work positivity and individual enabling	The self-determination theory and the social cognitive theory	Thriving at work as the joint experience of learning and vitality	Survey	The USA	Different industries

(continued)

Table A4.

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Pratt, Michael Ashforth, Blake	2003	<i>Positive Organizational Scholarship: Foundations of a new Discipline</i>	Work as a source of meaning	The positive organizational behaviour	Conceptual understanding of meaningful work	Conceptual		
Rosso, B. D. et al.	2010	<i>Research in Organizational Behavior</i>	Meaningful work pathways	The self-determination theory and the job characteristics theory	Underlying mechanisms of meaningful work	Conceptual		
Sonenshein, Scott et al.	2013	<i>Organization Science</i>	Organizational striving	The sensemaking theory	Progressive self-change in organizations	Multiple case studies		
Wong, S. I. et al.	2020	<i>The Journal of Occupational and Organizational Psychology</i>	Digital labour	The career construction theory	Conditions to perceive meaningful work for micro-work employees	Survey	International	Platform organizations (MTurk and Clickworker)

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Adler, Paul S, Chen, Xiaoling	2011	<i>Accounting, Organizations and Society</i>	Creativity and control	The perceived locus of causality	Conflict between creativity and control	Conceptual		
Bedford, David S	2015	<i>Management Accounting Research</i>	Use of management control configurations	The configuration theory	Simultaneous balance between exploration and exploitation	Survey	Australia	Different industries
Bedford, David S, <i>et al.</i>	2016	<i>Accounting, Organizations and Society</i>	Management control effectiveness and strategy	The complementarity theory	Effectiveness of MC in different strategic contexts	Survey	Australia	Different industries
Chenhall, Robert; Langfield-Smith, Kim	2003	<i>Journal of Management Accounting Research</i>	The role of reward systems and trust in strategic change	The contingency theory	Effectiveness of MCS and change management	Case study	The USA	The manufacturing
Davila, Antonio, <i>et al.</i>	2017	<i>Journal of Management Accounting Research</i>	MCS in creative organizations	The sensemaking theory	MCS and creativity	Multiple case studies	Europe	The fashion
Drake, Andrea, R, <i>et al.</i>	2007	<i>Behavioral Research in Accounting</i>	Empowerment and motivation of non-management employees	The behavioural accounting	Antecedents of motivation and financial performance	Experiment	The USA, Canada, Asia and Europe	
Evans, M., and Tucker, B. P	2015	<i>Qualitative Research in Management Accounting and Research</i>	Management controls and environmental change	The complementarity theory	Organizational change	Case study	Australia	The energy
Ferreira, Aldónio, and Otley, David, T	2009	<i>Management Accounting Research</i>	Development of a holistic performance management system	The contingency theory	Simplification of performance management and management control systems	Multiple case studies	Portugal	

(continued)

**Table A5.** Summary of selected studies in accounting research

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Fogarty, Timothy, J. <i>et al.</i>	2000	<i>Behavioral Research in Accounting</i>	Antecedents and consequences of burnout in accounting	The role stress model	Functional and dysfunctional aspects of role stressors	Survey	The USA	The accounting
Grabner, Isabella	2014	<i>The Accounting Review</i>	Incentive systems in a creativity dependent company	The complementarity theory	Conflict between creativity and control	Survey	Germany, Austria and Switzerland	Different industries
Groen, Bianca, A. C. <i>et al.</i>	2012	Management Accounting Research	Employee performance	The theory of planned behaviour	Co-development of performance measurements	Multi-method	The Netherlands	Beverage
Hall, Matthew	2008	<i>Accounting, Organizations and Society</i>	Behavioural consequences of PMS	Behaviour theories	Improvement of individual performance	Survey	Australia	Different industries
Henri, Jean-François	2006	<i>Accounting Organizations and Society</i>	Organizational culture	The contingency theory	Influence of organizational culture on the design and use of control systems	Survey	Canada	Different industries
Kruis, Anne-Marie <i>et al.</i>	2016	<i>Management Accounting Research</i>	Balance of levers of control framework	The configuration theory	Configuration of controls in relation of the strategic objective	Survey	The Netherlands	Different industries
Mahama, Habib Cheng, Mandy M	2013	<i>Behavioral Accounting Research</i>	Managers' enabling perceptions in relation to cost systems	Behaviour theories	Costing systems and empowerment	Survey	Australia	Different industries
Malmi, Teemu Brown, David A	2008	<i>Management Accounting Research</i>	Management control systems as a package	The configuration theory	Control design	Conceptual		
Morales, Jereny	2019	<i>Management Accounting Research</i>	Search for meaningful work through symbolic categories	Behavioural theories	Symbolic categorization	Multiple case studies	The UK	Different industries

(continued)

Table A5.

