



A structured literature review on negative performance feedback

21849278

A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Philosophy (Evidence Based Management).

13th November 2023

Abstract

The scholarship is facing the advent where studies reporting on the effects of negative performance feedback are increasingly reporting inconsistent outcomes. Through this structured literature review, the bases of the opposing position in the scholarship were identified. The need to report in relative terms is emphasised as the basis for the need to avoid aggregation approach. The future research avenues centred on the need for field-based research designs that are primarily intended to address the need for specificity of boundary conditions and decision space within which research on negative performance feedback report is emphasised.

Keywords: negative performance feedback, performance feedback; feedback-recipient

Declaration:

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirement for the degree of Master of Philosophy [Evidence Based Management] at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and content to carry out this research

21849278

14th November 2023



Contents

Abstract.....	ii
Declaration:	iii
Contents	1
Chapter 1: Introduction to a structured literature review on negative performance feedback.....	4
1.1 Introduction.....	4
1.2 A brief theoretical background of the construct: negative performance feedback	4
1.3. The basis and relevance of the review problem	7
1.4 The rationale for structured literature review	8
1.5 Chapter conclusion	11
Chapter 2: Method and analysis	12
2.1 The purpose and the review questions	12
2.2 The review methodology	12
2.3. Source identification.....	12
2.4 The literature search	13
2.4.1 Search terms.....	14
2.4.2 Units of analysis	14
2.4.3 Timeframe	15
2.4.4 Quality measures	15
2.4.4.1 Assessment of journal quality	15
2.4.4.2 Assessment of impact	16
2.4.4.2.1 Google Scholar Gross-Reference Citations	16
2.4.4.2.2 Use of Scopus Quartiles.....	17
2.5 The exclusion criterion.....	17
2.5.1 Exclusion based on grey literature	17
2.5.2 Exclusion based on practice domain.....	18
2.6 Method of data analysis and coding.....	19
2.7 Measures of quality and rigour	20
2.7.1 Ensuring replicability of the selection process	20
2.7.2 Credibility and reliability.....	21
2.7.3 Validity of the results.....	21
2.7.4 Robustness of the results	21

2.8 Limitations.....	22
2.9 Chapter conclusion.....	23
Chapter 3: The results and discussion of the findings of the structured literature review	24
3.1 Introduction.....	24
Section 1: analysis of the effects of negative performance feedback at the individual and team's level of analysis	24
3.2 The results of the research designs used on individual and team's level of analysis.....	24
3.2.1 Discussion on the research designs used at individual and team's level of analysis.....	25
3.3 Analysis of the effects of negative performance feedback at the individual and teams' level of analysis.....	26
3.3.1 Discussion on the reported effects of negative performance feedback.....	27
3.3.2 Analysis of the influence of the effects of negative performance feedback	28
3.3.2.1 The bases of the reported inconsistent effects of negative performance feedback	28
3.4 Negative performance feedback interventions that influence the feedback effects	31
3.4.1 Framing negative performance feedback.....	31
3.4.2 Distinction based on the frequency of the feedback.....	35
Section 2: analysis of the effects of negative performance feedback at the organisational level	36
3.5 The results of the research designs used on organisational level of analysis	37
3.5 The reported feedback characteristics that influence the effects of negative performance feedback	39
3.5.1 Degree of the gap between actual and targeted aspirations.....	39
3.5.2 Discrepancy between the firms performance to that of peers.....	40
3.5.3 Objective performance feedback.....	40
3.6 The reported variables that moderate the effects on negative performance feedback at the organisational level	42
3.7 The reported effects of negative performance feedback to the feedback-recipients at organisational level	44
3.7.1 Positive affect as a factor of managers' expertise.....	44
3.7.2 Positive effect as a factor of peer performance feedback.....	46
3.7.3 Negative affect as a factor of inconsistency in feedback characteristics.....	47
3.8 Chapter conclusion.....	48
Chapter 4: Discussion of literature review.....	49
4.1 A glance on the review question and objective.....	49

4.2 Presentation of the review findings	49
4.2.1 Effects on the feedback-recipient and influence on the subsequent performance at individual and teams level of analysis	49
4.2.2 The effects and influence the subsequent performance at the firms' level of analysis	53
4.3 The methodological constraints presenting avenue for future research	54
4.4 Contributions of this structured literature review	56
4.5 Limitations of the study	57
Chapter 5: Formulation of research questions and Conclusion	58
5.1 Presentation of the formulated research questions.....	58
5.2 The need for research to address contextual and boundary specificity.....	59
5.3 The need for research to set out context-specific decision space	61
5.4 Conclusion	63
APPENDIX 1: Number of articles by academic journal subject field and title.....	74
APPENDIX 2: Gross-reference citations per article.....	75
APPENDIX 3:Studies that used experimental designs	78
APPENDIX 4: Studies that used historical archival data sets of firms' observations over time...	79

Chapter 1: Introduction to a structured literature review on negative performance feedback

1.1 Introduction

This structured literature review is based on the construct “negative performance feedback”. Negative performance feedback is an organisational phenomenon that has captured the scholarship from as early as 1958 from the writings of March and Simon. It is one of the key tenants of the behavioural theory of the firm, particularly emanating to its problemistic search model. The commonly known prediction of this model is that the performance feedback showing performance below aspiration (negative performance feedback) triggers the feedback-recipient to undergo a process of problemistic search through which the subsequent performance will meet the predetermined aspiration level. Thus, predicting a linear relationship between negative performance feedback and the subsequent performance.

In reaction to this prediction, there is evidence of a widespread scholarship that examined the effects of negative performance feedback from different angles. While the scholarship is agreeable on what negative performance feedback is, there seems to be inconsistencies on what the scholarship has reported as the effects of negative performance feedback to the subsequent performance regardless of the level at which the effects are examined. On one hand, some scholars confirmed the existence of the linear relationship, whilst on the other hand, some scholars confirmed the contrary. Based on this contradiction, this structured literature review seeks to answer the question: what is the state of knowledge about the effects of negative performance feedback in corporate organizations?

1.2 A brief theoretical background of the construct: negative performance feedback

A retrospective glance at the literature addressing the construct performance feedback identifies evidence of intense scholarly debates on the predictions of the behavioural theory of the firms. Among the predictions of the behavioural theory of the firm, is the problemistic search model (Cyert & March, 1963) which is premised on the assumption that performance feedback of a firm is predictive to the subsequent performance outcomes of the firm (Geddes & Linnehan, 1996). In brevity, the problemistic search model predicts that the performance feedback

showing the below aspirations outcomes triggers the process of problemistic search: search for the means through which the subsequent performance can be improved.

The analogy behind the problemistic search model is that Cyert and March (1963) assumed a presentation of performance feedback on a continuum. Based on the assumption, at the one end on the continuum is the actual performance feedback denoting a scenario where the targeted performance aspirations are met and on the other end, a scenario where aspirations are not met (Gavetti, Greve, Levinthal & Ocasio, 2012; Posen, Keil, Kim & Meissner, 2018). That is, this analogy communicates a possibility of the performance feedback presenting at least two sets of feedback: the one that presents failure to achieve and the one that communicates achievement. The possibility of indicators showing outcomes that exceeded the targeted performance standard is however not negated.

Based on this analogy of performance feedback, the behavioural theory of the firm, with its problemistic search model predicts that performance feedback that presents below aspiration level outcomes compels the feedback-recipient to undergo the problemistic search. Through this process, the feedback-recipient will undertake to enquire into the possible sources of the underperformance; identify the means through which the underperformance will be rectified; and then execute the cause of action intended to rectify the performance indicators on which the underperformance was identified. The basic assumption is that the feedback-recipient having successfully undergone the problemistic search process; will witness an improvement in the subsequent performance (Posen et al., 2018). This is the basis on which scholars confirmed the linear relationship between performance feedback showing below aspiration level outcomes and the subsequent firm's performance (e.g. Villagrasa, Buyl & Escribá-Esteve, 2018; Gnepp, Klayman, Williamson & Barlas, 2020; Saraf, Dasgupta & Blettner, 2022).

The literature further confirms that consequent to the predictions of the behavioural theory of the firm, a considerable attention of a wide array of scholarship which developed further on the predictions (e.g. Ilgen, Fisher & Taylor, 1979; Jaworski & Kohli, 1991; Ilgen & Davis, 2000; Greve, 2010; Jordan & Audia, 2012). Moreover, the literature points to the scholarship that undertook to test the linear relationship prediction on different levels of analysis: individual (Ilgen, Fisher & Taylor, 1979); teams (Dierdorff, Fisher & Rubin, 2019; Gjedrem & Kvaløy, 2020; Delavallade, 2021) and organisational (Tarakci, Ateş, Floyd, Ahn & Wooldridge, 2018; Drouvelis & Paiardini, 2022). As a result of the widespread engagement with the foundation of the behavioural theory of the firm, the theory got more and more refined into other theories and models. For instance; performance feedback theory (Greve, 2010), negative feedback model

(Ilgen et al., 1979; Jaworski & Kohli, 1991; Ilgen & Davis, 2000) and the motivated feedback disengagement model (Grundmann, Scheibe & Epstude, 2021) just to name a few.

Additionally, the literature confirms that as more and more scholars engage in the conversation, the use of the construct “negative performance feedback” becomes a common connotation of performance feedback denoting the below aspirations outcomes (e.g. Ilgen & Davis, 2000). This labelling emanated from the positioning of performance feedback along the continuum of performance outcomes, commonly referred to as performance feedback valence (Ilgen & Davis, 2000; Posen et al., 2018; Grundmann et al., 2021). The performance feedback valence referred to herein, represents a continuum, within which performance feedback at one side is labelled positive while on the other side is labelled negative. Feedback valence is therefore a form of a qualification that is assigned to performance feedback by way of attaching a sign to it.

Regardless of the sign attached to it, it is important to recognise that performance feedback is an inherent organisational phenomenon that is intended to communicate whether or not the predetermined performance standard is met. The common understanding is that a negative valence presents a need for the recipient to undertake measures to address the shortfall in performance (Ilgen & Davis, 2000; Swift & Peterson, 2018; Gnepp et al., 2020; Alam & Singh, 2021). For the purpose of this review; negative performance feedback therefore refers to a performance report denoting a shortfall in actual performance as benchmarked against the predetermined performance outcomes.

The literature confirms that the scholarship has addressed this construct from different levels of analysis: at organisational (e.g. Eggers & Suh, 2019; Lv, Chen, Zhu & Lan, 2019; Lv, Zhu, Chen & Lan, 2021) and at individual (e.g. Ilgen & Davis, 2000; Grundmann et al., 2021; Motro, Comer and Lenaghan, 2021; Xing, Sun & Jepsen, 2021). It is apparent that negative performance feedback as a construct is still an active agenda in the scholarship. This means that a massive research is undertaken to interrogate the extent to which the propositions of the problematic search model could apply to other contexts and still remain true to its propositions (Lechermeier & Fassnacht, 2018).

As a result of the scholarship engagement with the construct, the theoretical apparatus of the model were challenged at different organisational settings; subjected to not only different levels of analysis (e.g. Choi, Rhee & Kim, 2019; Oehler, Stumpf-Wollersheim & Welpe, 2019; Schumacher, Keck & Tang, 2020; Drouvelis & Paiardini, 2022) but also to different performance measures (e.g. Swift & Peterson, 2018; Billinger, Srikanth, Stieglitz & Schumacher, 2021; Motro

et al., 2021; Saraf et al., 2022); and different types of aspirations (e.g. Ref & Shapira, 2017; Xu, Zhou & Du, 2019; Goyal & Goyal, 2022). All of which subsumed the tenants of the problemistic search model into the extant debates on the negative performance feedback. Although the scholarship is almost agreeable on the definition of the construct negative performance feedback and the fact that it is an unavoidable organisational phenomenon; it is however not agreeable on the effects of negative performance feedback in organisations. As such, the differences in the reported effects confirm the existence of inconsistencies in the effects of negative performance feedback regardless of the level at which the effects are examined.

1.3. The basis and relevance of the review problem

In order to understand the bases of the opposing views reported with regard to the effects of negative performance feedback in organisations, I undertook a retrospective analysis of the literature. I established that in his study, Greve (2010) acknowledged the differences and claimed that they denote a performance improvement fallacy. A review conducted by Posen et al. (2018) confirmed, and further reported that the effects of negative performance feedback are rather contingent, subjected to so many antecedents. This was later alluded to by Fong, Patall, Vasquez and Stautberg (2019) in a meta-analysis; they report that it is the negative valence of performance feedback that is a critical moderator responsible for influencing perceptions and decisions about the feedback. As such, Fong et al. (2019), associate the differences in perceptions about negative performance feedback as the basis for the opposing effects. While some scholars have identified and confirmed a linear relationship (e.g. Villagrasa et al., 2018; Gnepp et al., 2020; Saraf et al., 2022), others have proven to the contrary (e.g. Schumacher et al., 2020; Grundmann et al., 2021). These opposing positions are therefore the basis for which effects of negative performance feedback are said to be fallacious, signalling that the baseline effects of negative performance feedback on performance are rather not universal.