Author(s)	Year	Journal	Area of research	Underlying theories	Context/Scope	Method of data collection	Country of the study	Industry of the study
Mundy, Julia	2010	<i>Accounting, Organizations and Society</i>	Enabling use of MCS	Complementarity theory	Balanced use of Levers of Control Framework	Multiple case studies	The UK	The financial industries
Pfister, Jan; Lukka, Kari	2019	<i>The Accounting Review</i>	Management controls and motivation	The self-determination theory	Relevance of personnel and culture controls	Case study	Finland	The IT
Spekle, Roland, F. et al.	2017	<i>Behavioral Research in Accounting</i>	Creativity and control	The self-determination theory	Control system use to drive empowerment and creativity	Survey	The Netherlands	Different industries
Tillmann, Katja	2008	<i>Management Accounting Research</i>	Management control use for organizational sensemaking	The sense-making theory	Perception and use of strategic management accounting	Grounded theory development	Germany	Chemicals
Goddard, Andrew	2005	<i>Management Accounting Research</i>	Interplay of Levers of Control Framework	The complementarity theory	Levers of Control Framework use for business strategy	Multiple case studies	Finland	Different industries
Tuomela, Tero-Seppo	2016	<i>Management Accounting Research</i>	Fairness perception of annual bonus payments	The equity theory	Behavioural management accounting	Survey	Germany, Austria and Switzerland	Different industries
Voubein, Ludwig et al.	2007	<i>Accounting Organizations and Society</i>	Associations of control use to attention and learning	The contingency theory and the complementarity theory	Antecedents of control use and costs and benefits	Survey	The USA	Different industries

### Appendix 3

**Cluster 1:** Meaningfulness can arise from the roles in that people perform (Deeg and May, 2022; Dutton *et al.*, 2010; May *et al.*, 2004; Spreitzer, 1996). Roles go beyond individual job tasks, and include sets of norms and expectations concerning the behaviour and identity of the employee, relating to “who I am” rather than “what I do” (Bailey *et al.*, 2017) or “why am I here?” (Lips-Wiersma and Wright, 2012). Morales (2019) finds that management accountants build symbolic categories to create a bridge between what they do and who they are, to secure a feeling of meaningfulness. Practices that best typify meaningful work are those that nurture callings. When one’s work is a calling, it is seen as the sum of “socially” valuable activities that are pleasurable (Pratt and Ashforth, 2003). A qualitative study of zookeepers noted that those with a sense of calling were more willing to sacrifice money, time and physical comfort or well-being for their work (Bunderson and Thompson, 2009).

Pratt and Ashforth (2003) draw on the social identity theory to show how individuals’ membership in valued groups can enhance the perception of meaningful work through raised levels of self-esteem. They suggest that the creation of family-like dynamics at work such as through fostering care and connection between people can promote solidarity and cohesion. Chatman *et al.* (1991) point out that when employees have consistent values with the organization, the culture of the organization could contribute to the employees’ working morale, their promises to the company and their efficiency or performance. Brickson (2007) suggests that employees’ perceived congruence between their identities and the identity orientation of their organization (i.e. individualistic, relational or collectivistic) play a role in the meaning of their work. Colbert *et al.* (2016) indicate that positive workplace relationships increase perceptions of meaningfulness. Duchon and Plowman (2005) argue that a meaningful work climate is a set of perceptions that workers have about the local work unit, how it is managed and how workers relate to each other. This climate enhances workplace spirituality and improves work unit performance. Many authors agree that meaningful work is highly associated with strong value-driven organizational cultures and spirituality where personal identification or individual-organization value congruence is identified as a principal source of meaningfulness (Ashforth *et al.*, 2016; Bailey *et al.*, 2017; Brickson, 2005, 2007; Chatman *et al.*, 1991; Kristof, 1996; Robertson *et al.*, 2020).