Upon further consultation with the literature, some scholars associate the opposing effects to the fact that construct negative performance feedback has been interrogated from different angles of scrutiny; levels of analysis, organisational foci and domains (Fong et al., 2019). As a result, any attempt to generalise the findings despite the fact that these studies are different may be responsible for inconsistencies that emanate whenever inferences are made (Lechermeier & Fassnacht, 2018). There is a common tendency of scholars to mix-up the facts when analysing and discussing the findings at each of the levels (Lechermeier & Fassnacht,

2018). As such, Tarakci et al. (2018), advise on the need to understand negative performance feedback and its antecedents relative to the applicable level of analysis. Otherwise, it may not suffice to generalise the interpretations and application of the findings of such categories of studies. This motivates the need to study negative performance feedback relative to a specific level in order to avoid misleading the scholarship.

The tendency to adopt a generalised approach is confirmed. For instance; in their systematic review and meta-analysis, Tagliabue, Sigurjonsdottir and Sandaker (2020) reported the effects of negative performance feedback as an integral part of performance feedback in general. When addressing the effects of negative performance feedback from a general and inclusive point of view, the analysis is inclined to lack the required level of specificity. This approach can be more restrictive on the scholarship due to its inherent lack of clarity in reporting the effects.

Additionally, in their meta-analysis, Kotiloglu, Chen & Lechler (2021), were interested in assessing organisational responses to performance feedback. In their analysis, focus was on performance feedback and not specifically on negative performance feedback. However, when reporting their findings, they highlighted the existence of contradictory effects of negative performance feedback. This approach exposed their research to be inconclusive on the basis of the reported contradiction. This evidence therefore confirms the need for a more focussed intervention intended to address the effects of negative performance feedback from a more specific perspective. That is there is the need for research that will rather observe specificity in reporting about the effects of negative performance feedback.

Against the above background, this structured literature review is aimed to interrogate the literature reporting on the effects of negative performance feedback in organisations. The main objectives are: to examine the effects of negative performance feedback on the feedback-recipient and to establish how the effects of negative performance feedback on the recipient influence the subsequent performance of the recipient. The secondary objective is to establish if indeed there are inconsistencies in the reported effects and the bases for those inconsistencies.

1.4 The rationale for structured literature review

Posen et al. (2018) undertook to conduct a structured literature review on problemistic search which; in the context of this review, is triggered by negative performance feedback. Their review was therefore not specifically on the construct negative performance feedback. Additionally,

some studies examined inconsistency of performance feedback (e.g. Lucas, Knoblen & Meeus, 2018; Blagoeva, Mom, Jansen & George, 2020) and not specifically the inconsistencies of the effects of the negative performance feedback. I therefore remain of the assumption that no review was conducted to specifically untangle the inconsistencies reported in line with the effects of negative performance feedback. Otherwise it remains a conspicuous call for interrogation. This call is justified as indicated in the aforementioned sections, presenting the need for this structured literature review with the hope to examine, identify and classify the boundary conditions that expedite and those that thwart responsiveness to negative performance feedback.

Notwithstanding, this construct has already reached the stage of recognition of proliferation, which gives me an understanding that the construct has a firm empirical grounding. This presents a fair chance for omissions and or misconceptions emanating from different foci and levels of analysis (Tarakci et al., 2018). The stage of recognition of proliferation in this scholarship supports construct eligibility for a structural literature review. This stands despite a number of reviews that have already been conducted (e.g. Lechermeier & Fassnacht, 2018; Tagliabue et al., 2020). While these reviews have confirmed the evidence of conflicting positions, Tagliabue et al. (2020) further suggest the need for paying attention to these conflicting empirical findings, to establish the possibility for their reconciliation.

In enforcing the reconciliation the need to observe boundary specificity is identified as a prerequisite. This means the reported effects should be classified by their empirical domains for the purpose of maintaining accuracy of the applicable contexts, timeframe, and decision space. Taking for instance, Eggers and Suh (2019) reports that generalisability should only apply to studies addressing similar domains where the boundary conditions and variables under study are similar.

In the light of the above, the current lack of reconciliation in the state of scholarship addressing the effects of negative performance feedback presents an opportunity for theory building (Dumay, Bernardi, Guthrie & Demartini, 2016). This is because the reconciliation of the overlooked aspects may help bridging the gap in scholarship. Hoping for knowledge production, it is against this established need that this structured literature review is justified. The expectation is that through the review, the areas that are still pending more scholarly attention will be identified, on which I will be able to base the planned future research (Dumay et al., 2016). As such, the structured literature review paves my way towards knowledge production

(Massaro, Dumay & Guthrie, 2016). Through this structured literature review future research is informed as several avenues are established.

One of the key findings of this structured literature review is that negative performance feedback rather has effects on the recipient and not on the performance. It is therefore the effects of negative performance feedback on the recipient that moderate whether or not negative performance feedback expedites or thwarts the subsequent performance. With this finding presenting avenues for future research, I believe that in addressing them, I will manage to contribute to the existing body of knowledge. Through this structured literature review, the establishment of future research avenues will help to generate an understanding of the negative performance feedback in organisational context, which is also a prerequisite for understanding organisational behaviour. Bearing the criticality of organisational behaviour in management sciences, this structured literature review is worth pursuing.

Justified to be an evidence based approach, I believe the structured literature review is a research method that would satisfy the need to conduct a rigorous analysis of evidence provided by the scholarship addressing the construct "negative performance feedback". In identifying the literature on which to base this review; I targeted the peer-reviewed academic articles addressing this construct. As highlighted in the aforementioned background, negative performance feedback is denoted by performance feedback showing the below aspirations performance outcomes. As such, during the selection of the articles that made it to the sample, I used the search terms performance feedback and its thesaurus term "feedback". The articles were considered for inclusion if they contained either one of the two search terms in their abstract, title or key words, while they also addressed negative performance feedback in their body content.

The motive behind the application of this framework of search was solely to increase retrievability of the targeted articles. Through the execution of the inclusion and exclusion criteria, I was able to solicit a sample of 52 high quality articles. While I made reference to the seminal scholars at different sections of this review, the findings of this structured literature review were solely based on the 52 articles published on a timeframe ranging from 2017 to 2022. As such, reliance on the highly rated articles improved the legibility of this structured literature review to achieve its purpose. This is because one common shortcoming of the prior research is its tendency to rely on a combination of high and low rated articles (e.g. Lechermeier & Fassnacht, 2018; Tagliabue et al., 2020). This tendency to use an umbrella approach

addressing quality of the literature is compromising on the quality and accuracy of the findings. This further denies the scholarship the opportunity to maintain accuracy in making inferences.

1.5 Chapter conclusion

This chapter introduces the construct of interest “negative performance feedback”. The origin of scholarship pertaining to negative performance feedback can be traced from the predictions of the behavioural theory of the firm, its problemistic search model. The primary prediction of this model was a linear relationship between the later refined construct negative performance feedback and performance. This prediction attracted scrutiny from all levels of analysis; contexts, foci and domains. As a result of massive scholarship interventions, some scholars still insist on the linear relationship while other scholars predicted a nonlinear relationship.

The need to understand the inconsistencies in the effects of negative performance feedback is mandatory in management research owing to the criticality of organisation behaviour. As such this literature review is framed to untangle the bases of the inconsistencies with the hope of reconciling the differences. This structured literature review therefore facilitates for a more critical reflection of how research addressing the construct negative performance feedback should continue to develop, considering the fact that negative performance feedback is a critical moderation in the face of organisational behaviour. It is indeed crucial to understand the state of knowledge about the effects of negative performance feedback in corporate organisations. In order to be able to answer the review question and to achieve the objectives stated herein above, this structured literature review was conducted in line with the method outlined in the subsequent.

Chapter 2: Method and analysis

2.1 The purpose and the review questions

This structured literature review is based on the construct “negative performance feedback”. The review question that this structured literature review seeks to answer is: what is the state of knowledge about the effects of negative performance feedback in corporate organisations? With this question, the main objectives are: to examine the effects of negative performance feedback on the feedback-recipient and to establish how the effects of negative performance feedback on the recipient influence the subsequent performance of the recipient. The secondary objective is to establish if indeed there are inconsistencies in the reported effects and the bases of those inconsistencies.

2.2 The review methodology

This structured literature review is identified as a suitable research methodology through which the review question will be answered. The rationale behind the use of this methodology is to gather a nuanced understanding of the state of knowledge about the effects of negative performance feedback in corporate organisations. As one of the methodologies trusted for management research, the structured literature review is suited for interrogation of the corpus of literature to gather insights and to make critical reflections of the literature under scrutiny (Dumay et al., 2016; Snyder, 2019). According to Massaro et al. (2016) a structured literature review is helpful for synthesising developments on the literature for the purpose of making a contribution. It is therefore a justified evidence based approach, required for a rigorous analysis of evidence.

In mapping out this structured literature review, I started by developing a review protocol to guide the process. According to Ali and Usman (2018), a review protocol is a framework that is established to guide the process of structured literature review in sourcing the literature to be used, the analysis and synthesis and reporting the structured literature review.

2.3. Source identification

The literature used for this structured literature review was solely obtained from electronic academic databases: Scopus and Web of Science. These databases are trusted in scholarship, and have been used in other reviews. For instance, Lechermeier and Fassnacht (2018) used the Scopus database, while Tagliabue et al. (2020) and Kotiloglu et al. (2021) used the Web of Science database. The two databases are hailed for having large volumes of information and therefore regarded to complement each other (Posen et al., 2018). I also used Google Scholar mainly for citation analysis. This is because it was used for the same purpose in other reviews (e.g. Dumay et al., 2016; Ali & Usman, 2018; Posen et al., 2018; Tagliabue et al., 2020). Despite being regarded as the trusted databases, I used them because I wanted to avoid relying on only one database, as I believed that would expose this structured literature review to publication bias (Álvarez Jaramillo, Zарtha Sossa, & Orozco Mendoza, 2019). Additionally, use of several databases is recommended for it assures adequacy of access when executing the search (Álvarez Jaramillo et al., 2019).

When navigating through the databases, I had no predetermined guide as to the number of articles that I intended to extract from each of the databases. I only needed to remain flexible in switching among the databases to retrieve the articles. In particular, Google Scholar was useful to retrieve articles that I could not find in the two databases, mainly where I would have identified an article, and it only appeared as an abstract in the other databases. So in that way, it is used mostly for the purpose of improving recall (Ali & Usman, 2018). The ultimate sample of studies used for this structured literature review was extracted through the following primary eligibility criteria.

2.4 The literature search

In conducting the literature search, I adopted a purposeful sampling method. I believe this method is inheritably suitable for structured literature reviews, especially where the researcher already identified the units for analysis, and is therefore clear about the attributes of the targeted literature (Álvarez Jaramillo et al., 2019). In executing eligibility criteria, I was strictly looking for empirical studies reported in the form of articles and structured literature reviews that are written in the English language. English language is officially required for pursuing this review. I also had no geographical delimitations in relation to areas of publication of the literature used in this review. The following outlines the protocol which was followed in executing the search and article screening process.

2.4.1 Search terms

In navigating the databases for retrieving the articles, the search term that I predominantly used was “performance feedback”. The choice of the predominant search term was based on the need to focus this structured literature review on the main corpus of articles that are pertinent to the structured literature review (Snyder, 2019). However, only articles that included the search term but entirely addressed negative performance feedback and those that addressed it as part of multiple performance conditions in their content were considered for inclusion. I relied on the term performance feedback and not negative performance feedback because I was already aware that in some articles, negative performance feedback is denoted by the phrase “performance below aspiration level”. At this point, I examined the title, key words and abstract of the articles to establish their relevance (Dumay et al., 2016). As a result, I was able to draw 223 articles which satisfied this requirement.

As the process of data extraction continued, I also realised the need to also search through the use of the thesaurus term “feedback”. I discovered that there were articles that did not have the construct “performance feedback” on their titles, abstract, or in the list of key words. So I considered articles that had the word feedback in either the title, abstract and or the keywords, if their content had the word performance feedback for inclusion. This phase brought up 53 articles. Through this alternative, I was able to increase retrievability (Ali & Usman, 2018; Dumay et al., 2019). The search results yielded a total of 276 articles. Among these articles, I identified that eight articles were duplicated, and therefore removing the duplicates reduced the number of articles to be considered for inclusion to 268 articles.