**Cluster 2:** Interactions with beneficiaries are motivating because they highlight the prosocial impact that work can have on others (Brieger *et al.*, 2020; Grant, 2007, 2008; Lin *et al.*, 2020; Rodell, 2013; Rosso *et al.*, 2010). Grant (2008)’s theory of prosocial motivation further proposes that meaningful work tasks are those that provide service to society or the community and contribute to the sense of a greater good or higher purpose. Furthermore, Colbert *et al.* (2016) find empirically that giving to others is positively related to perceptions of meaningful work. Lately, the meaningful work perception of entrepreneurs, who may face various challenges in establishing their business, has been discussed in some studies (Brieger *et al.*, 2020; Gregori *et al.*, 2021). Entrepreneurs who perceive that their work has a positive direct effect on beneficiaries and create social value, rate higher on work meaningfulness and engagement (Brieger *et al.*, 2020). Entrepreneurial engagement in environmental businesses further relates to positive work identities and the perception of meaningful work (Gregori *et al.*, 2021). However, research also argues that altruistic motivation is not the only driver for social contribution. Employees also expect that altruism would lead to private benefits such as developing skills to enhance career prospects (Bode and Singh, 2018), and according to Grant (2008), social contribution is more likely to improve job performance for employees with strong prosocial values than for employees with weak prosocial values.

**Cluster 3:** The perception of meaningful work is positively influenced when the individual perceives higher levels of autonomy, skill variety, task significance and task identity (Hackman and Oldham, 1980; Oerlemans and Bakker, 2018), which, in turn, contributes positively to motivation, performance and satisfaction (Rosso *et al.*, 2010). When employees experience their work as meaningful (i.e. significant, challenging and complete), the potential for that work to be internally motivating is greatly improved because employees feel that their work matters (Hackman and Oldham, 1976, 1980). Especially, employees who experience making a difference or impact (Grant, 2007, 2008; Pratt and Ashforth, 2003) are associated with higher levels of work motivation (Foulek *et al.*, 2019; Hackman and Oldham, 1980; Humphrey *et al.*, 2007), i.e. autonomous motivation (Ryan and Deci, 2000), engagement and productivity (Grant, 2008; Kahn, 1990).

**Cluster 4:** Researchers have explored that certain leadership styles can influence the degree to which work is perceived as meaningful (Gartenberg *et al.*, 2019; Kempster *et al.*, 2011; Rosso *et al.*, 2010; Schaubroeck *et al.*, 2012) and particularly emphasize meaningful work related to transformational

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leadership practices (Carton and Lucas, 2018; Tepper *et al.*, 2018). Moreover, different studies show that if employees experience meaningful work their engagement increases (Allan *et al.*, 2019; Barrick *et al.*, 2015; Humphrey *et al.*, 2007; Kahn, 1990; May *et al.*, 2004). In a current meta-analysis of meaningful work, Allan *et al.* (2019) find amongst others, that meaningful work highly correlates with work engagement, commitment and job satisfaction and has moderate to large correlations with life satisfaction, life meaning and general health.

Individuals are further not passive respondents; they help create meaning that express and confirm their desired sense of self (Pratt and Ashforth, 2003). Extra role behaviour (Lin *et al.*, 2020), job crafting (Sonenshein *et al.*, 2013; Vogel *et al.*, 2016) or sensemaking (Müller *et al.*, 2019; Tillmann and Goddard, 2008) are methods to enhance the perception of meaningful work by changing the parameters of one's job to suit personal needs, preferences and abilities that can lead to more meaningfulness. As a result, psychological empowerment (Drake *et al.*, 2007; Hall, 2008), thriving (Paterson *et al.*, 2014), employee well-being (Franco-Santos and Doherty, 2017; Van De Voorde *et al.*, 2012) and individual performance (Hackman and Oldham, 1980; Humphrey *et al.*, 2007; Wrzesniewski, 2003) are positively affected.

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