2.4.2 Units of analysis

I conducted a second phase of article screening. During this phase, my focus was on the units of analysis that were addressed in the articles. Articles were considered for inclusion if they addressed negative performance feedback relative to performance in corporate organisation; with regard to individuals, teams or units and / or the entire organisation. It is important to highlight that in addressing this phase, any other article that addressed performance feedback outside of the organisational setting was eliminated from the pool of articles considered for inclusion. For instance, articles that addressed performance feedback relative to learning and

instruction settings were not considered for inclusion. At this phase, 64 articles were eliminated, leaving a remainder of 204 articles, subjected to time-frame screening.

2.4.3 Timeframe

I considered that in pursuing this review, it is a requirement to use the recently published articles with the purpose of focussing on the latest developments in the research that addresses the construct of interest. In satisfying this requirement, I limited the scope of the review to articles that were published at least from the year 2017 to 2022. In enforcing this requirement, I eliminated 60 articles that were published between the years 1979 to 2016. At the end of this elimination phase, only 144 articles were left for consideration for inclusion, subject to quality assessment.

2.4.4 Quality measures

2.4.4.1 Assessment of journal quality

I appraised the quality of the articles using the Academic Journal Guide of the year 2022 to track the article journal rating by the Association of Business Schools (ABS) (e.g. Kotiloglu et al., 2021). In the alternative, I also used the journal impact index by the ScImago Journal & Country Rank portal for a few articles that I identified as relevant, but which I could not determine their quality rating as per the ABS. The use of the academic journal rating and the journal impact index is of critical importance as the two are prominent in measuring the scholarly impact of the articles in the scholarly conversation (e.g. Kotiloglu et al., 2021). For that, the degree to which the sample is made up of high quality articles, the more reliable are the results, more especially if the review is well structured (Dumay et al., 2016). That is, the use of the high-quality articles makes a fair representation of the quality of the findings of the structured literature review.

Based on these quality measures, the articles that made it to the sample were drawn from the journals that were rated 4*, 4 and 3 by the ABS at least as per the journal quality list provided by Anne-Wil Harzing in 2022. Any other article, whose journal is rated 2 or is unrated were to be eliminated from the pool. At this phase, I identified that 85 articles were drawn from journals that were rated 2 and two articles that I could not trace in the ABS quality listing. The journals which

were rated 2 were rather drawn from the journals which included among others: Administration and society; Journal of organisational behaviour management; Journal of organisational behaviour; and the behavioural and experimental economics. This reduced the pool of articles that were considered for inclusion to 59 articles (see **Appendix 1** for the journals whose articles were included in the final sample of this review).

Included in these 59 articles, were two articles that were unrated as per the ABS, which despite that were fairly relevant to this structured literature review. These were articles drawn from the Plos One journal. These articles are reported independently for the following reasons: the quality of the journal could not be established through the journal quality list provided by Anne-Wil Harzing in 2022, as the journal is not included in the list. Their quality was established using the Scopus journal metrics of H-Index as published by the Scimago Journal & Country Rank portal. This journal is reported with an H-Index of 404 which is a fairly good quality indicator of quality. Two additional impact measures were conducted as indicated below.

2.4.4.2 Assessment of impact

2.4.4.2.1 Google Scholar Gross-Reference Citations

At this phase of screening, I conducted an assessment of the article's impact. In determining the impact of the articles, there were several measures that could be used, but I decided to adopt the use of Google Scholar article citations analysis, by tracing the gross-reference citations of each one of the articles. This is a basic technique that is commonly used to establish the impact of the article. It is determined by the number of times an article was cited by other scholars. That is, the fact that an article is reported to have been cited in the making or contribution of the existing literature is regarded as a good indication that such an article has an impact in the body of knowledge (Donthu, Kumar, Mukherjee, Pandey & Lim, 2021).

The Google Scholar gross-reference citation was adopted from other highly rated reviews (e.g. Dumay et al., 2016; Posen et al, 2018). It is therefore advantageous as it confirms the usability of the article/s in scholarship development. **Appendix 2** shows a record of the gross reference citations for the articles included in that made up a sample for this review. As shown from the Appendix 2, only one article: Bipp and Kleingeld (2018) presented with zero gross reference citations. This gives an impression that almost all of the articles were already used by other scholars as at the 30th August 2023. At this phase, no article was eliminated. However, since

the majority of the articles had the gross-reference citations that range between 0 and 29, I decided to conduct an additional impact analysis metrics.

2.4.4.2.2 Use of Scopus Quartiles

I also conducted the journal impact index as a complementary method of quality assurance (e.g. Ali & Usman, 2018). This is because of the reported limiting effect of google scholar citation analysis, as it is claimed to wane the impact of the articles as it ignores the fact that some high impact articles may present with fewer citations (Donthu et al., 2021). For instance, included in the sample is the article by Saraf et al. (2022) that presents with only eight citations as at the 30th August 2023, although it is retrieved from a journal bearing a quality rating of 3. Had I relied on the citation analysis only, this article would have not made it to the sample. That would have exposed this review to risk of omission; if not the inclusion bias as some high quality articles sometimes present with less cross reference citations (Dumay et al., 2016).

As such, I undertook to identify the journal quartiles of the articles considered for inclusion at this stage. According to Álvarez Jaramillo et al. (2019), a quartile indicates the journal's ranking within a specific subject category. It is a critical determinant of a degree to which a journal is credible as judged with respect to the demand of the journal by the scientific community (Álvarez Jaramillo et al., 2019). The Scopus journal metrics as presented by the Scimago Journal & Country Rank portal was consulted to determine the impact factor for the journals within which the 59 articles were drawn. The articles were drawn from the journals classified in the first quartile. Although not all of these articles made it to the final sample, within the 52 articles that made it to the sample, at least 46 articles were drawn from the journals covering the business, management and accounting subject areas. The fact that all of the articles used in the sample were drawn from the journals classified in the first quartile is an indication that all journals used were rated as credible, judging from their impact on the scientific community.

2.5 The exclusion criterion

2.5.1 Exclusion based on grey literature

Despite the exclusion of articles that were rated 2 and or the unrated articles as per the ABS, this structured literature review is solely based on empirical and peer reviewed journal articles, without any form of grey literature. This is because grey literature is non-academic and not peer-reviewed. As a result, it cannot be trusted to impact scholarly conversation and development (Massaro et al., 2016). Thus, they are regarded as static (Ali & Usman, 2018) and statistically insignificant (Tagliabue et al., 2020). As such, no conference paper, book or book chapter, newspaper, magazine and any other form of literature that remained un-defined and could therefore be classified as grey literature was used.

2.5.2 Exclusion based on practice domain

For the purpose of setting the scope for this review, articles that were reporting in other organisational domains other than corporate organisations were excluded. This included articles that were reporting with regard to the public organisations; the not-for-profit making organisations and those that reported with regard to educational institutions. An exception was given to studies that were based on samples that included post-graduate students in universities, for as long as they were observed or interviewed relative to corporate organisational performance and not their student performance. This exclusion criterion was preferred notwithstanding the possibility of the cross domain applicability of the effects of performance feedback (Drouvelis & Paiardini, 2022). In pursuing this exclusion criterion, I decided to spot-on the articles that are from other domains and automatically excluded them during the search process. I identified seven articles which I excluded based on their domains. Deducted from the 59 articles, I was left with 52 articles which made up the sample for this review. The following were the articles that were eliminated based on their domain:

Table 1: Articles that were eliminated based on their domain

Reference	Article Title	Basis for Exclusion
Adam and Vogel (2018)	Improvements to visual working memory performance with practice and feedback.	Students Performance
Cooks and Ciesla (2019)	The impact of perfectionism, performance feedback, and stress on affect and depressive symptoms.	Students Performance
Delavallade (2021).	Motivating teams: Private feedback and public recognition at work.	Public institutions
Goulas& Megalokonomou (2021)	Knowing who you actually are: The effect of feedback on short-and longer-term outcomes.	Students Performance
Hong (2019)	A behavioral model of public organizations: Bounded rationality, performance feedback, and negativity bias.	Public organisations
Redifer, Bae and Zhao (2021)	Self-efficacy and performance feedback: Impacts on cognitive load during creative thinking	Students Performance
Wong et al. (2021)	Fostering creative performance of platform crowdworkers: the digital feedback dilemma.	Crowdworkers were not directly related to any organisation setting

Source: Author, as at 31st August 2023

2.6 Method of data analysis and coding

The method of data analysis adopted in this structured literature review is content analysis. Primarily, this method of analysis was preferred because the data sets used in this review are content-oriented (Vaismoradi, Turunen & Bondas, 2013). Specifically, the content used in this review is manifest in nature since it is text-based (Erlingsson & Brysiewicz, 2017). In conducting the analysis, I deductively classified the text based on the meaning and the themes that I drew from each data set. The meanings and themes were classified according to the predetermined codes, from which the sub-categories were further developed (Azungah, 2018). The purpose was to analytically examine the narratives in the literature reporting on the effects of negative performance feedback in organisations.

As I interrogated the literature; I identified the data sets and was keen to identify them in terms of who said what, to whom, where and with what effects, in relation to the narratives that talk to the review question and the purpose of this review. That is, I deductively started with the following codes with which the data sets were categorised, and allowed to develop further into sub-categories: the study focus; the context of the study; the research method relative to the sample of the study, the findings/contribution, and avenues for future research. These were the predetermined codes in which the data sets were classified, and from which the categories and sub-categories emerged, developing from the classification of the themes. This process of analysis was very crucial since it is the one through which the framework of the structure of the subsequent descriptive report was made. As such, the descriptive report and its structure form the evidence that reflects a multifaceted process undertaken in deriving meanings, to make sense of the data, and to interpret it for the purpose of synthesis and therefore providing answers to the review question. Nonetheless, the use of content analysis is justified as it was used in other structured literature reviews (e.g. Massaro et al., 2016).

During the process of coding, all articles were downloaded into the pdf files, and printed. I personally engaged with the literature through manual reading, recording and classifying the data sets into the codes arranged into categories and sub-categories by the help of both the computer excel-spreadsheet and a word-document. While I acknowledge that there are software applications designed to pursue this process, I preferred to engage with manual coding for the sole purpose of wanting to embrace the process. I was keen to acquaint myself with the process of knowledge production. While this route was lengthy and challenging; it allowed this

review to develop iteratively. It also helped me to understand the process better. My preference is justifiable as it was used in other recent reviews (e.g. Dumay et al., 2016).

In pursuit of manual content analysis, the researcher is able to pick the words and phrases with similar meaning. Besides, while the software applications are preferred over the manual process for purposes related to convenience, more especially when dealing with the massive literature, they are by no means intended to supplant the manual approach (Gaur & Kumar, 2018). This is because the manual approach facilitates an in-depth (Azungah, 2018).

The use of the two computer applications is beneficial as the word document was used to develop descriptive narration of the themes as they emerged, which was later consolidated into the report; the use of the excel spreadsheet was helpful in to assemble the extracted data into themes for the purpose of synthesising the meaning attached to the themes (Gaur & Kumar, 2018). Based on the fact that the whole process is traceable, it is also reliable as it enables the conduct of an audit trail through which the whole process of content analysis can be replicated. Although the use of the excel spreadsheet on its own could not be used for the purposes of synthesis, it was helpful in maintaining a meaningful tabulation of datasets into the respective categories and with presentation of tables which aided the process of synthesis.

2.7 Measures of quality and rigour

2.7.1 Ensuring replicability of the selection process

Following data extraction, the criterion for inclusion and exclusion was verified in three different phases of time. As advised by Xing et al. (2021), the use of repeated attempts, in different phases of time, to check and verify the sample of articles to be used in this review helps in improving replicability of the sample selection process. The several attempts allowed this sampling process to develop iteratively. This presents an opportunity for confirmatory analyses. Furthermore, the fact that the eligibility criteria used consisted of several but complementary steps was helpful to mitigate the common-method bias (Alam & Singh, 2021). Moreover, this review has adopted several directions as guided from other reputable reviews and meta-analysis. The guidance was helpful, as it enabled this review to replicate the steps that were at one point the basis of quality in other reviews. Finally I have undertaken to report almost every step that I took during the process, which I believe also adds to the replicability of the process followed.

2.7.2 Credibility and reliability

There are several factors that were helpful in improving the credibility and reliability of the literature used for this review. First of all, the review is based on the peer-reviewed academic articles. This is a good indicator of credibility and reliability. This is because the peer-reviewed articles are an assurance that the articles and their content underwent a rigorous process of quality assessment, and they were found to have maintained the required level of reliability and validity for scholarship. The other factor that is an assurance for credibility and reliability is the fact that the articles were drawn from high quality journals, and the fact that the quality of the journals was assessed through several measures: the assurance that all of them were in the first quartile and the quality score ranging in a range of 3, 4, and a 4* as per the ABS. The assurance of high quality is indeed promising positive results for this review, as its findings are drawn from highly reliable and credible sources. Moreover, the data extraction was performance on the reputable databases, well-known to supply credible literature.

2.7.3 Validity of the results

Although the articles included in the sample were sourced from a variety of journals, which exposes the structured literature review to a limiting effect on internal validity, this effect was counteracted by the assurance that all of the articles included in the sample were drawn from the high quality journals, all of which were in the first quartile. This did not only help in mitigation of the publication bias, but is also an assurance for reliability and credibility (Tagliabue et al., 2020). The high quality articles are authoritative because they underwent a rigorous peer reviewing process. Their use increases internal validity and trustworthiness of the results of this review (Villagrasa et al., 2018). Furthermore, the use of articles from a variety of journals and databases was advantageous in improving the external validity of the results (Villagrasa et al., 2018; Tagliabue et al., 2020). In addition, in the subsequent chapter, the results will also reflect that the sample consisted of a variety of studies that were based on data from a variety of industries. This is also a good indicator that improves on the external validity. Overall, the articles included in the sample are impactful and therefore influence research.

2.7.4 Robustness of the results

In selecting the sample of articles used in this structured literature review, a combination of different measures of quality was used with the purpose of improving the propensity for achieving the required level of robustness of the results. The sample was made of not only high quality but most recent peer-reviewed literature. This is a good indicator for robustness as the findings of this review are based on the accredited literature, giving an assurance of high quality findings (Lourenço et al., 2018). The exclusion of the literature from other domains such as crowding; not-for-profit and public institutions is also a good indicator relevant for improving the robustness of the results of this review. This is because this structured literature review is by itself limited to examining the effects of negative performance feedback in corporate organisations.

Additionally, I have established that it is a common course that some reviews and meta-analyses rely on a mixture of both high and low quality literature (e.g. Lechermeier & Fassnacht, 2018; Tagliabue et al., 2020). This presented a constraint as the gist of their arguments and findings was exposed to a compromised credibility. So against the same challenge, the articles included in the sample for this review; are of high quality, and are therefore trustworthy. In support of this approach to improving robustness, a similar approach was adopted in Martínez-Noya and Garcia-Canal (2021), as they applied the robustness technique by removing from their sample; the firms that were found to have no patents during the period covered by their study. This was a prerequisite as in their study; patents were regarded as the key indicator for firms' innovation performance. On the same analogy, excluding the grey literature including articles drawn from the low quality journals is a fair indicator for the anticipated robustness.

2.8 Limitations

I cannot claim the methodology adopted in the search and analysis of the literature used for this review to be without caveats. Primarily, this review is limited in terms of coverage and comprehension. The fact that I targeted a sample of at least 50 articles; the recent literature and specific quality indicators was limiting in terms of coverage and comprehension. Besides the fact that a large number of articles were excluded based on quality and date of publication, there is a high possibility that a lot of articles were missed, mainly because the process of extraction took place over time, and it was stopped just by the time when the targeted number of articles was achieved.

This remains a constraint despite the fact that the inclusion of 52 articles in the sample is fairly practical as compared to other reviews that were approved in spite of their reliance on a significantly less number of articles (e.g. Tagliabue et al., 2020). Their review was conducted based on a sample of only 15 articles, but it was approved. Notwithstanding, the fact that in this review only 52 articles made it to the final sample is still regarded a limitation, because negative performance feedback is quite a well-established construct in the body of knowledge, presenting an opportunity for an extensive coverage. This therefore compromised the representativeness of this sample to a corpus of all the literature addressing this construct. Additionally, the fact that the process of data extraction was allowed to develop iteratively, over different phases of the extraction, has exposed this process to a compromise regarding the replicability of the entire process.

2.9 Chapter conclusion

This chapter addressed the structured literature review as a methodology for this study. The sampling method that was observed to extract the articles for the sample was purposeful; while content analysis is identified as a suitable method of data analysis to be applied. I identified a deductive process of content analysis. Although there is evidence of compromised comprehension and representativeness of the sample to the entire corpus of literature addressing the construct negative performance feedback, the quality assurance measures that were observed and complied with during the enforcement of the eligibility criteria promises a fair level of validity, reliability, credibility and trustworthiness of the sample and therefore of the findings of this structured literature review.

Chapter 3: The results and discussion of the findings of the structured literature review

3.1 Introduction

This chapter is intended to report and discuss the results of the structured literature review conducted on the sample of articles. I conducted a retrospective analysis of the literature reporting on the effects of negative performance feedback; concentrating on a sample of 52 articles published between the year 2017 and 2022. It is important to highlight that this sample is by no means fully representative of all the peer-reviewed academic articles reporting on the effects on negative performance feedback. This limitation in scope of coverage is resulting from the purposive nature of this review; as I basically conducted it to pilot the process of a structured literature review as a research methodology.

The process of review and analysis of the articles commenced with the exercise of downloading the pdf versions of all the articles that made it to the sample. All of the articles were classified according to their research focus which I established through; the title, abstract, the research questions, and or the purpose of the studies. From this exercise, I was able to develop a classification of articles in two primary sections: articles that reported on negative performance feedback relative to individual and team's level of analysis and those that reported relative to firm's level of analysis. Firstly, focus is put on the results of the structured literature review relative to individual and teams level of analysis.

Section 1: analysis of the effects of negative performance feedback at the individual and team's level of analysis

3.2 The results of the research designs used on individual and team's level of analysis

When coding the articles based on the anticipated levels of analyses, I established that the studies were varied in terms of the research designs they used. the following are the research designs by studies reporting on the individual level of analyses: mixed method surveys (e.g. Bipp & Kleingeld, 2018; Steffens et al., 2018; Itzchakov & Latham, 2020; Gnepp et al., 2020; Ciancetta & Roch, 2021); field experimental designs mostly relying on the online surveys (e.g. Casas-Arce et al., 2017; Lourenço et al., 2018; Song et al., 2018; Swift & Peterson, 2018; Tarakci et al., 2018; Villagrasa et al., 2018; Huang et al., 2019; Hoffmann & Thommes, 2020;

Xing et al., 2021); and the laboratory-based experiments (e.g. Oehler et al., 2019; Gjedrem & Kvaløy, 2020; Hecht et al., 2020; Billinger et al., 2021; Motro et al., 2021; Drouvelis & Paiardini, 2022).

3.2.1 Discussion on the research designs used at individual and team's level of analysis

The use of these research designs is a good indicator of both internal and external validity for the empirical studies (Song et al., 2018; Gjedrem & Kvaløy, 2020; Hecht et al., 2020). These methods are hailed for being good at establishing the causal relationship between variables (Drouvelis & Paiardini, 2022). When used in line with the need to establish the subjective phenomena like the effects of negative performance feedback, their use supports the need to gather a nuanced understanding of the relationship between the variables (Bipp & Kleingeld, 2018). Therefore, they are presenting an advantage for refining theoretical contributions of the prior research (Jiang & Holburn, 2018). They are good for explaining the behaviour within a specified context (Bipp & Kleingeld, 2018). As indicated by Drouvelis and Paiardini (2022), the use of experimental designs is supported whenever there is a need to establish a causal relationship between the variables. This is because the experimental designs are hailed for their ability to institute the direction of the relationship.

Notwithstanding, I confirmed that some studies used laboratory-based experimental designs (e.g. Bipp & Kleingeld, 2018; Steffens et al., 2018; Oehler et al., 2019; Gjedrem & Kvaløy, 2020; Hecht et al., 2020; Itzchakov & Latham, 2020; Billinger et al., 2021; Motro et al., 2021; Drouvelis & Paiardini, 2022)(See Appendix 3). Much as the use of this research design is hailed for being a gold standard for studies that are intended to demonstrate causal relationships (Podsakoff & Podsakoff, 2019), it also presents some challenges. While the laboratory-based experimental designs have inherent challenges when used in studies the seek to examine the subjective phenomena, these studies are also constrained by their reliance on the use of samples that are comprised of university students (e.g. Billinger et al., 2021; Bipp & Kleingeld, 2018; Steffens et al., 2018; Oehler et al., 2019; Gjedrem & Kvaløy, 2020; Motro et al., 2021; Drouvelis & Paiardini, 2022).

This is the case even though these studies are reporting on negative performance feedback relative to organisational setting, and not the teaching and learning setting. Additionally, some laboratory experimental designs use tools of assessments that negate the reality of natural settings. On one hand, Oehler et al. (2019) used a computer-based game to detect the effects

of negative performance feedback on routine change. On the other hand, Motro et al. (2021) also used face-based emotion-recognition software to assess the effects of negative performance feedback on emotions. These tools pose research constraints as they relatively give short-term effects; and their level of complexity does not necessarily resemble the complexity that characterises the natural settings (Bipp & Kleingeld, 2018).

Their internal validity is compromised as even if the subject of the study were employed, while pursuing their studies, their reaction in the teaching and learning setting may not be construed to be valid to resemble how they would truly respond in the organisational setting (Podsakoff & Podsakoff, 2019). As a result, the reliance on laboratory-based experiments is said to provide the within-person effects based on the temporal unfolding of emotions towards the feedback (Jiang & Holburn, 2018; Gjedrem & Kvaløy, 2020; Drouvelis & Paiardini, 2022). This highlights a concern as the students participants are not in anyhow representative of the individuals while they are in their organisational setting.

In their study limitation, Bipp and Kleingeld (2018) confirmed the shortcoming presented by their use of the student subjects in their sample as a great limitation of their study. According to Bipp and Kleingeld (2018), the teaching and learning environment does not resemble an organisational setting as it is not as controlled as it is the case in corporate organisations. For this reason, the findings that are based on students may be criticised for their predominance in presenting artificial findings (Song et al., 2018; Steffens et al., 2018). To control for these shortcomings, the field-based designs are recommended for accurately reporting observations and interactions without divorcing them from their ecological setting (Podsakoff & Podsakoff, 2019). This therefore poses a question of whether or not the reported effects of negative performance feedback could or couldn't be sustained in real organisational settings. This question needs to be explored. At this point it is important to present the results of the analysis of the effects of negative performance feedback at the individual and teams' level of analysis, as given below.

3.3 Analysis of the effects of negative performance feedback at the individual and teams' level of analysis

The following were the studies that specifically reported on the effects of negative performance feedback with respect to individuals and teams in organisations. In particular, the studies addressed these areas: employee personality and perception (Bear, Cushenbery, London &

Sherman, 2017; Casas-Arce, Lourenço & Martínez-Jerez, 2017; Steffens, Fonseca, Ryan, Rink, Stoker & Pieterse, 2018; Swift & Peterson, 2018; Cooks & Ciesla, 2019; Ciancetta & Roch, 2021; Redifer, Bae & Zhao, 2021); managerial overconfidence (Schumacher et al., 2020); sadness, efficacy and grid (Motro et al., 2021); and employees' wellbeing (Xing et al., 2021). The following reported on how negative performance feedback should be framed Song et al., 2018; Huang et al., 2019; Gjedrem & Kvaløy, 2020); the effects of top-down feedback on routines (Oehler et al., 2019; Hecht et al., 2020; goal setting and achievement (Bipp & Kleingeld, 2018; Lourenço et al., 2018; Tarakci et al., 2018; Hoffmann & Thommes, 2020; Itzchakov & Latham, 2020; Gnepp et al., 2020; Murphy, 2020; Alam & Singh, 2021; Billinger et al., 2021; Grundmann et al., 2021; Drouvelis & Paiardini, 2022). The section below provides a discussion of the effects of negative performance feedback.

3.3.1 Discussion on the reported effects of negative performance feedback

In establishing the effects of negative performance feedback I established that scholars report on the effects that the feedback-recipient encounters at the point of conduct with the negative performance feedback. According to Bipp and Kleingeld (2018), Villagrasa et al. (2018), Rhee et al. (2019), Grundmann et al. (2021), Montro et al., (2021) and Redifer et al. (2021), it is the cognitive interpretation of performance feedback that determines the valence that the feedback-recipient assigns to the feedback as given. In their study, Billinger et al. (2021) and Saraf et al. (2022) outline that it is the perception of the feedback receiver about the feedback that renders it negative. That is, it is how the feedback-recipient judges the performance feedback that can render it negative. In particular, Cooks and Ciesla (2019), argue that what distinguish negative performance feedback are its depressive symptoms. As per their study findings, the only time when performance feedback is judged to be negative is when it elicits negative emotions. This explains what usually happens to the feedback-recipient upon the receipt of the feedback, and on which the feedback-recipient may decide on the manner in which to act upon the feedback.

The following are some of the reported symptomatic effects of negative performance feedback reported in line with the recipient's perception: maladaptive coping (Swift & Peterson, 2018); personal discomfiture (Lourenço et al., 2018); anxiety and worry (Cooks & Ciesla, 2019); disappointing (Oehler et al., 2019); scepticism (Murphy, 2020; Grundmann et al., 2021); sadness (Motro et al., 2021); shame (Xing et al., 2021). Summarily, these are some of the

reported negative emotions associated with the performance feedback showing the below aspirations performance outcomes.

Accordingly, the state at which the feedback-recipient is experiencing the negative emotions resultant for performance feedback is referred to as negative affect (Ilgen & Davis, 2000; Motro et al., 2021). Since the recipient's perception about the feedback manifests at the first point of conduct with the feedback, it suffices to say the elision of emotions is the primary effect of performance feedback in the context of the negative performance feedback showing the below aspirations performance outcomes. Based on the classification of the emotions along the continuum of positive and negative emotions, the inclination is that negative emotions will therefore influence the recipient to judge and classify the performance feedback as negative performance feedback.

3.3.2 Analysis of the influence of the effects of negative performance feedback

At the secondary level, once the performance feedback is judged or classified as negative, it portrays specific effects related to the subsequent decision and conduct of the recipient. The negative performance feedback is said to be: detrimental to the subsequent performance (Bipp & Kleingeld, 2018; Gjedrem & Kvaløy, 2020; Alam & Singh, 2021; Grundmann et al., 2021; Motro et al., 2021); compels a positive response (Oehler et al., 2019; Murphy, 2020; Xing et al., 2021); or may decide not to do anything (Klingeziel, 2018; Swift & Peterson, 2018; Villagrasa et al., 2018; Dierdorff et al., 2019; Gnepp et al., 2020; Billinger et al., 2021). These reported effects are therefore inconsistent, as there are two positions reported in line with the effects of negative performance feedback.

3.3.2.1 The bases of the reported inconsistent effects of negative performance feedback

In establishing the bases of these inconsistent effects of negative performance feedback, the literature has alluded to the mediating process of emotional regulation (Alam & Singh, 2021; Grundmann et al., 2021; Xing et al., 2021). According to Grundmann et al. (2021), refer to a process of regulating the emotions through acknowledgement of the emotions as they unfold, deciding on the strategy to regulate them and enforcing the chosen emotional regulation strategy. As put by Alam and Singh (2021), emotional regulation is a coping mechanism through which the feedback-recipient deals with the emotions at the within-person level. In regulating the

emotions, the feedback-recipients may employ strategies that will influence the decision to repair, protect or defend the performance feedback as received (Xing et al., 2021).

Xing et al. (2021) also emphasise that the need to repair performance will always supersede the “protect or defend” alternatives. According to Alam and Singh (2021) what determines the best option among the alternatives is the hedonic motivation on the part of the feedback-recipient. In some cases, the hedonic motivation of the feedback-recipient could be to maintain a conducive performance environment (Alam & Singh, 2021). In this case, emotional regulation can enforce a corrective behavior that supports performance improvement. Considering an incident where the hedonic motivation is to maintain a conducive performance environment, the feedback-recipient will undertake to control the emotions and adapt in a manner that will help prevent conflict. In a short-run there will be evidence of the effort to improve performance and after a considerable time, there will be evidence of correction in the subsequent performance outcomes (Xing et al., 2021).

However, when the accumulation of emotions has triggered the state of negative affect, the influence of emotional regulation’s repair strategy is suspended, for the feedback-recipient experiences thwarts in the willingness to repair (Ilgen & Davis, 2000; Steffens et al., 2018; Grundmann et al., 2021). The feedback-recipient is at a point of negative affect, the point where the repair strategy of the emotional regulation fails (Alam & Singh, 2021). That is, at this state, negative performance feedback is said to attract disengagement from the feedback-recipient. The feedback-recipient will undertake to disengage driven by the need to protect or defend the reported performance outcome (Ilgen & Davis, 2000; Grundmann et al., 2021). The recipient’s decision to disengage with the feedback explains scholastic position that claims that performance feedback does not improve performance. As such, the decision to protect or defend the unmet aspirations renders negative performance feedback not useful to correct and improve on the unmet performance areas and it is thus wasteful (Motro et al., 2021).

At the point of negative affect, the ability of the feedback-recipient to make good behavioural strategy choices is deactivated by the accumulation of emotions (Ilgen & Davis, 2000). This is the notion that Steffens et al. (2018) discovered through their study that the negative affect fuels discouragement breeding into a decline in commitment and the drive to achieve. In their study, Dierdorff et al. (2019) also report that with the experience of receiving negative performance feedback, the feedback-recipients who over-rate their relevance and contribution to the

organization resort to being misled by their naivety; and fail to address their performance shortcomings.

A contrary viewpoint is maintained by Billinger et al. (2021) who claims that when the recipient decides to protect and defend the unmet performance standard, the effect of performance feedback is to satisfice. As explained by Billinger et al. (2021) at the point of satisfice, there is no need for the feedback-recipient to repair, but to exploit the status quo. The feedback-recipient is emotionally aligned to take comfort with the reported state of performance (Grundmann et al., 2021). In considering the aforementioned point, it suffices to say the state of doing nothing about the performance feedback is another effect of negative performance feedback. The question of whether the satisfice effect is experienced outside of the negative affect and the extent to which the satisfice effect can be sustained still remains. According to Xing et al. (2021), at this point, the feedback-recipient is experiencing the state of “doing nothing”. This state is identified to be an adverse effect of negative performance feedback (Xing et al., 2021).

Some scholars report that the state of doing nothing, as may otherwise be denoted by the state of feedback disengagement (Grundmann et al., 2021) is temporal. According to the findings presented by Oehler et al. (2019) and Itzchakov and Latham (2020), even if the feedback-recipient can decide to take comfort in the reported state of affairs, that comfort is temporal as the feedback-recipient will be compelled to effect corrective measures on their performance. This is because there are two forces that are said to be responsible to enforce the need to correct or address the areas of underperformance.

On one point, the feedback-recipient’s internal desire to avoid a repeated encounter of negative emotions when presented with negative performance feedback (Oehler et al., 2019; Hoffmann & Thommes, 2020); and on the other point, the need to correct performance will be enforced through the applicable structural authority (Gnepp et al., 2020; Schumacher et al., 2020; Billinger et al., 2021). For being part of the organisation, and by virtue of the responsibility vested in the work, the feedback-recipient will therefore have to address the reported areas of underperformance. This responsibility is rather inherent in the organisational behaviour. This inherent responsibility will ultimately influence the feedback-recipient to devote time and effort to rectify the performance gap.

Notwithstanding the above, the literature has also pointed to contextual constraints that face the negative feedback-recipient. According to Villagrasa et al. (2018) the fact that the feedback-

recipient is compelled by the inherent responsibility to correct performance or is willing to improve on the reported performance shortcomings does not on its own dictate the ability to actualise undertaking performance improvement into action. Thus, it is making the performance improvement aspect of negative performance feedback a contingent phenomenon as it depends on other intervention. This is because the decision to undertake measures inclined to improve or repair performance is dependent on cognitive judgement of the recipient on whether the perceived performance goals, strategies and initiatives will be supported.

As put by Villagrasa et al. (2018), the choice among the options is therefore not only dependent of the hedonic goals of the feedback-recipient, but the salient performance goals with reference to the contextual factors facing performance goals (Villagrasa et al., 2018; Lu et al., 2019; Gjedrem & Kvaløy, 2020). The extent to which the feedback-recipient will be able to attain the desired performance outcome in the subsequent performance feedback is dependent on the requisite performance feedback interventions. These interventions determine the magnitude and direction of the effects of the negative performance feedback and the extent to which the corrective measures will be able to close the performance gap as may be determined with the subsequent performance feedback.

3.4 Negative performance feedback interventions that influence the feedback effects

3.4.1 Framing negative performance feedback

This structured literature review has established that one factor responsible for the inconsistencies of the effects of negative performance feedback is the mode through which negative performance feedback is delivered (Huang et al., 2019). As established through the review conducted by both Hoffmann and Thommes (2020) and Tagliabue et al. (2020), it is important to analyse the contribution of the modes of feedback delivery to the effects of negative performance feedback. The modes of feedback delivery can be defined in terms of that which facilitates the exchange of negative performance feedback between the feedback giver and receiver. For them these modes influence how the feedback-recipient responds to feedback (Hoffmann & Thommes, 2020; Tagliabue et al., 2020). The modes of feedback delivery reported in this review include: public or private disclosure (e.g., Song et al., 2018); use of digital platforms to deliver feedback (e.g., Hoffmann & Thommes, 2020; Wong et al., 2021); and, oral

or written negative performance feedback (Ciancetta & Roch, 2021). Other scholars have addressed the manner in which the feedback is framed. This addresses the variables such as: the language used in delivering negative performance feedback (Huang et al., 2019; Gjedrem & Kvaløy, 2020); the need to adopt a collective rather than an individualistic point of view (Huang et al., 2019); tone and choice of words used (Ciancetta & Roch, 2021).

On one hand, Song et al. (2018), reports that publicly disclosing negative performance feedback is an advantageous lever of productivity gaps across workers as it identifies best practices from the top-performers which the underperformers can learn for the purpose encouraging performance adjustments (Jiang, et al., 2018; Song et al., 2018). This presents a platform for facilitation of on-the-job training thus a strategy to mitigate the risk of uncertainty associated with trying untested performance adjustments. Public disclosure of negative performance feedback is therefore regarded as a measure that controls for the feeling of scepticism as it openly displays a comparative platform of evidence-based negative performance feedback reporting (Jiang & Holburn, 2018). The feeling of scepticism may trigger defensiveness and disengagement (Grundmann et al., 2021). This is because scepticism instils a sense of subjectivity which translates into the receiver to consider feedback as personal instead of factual. Thus, it increases the likelihood of disengagement.

On the other hand, the private disclosure of negative performance feedback is said to automatically control against competition and conflict associated with public disclosure of negative performance feedback. Regularly, negative performance feedback is treated confidential and can only be shared on a need-to-know basis. Publicly disclosing individual negative performance feedback eliminates the need for delivering constructive feedback in a safe space for the feedback-recipient to receive it without fear of judgement. In their study Hoffmann and Thommes (2020) reported that to the underperformers' public feedback encounters instill a sense of humiliation and fosters competition (Hoffmann & Thommes, 2020). It thus bears a tendency to create social statuses among the individuals and groups (Hoffmann & Thommes, 2020). In a similar way, this may lead to a situation of feedback disengagement at the expense of improvement (Grundmann et al., 2021). This review has therefore confirmed an existence of a trade-off on the effects of negative performance feedback when the mode of delivery is private or public.

The above provided evidence that research has addressed the effects of negative performance feedback with respect to publicising and privatising negative performance feedback delivery. The fact that is preferred against the other in different settings, signals existence of

inconsistencies on the effects of negative performance feedback with one mode versus the other. Alternatively, the evidence shows that the research has also recognized the use of digital platforms in controlling the drawbacks associated with the direct interaction between the feedback giver and recipient (Hoffmann & Thommes, 2020; Wong et al., 2021). The implication is that the feedback-giver by removing himself from the scene of feedback, and providing the feedback through the platform is able to control drawbacks associated with skepticism.

While the study conducted by Hoffmann and Thommes (2020) reported on non-linearity of the effects of a digitally delivered negative performance feedback amongst individual drivers, the study conducted by Wong et al. (2021) reported that using digital platforms to deliver negative performance feedback had influence on performance improvement among the crowd workers. Although the findings of their studies are inconsistent, these cases prove that indeed the mode used to deliver the negative performance feedback is responsible for influencing the effects of negative performance feedback. This supports the conceptual proposition of Grundmann et al. (2021) which assumes that the effect of negative performance feedback is highly situational. Thus, they vary according to different feedback interventions. This observation stands despite the fact that only two articles reported in line with this effect. Notwithstanding, I have an opinion that more research is required to assess the feasibility of creative performance improvement through adoption of digitalized negative performance feedback platforms in different organisational settings.

Furthermore, the use of metrics that appraises and report negative performance feedback relative to performance of a specific unit of team and not individuals within the teams or units is recommended (Song et al., 2018; Dierdorff et al., 2019; Gjedrem & Kvaløy, 2020). This is justified on the basis that the rationale behind negative performance feedback provision should not be to identify best performers but to promote best practices. That is, negative performance feedback should be judged with respect to performance goals of a team of the unit within which they serve (Lourenço et al., 2018).

In addition, Dierdorff et al. (2019) and Gjedrem and Kvaløy (2020) also identified when giving the feedback relative to group performance, personalised emotions are avoided, since they have a tendency to retard corrective measures. However, Dierdorff et al. (2019) warn that the teams should be made of members with higher levels of self-awareness, as they stand a better chance to take responsibility over their performance shortcomings. Through their study, they established that when the teams are composed of members who are naïve and overrate their relevance and contribution; they tend to fail to address their performance shortcomings.

This addresses the emphasis of Lourenço et al. (2018) and Rhee et al. (2019), as they highlight that it is the role of the top management to ensure that the composition of the units facilitates proficiency in addressing negative performance feedback. This way, the ability of the managers to match team members mediates the effects of negative performance feedback at team level. Failure to match members could adversely affect the teams' responsiveness to negative performance feedback.

Moreover, Huang et al. (2019) and Gjedrem and Kvaløy (2020) emphasise the need to take caution about the tone of the language used in presenting negative performance feedback to the subsequent performance. Their study further identified gender differences on the effects of negative performance feedback in the context of oral and written negative performance feedback. The tone of the language used matters differently between men and women in the same organisational setting (Huang et al., 2019; Ciancetta & Roch, 2021). The understanding is that the tone used in delivering negative performance feedback influences the recipient's perception not only about the feedback but also the intentions of the feedback-giver. Highly susceptible to misjudgment, the feedback-givers' insensitivity in determining the tone through which negative performance feedback is given can be detrimental to the recipient's subsequent conduct, as the tone influences attitude towards the feedback.

With regard to feedback framing and modes of delivery, Gnepp et al. (2020) emphasise the need to change the perspective of delivering negative performance feedback. They indicate the need to recognise that the feedback giver's perspective in delivering performance is inclined to pursuing the responsibility to correct, which may even extend to the point of the giver forcing the improvement in the identified areas of underperformance. Instead, since in most cases not all areas of performance will present with unmet indicators, the feedback-recipient is rather interested to receive credit for the areas that are well-performed. This presents a position where the feedback-recipient is inclined to rather respond in a way that will shield their favourable self-view, for attainment of hedonic interests. This is done with the purpose to dampen the negative effects of negative performance feedback (Murphy, 2020). It is important that the mode of feedback delivery is structured such that it will influence developmental effects on the recipient (Gnepp et al., 2020).

According to Drouvelis and Paiardini (2022) the details of the feedback may be responsible for determining the feedback framing and the mode of delivery, which in turn determines whether or not the feedback will influence the feedback-receiver to perform better. Overall, confirmed through the literature is the fact that the modes of feedback delivery influence the direction

through which the feedback-receiver undertakes to respond to the negative performance feedback as given. Notwithstanding the differences in the extent to which such effects will be experienced in each case. The literature has also reported about the inconsistencies reported in line with the effects of negative performance feedback with respect to these different modes of delivery. Furthermore, the inconsistencies confirm the need to report the effects in relative terms.

3.4.2 Distinction based on the frequency of the feedback

In their study, Casac-Arce et al. (2017) advise on the need to apply a special caution when making inferences about the effects of negative performance feedback to specific environmental settings. In their case, they identified that what could be a natural base of feedback frequency in one industry may not hold in another industry. This confirms a pre-established inconsistency on the effect of negative performance feedback to different environmental settings. This indicates that the time lag between feedback intervals should be context specific. So whenever a need to make inferences on the natural base of feedback frequency identified it should therefore be made in relative terms.

For instance, Hecht et al. (2020) elaborates this requirement by highlighting that the natural base of feedback frequency that applies for managers (those at the top at any hierarchical level) is different from that which applies to the rest at the lower levels of hierarchy. In further elaboration, Hecht et al. (2020) indicate that while a short span of frequency is ideal for those at the top of the hierarchy (managers), the same span could be detrimental if applied to the rest of other levels of the hierarchy. One example of when the negative performance feedback is detrimental is seen in Steffens et al. (2018) where failure to provide reasonable time for the feedback-recipient resulted in lower ambition to improve and therefore less commitment. This could be possible in cases where the feedback-recipient turns to adopt disengagement strategies for the purpose of their hedonic goals (Grundmann et al., 2021). As a result, engaging in avoidance undermines performance goals.

Not only does the frequency of the feedback matter but also the details of negative performance feedback. According to Casas-Arce et al. (2017) the details and frequency of the feedback influence the direction of the feedback effects. That is, in their study, Casas-Arce et al. (2017) confirmed that the degree to which the negative performance feedback is detailed and the frequency at which it is given matter in the determination of the effects of negative performance

feedback on performance. The analogy that I draw from this finding is that with more detailed feedback and a reasonable frequency of the negative performance feedback time interval, the feedback-recipient has sufficient information of the problematic areas of performance and the adequate time to process the details of the feedback as given.

This finding coincides with the Song et al. (2018)'s notion of "know-why". This presents the need for the feedback-receiver to understand the basis on the reported (prior) substandard performance or failure. This requirement is contingent to the feedback-giver taking precaution to ensure that the details of the negative performance feedback are sufficient, to be able to influence the receiver's decision to either adjust or not. This requirement is salient, given in conjunction with the need for the environment of the negative performance feedback to be conducive for proper feedback processing, which simply provided the feedback-recipient with the opportunity for a fair decision-space. That is, capitalising the provision of negative performance feedback on short time spans marks a failure on the part of the applicable negative performance feedback system to capacitate the feedback-recipient/s by denying them the chance to learn from it (Song et al., 2018). In this way, the natural base of time interval that gives an indication of a sufficient space of time to act on the feedback reasonably is highlighted as a prerequisite.

Based on this review, there is a high propensity for positive negative performance feedback effects on performance, when more detailed feedback, with reasonable frequency of time interval, than it is the case with the less detailed feedback and shorter frequency of time interval. Notwithstanding the aforementioned, implicated is the need for research that studies interaction between the specified feedback frequency and the context in which it applies. That is, the scholarship should therefore undertake to distinguish the effects of negative performance feedback with regard to the applicable natural base of feedback frequency. Such effects should be reported commensurate to the specific negative performance feedback setting. This finding is in line with that of Tagliabue et al. (2020).

Section 2: analysis of the effects of negative performance feedback at the organisational level

This section reports the results of the studies that were analysed having reported on the effects of negative performance feedback at the organisational level of analysis. I have identified that some studies have addressed the effects of negative performance feedback relative to the

performance of the organisation. These studies otherwise use the term firm to denote an organisation. So in this section, the term firm and organisation will be used interchangeably.

When coding the studies that address this section, I found that they report among others on the effects of negative performance feedback in line with the following performance areas: research and development intensity (e.g. Lucas et al., 2018; Choi et al., 2019; Lu & Wong, 2019; Lv et al., 2019; Rhee, Ocasio & Kim, 2019; Xu et al., 2019; Blagoeva et al., 2020; Lv et al., 2021; Martínez-Noya & Garcia-Canal, 2021; Goyal & Goyal, 2022). Other studies reported in relation to innovation and other innovation related factors (e.g. Eggers & Suh, 2019; Ref & Shapira, 2017; Sengul & Obloj, 2017; Jiang & Holburn, 2018; Makarevich, 2018; Deb, David, O'Brien, & Duru, 2019; Gong, Zhang & Xia, 2019; Xie, Huang, Stevens & Lebedev, 2019; Xu et al., 2019; Schumacher et al., 2020; Wang & Lou, 2020; Gao, Yang & Zhang, 2021; Ref, Feldman, Iyer & Shapira, 2021; Ye, Yu & Nason, 2021; Saraf et al., 2022). To be more specific, the other performance area included in the classification of innovation-related factor are: new foreign market entrance (e.g. Ref & Shapira, 2017; Xie et al., 2019; Ref et al., 2021; Ye et al., 2021); venture capital investment (e.g. Makarevich, 2018; Deb et al., 2019; Lu & Wong, 2019); product diversification (Eggers & Sun, 2019); risk taking (Xu et al., 2019; Schumacher et al., 2020).

Although these studies are varied in terms of jurisdictional delimitations, they report about the effects of negative performance feedback on firms' performance in the areas shown above. However, I have identified that the majority of the studies report on research and development intensity based on the manufacturing industries. They are however, geographically dispersed (e.g. Ref & Shapira, 2017; Jiang & Holburn, 2018; Choi et al., 2019; Deb et al., 2019; Lv et al., 2019; Xie et al., 2019; Schumacher et al., 2020; Gao et al., 2021; Ref et al., 2021; Ye et al., 2021; Goyal & Goyal, 2022). The other studies are reporting based on varied business industries (e.g. IT electronics (Lu & Wong, 2019); Transportation (Hoffmann & Thommes, 2020); Banking & Insurance (Xing et al., 2021); Communication/Mobile phone industry (Huang et al., 2019); Venture Capital Investment (Makarevich, 2018); Mutual Fund (Eggers & Sun, 2019); Product industry (Billinger et al., 2021).

3.5 The results of the research designs used on organisational level of analysis

The results of this structured literature review show that all of the studies reporting about the effects of negative performance feedback are based on historical archival datasets, which is longitudinal in nature (See Appendix 4). Although their modal time frame of the data sets of the

firms' observations used is seven years, the study conducted by Lucas et al. (2018) was based on data set of firms' observations of a minimal timeframe of two years, while that conducted by Ye et al. (2021) was based on the data set of firms' observations of a maximum timeframe of 44 years. That is the median timeframe of the firms' observations used is 13.23 years.

This proves that above average timeframes of the data sets used in these studies were seven years and more. That is, the majority of the time frames covered by these studies present a more distant past. The use of archival data is relevant for studies that examine the effects that can only manifest over the longer timeframe. That explains the identified scenario pertaining to this review as all the studies that analysed negative performance feedback relative to the firms performance relied on archival data that is historical for their data sets were based on the past experiences, with the furthest using the firms' observation of more than 40 years ago (e.g. Eggers & Sun, 2017; Ye et al., 2021), and the next furthest timeframes of more than 30 years of firms' observations (e.g. Makarevich, 2018).

The fact that these data sets are longitudinal improves on the robustness of their findings (Bear et al., 2017; Lourenço et al., 2018). The use of archival data provides researchers with a platform that enables a valuable glance in the past, with the purpose of establishing patterns and trends from the recorded events (Wang & Lou, 2020). Although the archival data sets used in this review were sparsely distributed, most of the studies that used the archival data sets relied on large samples and observations. For instance, with the study that used the longest data set of 44 years also happened to have also used 56716 the firms' observations from across the world. This is a good indicator of robustness.

Although the use of longitudinal datasets is recommended for studies that examine the long-term effects; the use of longitudinal data presents shortcomings. The shortcomings are based on the fact that the more distant past reduces validity of the reported findings and contributions as they tend to be lacking the recent developments (Bear et al., 2017; Schumacher et al., 2020; Goyal & Goyal, 2022). In their nature, regardless of how recent these studies were reported, these studies simply relate the past experiences which may be misleading the current scholarship debates.

For instance, when studies are based on the more distant past, their degree of generalisability may be compromised even if their findings are applied in the same organisational contexts (Lv et al., 2019; Ref et al., 2021; Goyal & Goyal, 2022). The other potential challenge advanced by these data sets, is that the observations used are widely dispersed as the shortest time frame

used is three years while the furthest is 44 years as at the dates of publication of the studies. The use of these datasets present within the potential risk of bias should the results be reported in composite. As stated by Klingebiel (2018) and Tagliabue et al. (2020), when reported in composite, the use of datasets that combine small studies with large studies pose the review to the “small study effect”. This is explained as the propensity that small sample studies will present effects that are different from those of the large sample studies (Tagliabue et al., 2020; Martínez-Noya & Garcia-Canal, 2021).

3.5 The reported feedback characteristics that influence the effects of negative performance feedback

The analysis of the literature addressing the effects of negative performance feedback at the organisational performance, otherwise referred to as the firms’ performance level of analysis; identified the following as the feedback characteristics that influence the effects of negative performance feedback to the feedback-recipients.

3.5.1 Degree of the gap between actual and targeted aspirations

The first category presents the scenario where the negative performance feedback is characterised with varying degree of the gap between the actual aspiration outcome and the targeted performance. In accordance with Jiang and Holburn (2018) and Ref et al. (2021); the reported underperformance gap matters substantially, with respect to how the feedback-recipients will react to the negative performance feedback. According to them, managers as the requisite feedback-recipients are triggered to a different level by the degree to which the actual performance gap is to the anticipated aspiration level.

As stated in Ref et al. (2021), the gap between the actual performance outcome and the anticipated performance is a key determinant of the effects of performance feedback to the feedback-recipient. This is because the manner in which the managers will respond to the feedback is contingent on the gap itself. That is, when the gap is bigger, the understanding is that it presents the need for more resources required to fill the gap. In such cases, the presentation of the negative performance feedback will trigger the recipients to a varying degree. If the gap is reasonable as judged from the financial capability of the firm; it is because the managers know that their firms are not operating in a financial slack deficit. Thus, they will

be able to respond in a manner that will drive the subsequent performance towards closing the gap.

On the other hand, when the gap is regarded as bigger than the firm can afford to address, the receipt of the negative performance feedback will attract negative effects attracting disengagement with the feedback (Grundmann et al., 2021). In that way, the manner in which managers will react to the feedback is dependent on their judgement of the performance feedback itself in terms of whether they believe they will be in a better position to address the shortfall in performance (Ref et al., 2021). In their study case, when the feedback gap is the bigger, it presents financial challenges for the firms to expand into the foreign markets (Ref et al., 2021).

3.5.2 Discrepancy between the firms performance to that of peers

The other feedback characteristic that is reported to be significant is the degree to which the firms' negative performance feedback record presents a discrepancy relative to negative performance feedback of the firms' peers in the industry (Makarevich, 2018). This is regarded as an important factor in industries where mergers and acquisition are possible; since the reported gap can become the basis on which the firms can form alliances intended to collectively address the gap in aspirations. This is a common practice in firms that operate in oligopolistic markets.

3.5.3 Objective performance feedback

Additionally, Saraf et al. (2022) emphasise on the need for performance feedback to be objective. For Saraf et al. (2022), their study established that it is only when the negative performance feedback is judged to be objective that it can have a positive effect on the feedback-recipients. In their study, when the negative performance feedback is judged to be subjective, it attracts negative affect from the managers; consequently, the managers tend to disengage with the feedback. In such cases, the negative performance influence to the subsequent performance can be redundant; as a result of it posing no effect. There are several factors that diminish the objectivity of negative performance feedback. The reported factors included the following: inconsistent delivery of the negative performance feedback (Lv et al., 2019). This is a situation where the report on the negative performance feedback is delivered in

a manner that is judged to be inconsistent; therefore not allowing the feedback-recipient to make sense of and to adapt to the feedback as provided.

The second category of incidents of inconsistency of the negative performance feedback is reported with respect to cases where the feedback switches between social and historical aspirations (Wang & Lou, 2020; Martínez-Noya & Garcia-Canal, 2021). With this type of inconsistency, at one point the gap is reported based on the historical aspirations of the firm while on the other, the gap is reported with respect to the social aspirations (Martínez-Noya & Garcia-Canal, 2021). As such, the firms experience the performance outcomes that switch between different firms' aspirations. In their studies, (Xie et al. (2019) and Wang and Lou (2020) established that switching between aspirations is problematic as it presents inconsistency that hinders the managerial teams to focus their efforts on one area of firms' performance. Instead, they indicated that what moderates positive effects of negative performance feedback to the feedback-recipient is when both historical and social aspirations are coexistent and consistent in the feedback report (Xie et al., 2019; Wang & Lou, 2020).

The third category of incidents of inconsistency in the negative performance feedback is reported with respect to cases where the feedback switches between negative and positive performance feedback (Lu & Wong, 2019; Blagoeva et al., 2020). That is, in these cases, the firms report not only with one set of feedback characteristics. At one point, they report with the feedback showing the below aspiration level of outcomes while within a short space of time, they also report with performance feedback showing aspirations that meet the expectations. As reported by Lu and Wong (2019), the switch between the negative and positive performance feedback is a constraint in financial reporting and planning, as it impairs financial forecasts.

This remains the case as according to Blagoeva et al. (2020), this inconsistency attracts resistance on the part of managers who only act from the perspective of the structural power. For them, managers who are best suited to act upon inconsistent feedback falling in this category should have the expert power. The assumption is that with their level of expertise, such managers are best positioned to understand the possibility of the fluctuations in performance, as well as the forces behind the fluctuations. As such they are believed to be in a better position to pose a positive effect instead of the negative effect as may be encountered by the managers who act only from the perspective of their structural power. As reported by Blagoeva et al. (2020), managers who portray a positive effect moderated by the expert power will expedite the subsequent performance, as opposed to the managers who exhibit structural

power as they can only engage in the self-enhancing intentions that retard the subsequent performance.

The fourth category of incidents reported involve the cases where negative performance feedback is presented with inconsistencies in terms of its content. The issues around the inconsistencies in the details of the negative performance feedback are reported in Lucas et al. (2018), where in some cases the negative performance feedback presents with clear details of the areas in which the firms have failed to meet the performance targets, while in other cases the feedback is presented without the necessary details. The latter signal the incidents where the negative performance feedback is judged to be redundant by the managers only because in their judgement the feedback is presented with ambiguous details, and therefore judged to be vague.

In other related cases, one case involved the feedback that is reported reporting relative to the firms' social aspirations only (Choi et al., 2019); while in other cases the feedback is presented relative to a combination of historical and social aspirations (Ye et al., 2021). In all the reported cases of inconsistencies, the negative performance feedback was judged to be subjective, incomplete and vague, which only exhibited the negative effects on the feedback-recipients. To counter these effects it is advised that the presentation of negative performance feedback should be objective, consistency and persistence for it to be able to drive positive effects to the recipient and to influence the recipients to respond in a manner that will improve the subsequent performance (Ye et al., 2021; Goyal & Goyal, 2022).

In this section I have identified the feedback characteristics reported in the studies, the subsequent section presents the reported moderating variables. Only the variables that are not elaborated in the preceding section will be explained for the purpose of maintaining conciseness.

3.6 The reported variables that moderate the effects on negative performance feedback at the organisational level

As has been witnessed in the preceding section, the following are the moderating variables identified in the literature. The findings reported in the respective studies presented evidence that these variables influence the effects of negative performance feedback to the feedback-recipient. These variables include the following: the provision of a detailed, clear and unambiguous negative performance feedback report as (Lucas et al., 2018); the managers'

sensitivity to firms' innovation and competition the market (Choi et al., 2019); the managers' expert power as opposed to the structural power (Blagoeva et al., 2020); the managers' overconfidence emanating from their expertise and competence in the market (Choi et al., 2019; Eggers & Suh, 2019; Lv et al., 2019; Schumacher et al., 2020); the feedback reflecting low innovative performance while the firms are confirmed to be financially viable (Lu & Wong, 2019; Martínez-Noya & Garcia-Canal, 2021; Ref et al., 2021); a coexistence of both historical and social aspirations that are reported in a relatively similar range with that of peers or competitors in the market (Goyal & Goyal, 2022).

Additionally, Rhee et al. (2019) also points to the notion of attentional position of the decision makers. According to Rhee et al. (2019), all the reported moderating factors have a high propensity to fail to drive a positive effect on the feedback-recipient, for as long as the managers do not acquaint themselves with the optimal level of attentional position. That is, the managers at the top of the organisation should always pay the due attention to the negative performance feedback, if they ever expect it to influence the forms' performance.

This is reported to be possible where negative performance feedback pose a threat and as a result instils a sense of openness to change (Ref & Shapira, 2017); where managers portray the required level of heuristics (Jiang and Holburn, 2018); where managers are willingness to cooperate with competitors (Makarevich, 2018), and where managers are responsible over the firms' performance and are keen to achievement (Deb et al., 2019). In organisations that present with a substantial financial slack, high risk appetite is also identified as a key attribute required for managers (Gao et al., 2021). Another critical variable that is identified in the study conducted by Ye et al. (2021) is the need for the top management of a firm to have similar-viewpoints or common ground in understanding the challenges that face their organisations. According to Ye et al. (2021), unless the managers of the firms' are united in addressing the challenges as they present, the positive effects of negative performance feedback are void.

Furthermore, at least two scholars highlighted the relevance of strong regulatory mechanisms in any market within which the firms are operating. As per the report by Xu et al. (2019) and Gao et al. (2021), when firms are confronted with weak regulatory systems in the midst of strong competition, the firms which are less financially viable were reported to have engaged in corporate misconduct to try to boost their performance. Those cases involved among others; managers perceiving engagement in fraudulent activities as a solution to underperformance. These acts of corporate misconduct include but are not limited to the following: dishonest financial reporting, unlawful information disclosure, and environment pollution. With the advent

of corporate misconducts, I assume the firms are closest to their demise, as the primary purpose of soliciting negative performance feedback is proven to have failed. Summarily, the following section presents the classification of the reported effects of negative performance feedback to the feedback-recipients.

3.7 The reported effects of negative performance feedback to the feedback-recipients at organisational level

In establishing the effects of negative performance feedback on the recipient, it is important to note that at the firms' level, the recipient of the negative performance feedback are the decision making structures as it may be described differently from firm to firm. For the purpose of this report, I use managers to refer to those who are vested with the authority to manage or direct the firms.

3.7.1 Positive affect as a factor of managers' expertise

The results of the structured literature review outlined that negative performance feedback poses positive effects to the recipients of the negative performance feedback only where the feedback poses threats that triggers openness to change (Ref & Shapira, 2017). The other incidents are where the managers were found to have: increased risk tolerance (Sengul & Obloj, 2017); managerial heuristics (Jiang & Holburn, 2018); expert power (Lv et al., 2019; Blagoeva et al., 2020; Schumacher et al., 2020); high outsidersness and market expertise (Jiang & Holburn, 2018; Choi et al., 2019); attentional position of the decision-makers (Rhee et al., 2019); responsibility (Deb et al., 2019); a feeling of competence (Eggers & Suh, 2019); and where the managers judged the feedback to be objective (Saraf et al., 2022).

According to Eggers and Suh (2019), the positive effect is determined by the perception of the managers about the reported underperformance. To the effect that their perception of the negative performance feedback is a function of their personal characteristics, interpersonal skills, expertise and their level of competence in the area of business (Ye et al., 2021). Their competence in the market is a significant factor on which they base their judgement, for they understand that the success of their strategies intended to close the gap in performance is mainly dependent on their experience. That is, they depend on the tried and tested environment factors (Jiang & Holburn, 2018). This is because familiarity with the context with respect to both

geographically and culturally may be a good factor that helps managers to improve the firms' performance (Jiang & Holburn, 2018). That is, their experience in the market helps them to have increased risk tolerance towards the market fluctuations (Sengul & Obloj, 2017; Blagoeva et al., 2020; Schumacher et al., 2020).

Additionally, the results of the literature review also point to the importance of co-existence of both social and historical aspirations of the firm in the negative performance feedback report. According to Xie et al. (2019) and Wang and Lou (2020), managers are motivated by the feedback report that presents the firms' performance regarding both social and historical aspirations. Where the report presented negative performance feedback with co-existence of social and historical aspirations, managers increased the firms' spending on marketing (Xie et al., 2019; Wang & Lou, 2020).

In their study, Choi et al. (2019) identified expertise and competence as the key attributes of managers that model the managers' encounters with the negative performance feedback. In their study, the managers' who were found to be experts in the industry were found to excel in handling the firm's negative performance feedback. In particular, Choi et al. (2019) further postulate that what moderates the managers' composure with the negative performance feedback is their degree of outsidersness; the market and industry expertise which they gathered with experience overtime.

This pattern in manager expertise was also witnessed in a study conducted by Blagoeva et al. (2020), where they also discovered that; in the cases where the chief executive officers of the firms were competent based on their expert power; the chief executive officers encountered a positive effect with the negative performance feedback. In their report, Blagoeva et al. (2020) further report that in cases where the chief executive officers' judgement over the negative performance feedback was solely based on the structural power, the chief executive officers were found to have rather engaged in self-enhancing motives, which tend to retard the firms' research and development intensity strategies.

However, in this regard, Blagoeva et al. (2020) also provide a caution that the influence of positive effects of negative performance feedback can drive problemistic search for research and development only in a short-term. This means that the primary influence of positive effects of negative performance feedback is a change in strategy in the reported area of firms' performance. The commonly reported increase in firms' performance remains contingent on availability of other factors such as slack resources (Lu & Wong, 2019; Ref et al., 2021). As

indicated by Choi et al. (2019), not only do managers have to have the expertise, if that expertise is not well aligned with the market related experience (outsiderness) that may pose a challenge to the managers' regardless of their level of expertise.

Accordingly, it is important to also acknowledge the finding of Goyal and Goyal (2022), as their study established that the positive effects of negative performance feedback can only influence the problem-solving mode in managers' only where the managers' have established that the targeted aspiration is achievable. This position is also reasonable, as it explains the need for the managers to apply their judgement of the feedback as received. In that regard, it means that the effects of negative performance feedback are indeed dependent on personal attributes, expertise and competence of the managers. This is also supported by Ye et al. (2021) as they report that even where the required attributes are there, the other critical factor is the need for the executive team to see the problem from the same perspective. That is, it is only when managers interpret the threads posed by the negative feedback that they can be able to address it in a positive way. Otherwise, internal conflict would also expose the feedback-recipient to experience negative effects.

3.7.2 Positive effect as a factor of peer performance feedback

A different incidental report was postulated in the study conducted by Goyal and Goyal (2022), where they report about the relevance of coexistence of firms aspirations in the feedback report. It was established that when the negative performance feedback address the firms' historical and social aspirations, and with an indication that the aspirations have fallen below the performance range of the peer firms in the industry, managers encountered a positive effect with the feedback (Lv et al., 2019; Lv et al., 2021). However, despite the positive effect, the managers were found to be willing to engage in research and development search intensity only when the managers were confident that their firms were financially capable to change their strategies (Lu & Wong, 2019; Martínez-Noya & Garcia-Canal, 2021; Ref et al., 2021). This aspect points to the prerequisite contribution of financial slack in enabling the firms to respond effectively to negative performance feedback. That is, managers are able to tap in their problem-solving modes only when they are confident that the targeted aspiration level is achievable (Goyal & Goyal, 2022). Notwithstanding the positive effects of negative performance feedback as presented in line with their moderating factors, some scholars reported incidents where negative performance feedback elicited negative effects to the feedback-recipients.

3.7.3 Negative affect as a factor of inconsistency in feedback characteristics

In their study Lucas et al. (2018) report that when negative performance feedback is judged to be ambiguous, in terms of details; it attracts negative affect to managers, which instils a sense of detachment from the feedback. According to Lucas et al. (2018), ambiguous feedback makes it harder for the managers to understand which aspects of a firm's prior strategies, routines, and structures needs to be revised. As a result of the ambiguous negative performance feedback, the firm's engagement to research and development was rather retarded and not intensified.

Through this review, I have also identified that where the firms report with financial slack deficit, but also presented with increased risk appetite, the encounter with negative performance feedback triggered their willingness to engage in corporate misconduct (Gao et al., 2021). This is not a positive effect, as engagement in illegal practices will only attract challenges in organisations. As such, I decided to classify this effect as a negative effect. That is, when managers engage in fraudulent activities as a solution to underperformance, then such managers were negatively affected by the feedback (Xu et al., 2019).

In establishing whether negative performance feedback influenced improvement in the subsequent performance, it identified that the effects were only on the manager to adapt by engaging in the search for strategies that are intended to address the shortfall in performance. That is, the positive effects of negative performance feedback concerning the firms performance, can only influence the subsequent performance of the managers, as they are confronted with the need to search for strategies that are intended to modify their practices, and or correct the areas of underperformance (Lv et al., 2019; Lv et al., 2021). That is, in the short-run the only effect that negative performance feedback poses to the firm is for the manager to engage in the process of problemistic search as predicted by the seminal scholars (Posen et al., 2018).

As a result, managers adapt and engage in the search for strategies that are intended to resolve attainment discrepancy (Deb et al., 2019). Among the options, managers can decide to exploit the current business domain instead of exploring the new business domains (Eggers & Suh, 2019). For instance, in their study Jiang and Holburn (2018) managers resorted to risk aversion and stayed in the same market. This also indicates that it is not in every situation of underperformance that managers can decide to opt out of the market. In some cases, even where the managers have identified the need to enter into new markets, their firms but these effects could not be sustained due to unavailability of slack resources (Ref & Shapira, 2017; Ref

et al., 2021). In some cases, it is the overconfidence of the managers that make them unwilling to increase the firm risk-taking activities; as a result of their overconfidence, the managers remained not threatened by the reported under performance (Schumacher et al., 2020).

On the contrary, where the firms have the financial capacity to do so, managers improved the firms' performance by adopting into the mergers and acquisitions strategies, intended to revive their business performance. According to Gong et al. (2019), this option is only possible where the discrepancy in performance is considered to be salient. As such, mergers and acquisition are an option for firms operating in the oligopolistic market, as it is only in those markets that such strategies present an increased propensity for growth (Saraf et al., 2022). However, the change in strategy is reported to be contingent, as it depends on the availability of slack resources and competition intensity within the concerned environmental context of the firms (Villagrasa et al., 2018; Wang & Lou, 2020).

3.8 Chapter conclusion

In this chapter I presented the results of the analysis that I conducted on the sample of studies used for this structured literature review. The sample of the studies was divided into two primary cohorts; one that reports the results based on the effects of negative performance feedback relative to individuals and teams in the organisations. The other cohort presented the results of the studies that reported on the negative effects of performance feedback relative to the performance of the entire organisation. The finding of this review indicated that studies that reported in line with individuals and teams used empirical research designs are experimental. The studies that reported about the effects of negative performance feedback at the organisational level used historical designs relying on the use of archival data sets. In both sections, I have established that the effects of negative feedback are inconsistent based on the fact that the feedback-recipients' encounters with negative performance feedback are different. I also established that there are moderating variables that are responsible for moderating the different encounters with the negative performance feedback. Furthermore, I was able to establish that to a larger extent, the effects of the negative feedback encountered at any level are responsible for the feedback-recipients' subsequent performance. That is the subsequent performance is influenced by the effects of negative performance feedback as encountered by the feedback-recipient.

Chapter 4: Discussion of literature review

4.1 A glance on the review question and objective

This literature review is intended to answer the review question: what is the state of knowledge about the effects of negative performance feedback in corporate organisations? In order to be able to answer this question, the presentation of the literature reviewed is structured along the pre-established objectives of this review: to examine the effects of negative performance feedback on the feedback-recipient; to establish how the effects of negative performance feedback on the recipient influence the subsequent performance of the recipient; and to establish if there are inconsistencies in the reported effects and the bases of those inconsistencies.

4.2 Presentation of the review findings

4.2.1 Effects on the feedback-recipient and influence on the subsequent performance at individual and teams level of analysis

The findings of this literature review point that negative performance feedback is defined as the performance feedback that reflects a standard of performance that is below the aspirations which on the alternative postulate a performance record that are below the desired performance standard. According to the literature, the fact that negative performance feedback denotes performance below the desired standard does not suffice to attract the labelling of negative performance feedback (Bipp & Kleingeld, 2018; Villagrasa et al., 2018; Rhee et al., 2019; Grundmann et al., 2021). To a larger extent, studies that report on the effects of negative feedback include the scholars who are of the understanding that it is rather the emotions that are felt upon receipt of the feedback that determines whether the feedback is negative or not (Motro et al., 2021; Redifer et al., 2021). For these scholars, even if performance feedback

presents a record that reflects a gap between the predetermined performance standard and the actual performance standard, such performance feedback can be qualified to negative performance feedback if the feedback-recipients encounter negative emotions with it.

This review has, however, identified that despite the emotions associated with the negative performance feedback, what determines whether feedback is negative is the record that portrays unmet performance aspiration. In particular, the report that shows the actual performance that presents a gap relative to the targeted performance outcome. These scholars assume that the feedback-recipient already knew about the required performance standard, but failed to meet the standard as predetermined. The gap in performance is therefore denoted by the degree of the discrepancy between the actual performance and the targeted performance outcomes. As such, the majority of scholars assume the behavioural theory of the firms' perspective of negative performance feedback.

However, what remains common among the scholars is the fact that the feedback-recipient when presented with the performance feedback that presents the gap between the actual performance outcome and the predetermined performance standard, encounters some emotions emanating from the perception and the cognitive interpretation of the feedback. It is the interpretation that will therefore determine whether or not to engage further with the feedback (e.g. Billinger et al., 2021; Motro et al., 2021). While some scholars report that negative performance feedback elicits negative emotions that retard improvement of the subsequent performance (e.g. Grundmann et al., 2021; Xing et al., 2021); some scholars report that it is the negative emotions that rather drive the feedback-recipient to undertake measures to correct or address the areas of underperformance (e.g. Gnepp et al., 2020; Murphy, 2020). The opposing positions are the bases of the conceived inconsistencies in the effects of negative performance feedback as reported by the literature. I refer to the interpersonal effects of negative performance feedback as the primary level effects.

Through this literature review, I established that there are mechanisms that moderate the effects of negative performance feedback to the feedback-recipient. At the first level, scholars like Grandmann et al. (2021) emphasised the notion of emotional regulation. Although Grandmann et al. (2021) and others are of the prediction that the encounter with negative emotions resultant from the receipt of negative performance feedback attracts disengagement for hedonic purposes; some scholars report that it is the process of emotional regulation that helps the feedback-recipient to control the emotion and to undertake measures that will avoid the

experience with the negative performance feedback to repeat itself. As a result, the feedback-recipient will regulate emotion to facilitate the ability to improve on the shortcomings.

The other group of scholars are of the position that the notion of emotional regulation is not voluntary, but compelled through the hierarchical structure in the organisation. For this group of scholars, an encounter with negative performance feedback inherently requires the feedback-recipient to correct as the feedback-recipient has a responsibility to do so, otherwise there will be repercussions. In an attempt to avoid unfortunate encounters with the managers, the feedback-recipient will undertake to correct performance shortcomings. Still at this point there are those scholars who are of the position that the feedback-recipient vested with responsibility over own performance, will undertake to address and correct performance. At this level the intensity of the opposing viewpoints is increased, hence it confirms the inconsistencies.

However the question of whether there are incidents where encounters with negative performance feedback elicits positive emotions at first conduct attracts further scrutiny, as no study, at least at the point of this review has addressed that aspect. This question stands notwithstanding the scholars who only make an implication of a possibility of such emotions surfacing.

This review has also established the commonly overlooked effect of negative performance feedback; which is based on the assumption that the effects of negative performance feedback should be physical or present material manifestations. The fact that upon manifestation of the effects, the recipient may appear to be passive does not necessarily mean the effects were negative or were not there. As advanced by Grundmann et al. (2021) in their conceptual paper, there is need for management researchers to investigate the notion of feedback processing and emotion regulation. This may help in resolving this oversight. The question may be centred on establishing the capacity of the feedback-recipient to launch emotion regulation, with more interest put on establishing the boundary condition within which the recipient can launch and switch between regulation and the non-regulation modes. In this way, scholars can be able to establish an understanding on the cases where the recipient maintains passivity despite the effects encountered with the receipt of negative performance feedback.

Further on the review, the literature has also pointed to the function of moderating factors in influencing the effects of negative performance feedback to the recipient. At the individual level of analysis, they are classified as the manner in which the feedback is framed. Feedback framing includes several variables such as the language used in delivering the feedback, the

details provided in the feedback report and the mode of delivery used. The other intervention addressed the frequency at which the feedback is provided and whether such frequency provides a reasonable time interval from the point of receipt of the feedback to the point where the subsequent performance appraisal is undertaken.

The argument that is emphasised at this level is the need for a reasonable time interval that will allow the feedback-recipient to undertake correction. This is one area that presents a conundrum in the literature as the time that is reasonably required to undertake the correction is subjective on its own, least to mention the fact that the process of correction is also contingent on many other factors. These factors may include the need for structural support; in terms of availability of resources, and the conducive environment that fosters the opportunity to learn. The latter is also subjective because what one can claim to be a conducive learning environment, may not stand for the other person.

Collectively, the review has rather pointed to a situation where at primary level, the effects of negative performance feedback are cognitive depending on the perception of the feedback-recipient; and at the secondary level, the cognitive factors are becoming moderators for whether or not the subsequent performance feedback will have improved. This analogy presents further the issues of endogeneity as even when emotional regulation has been successfully done, in a manner that the feedback-recipient is willing to correct the subsequent performance; success in doing so is contingent on other factors.

Furthermore, the secondary level of the effects of negative performance feedback is vested in the ultimate intention of the feedback-recipient about the performance. This can be portrayed by the active engagement of the feedback-recipient in the search for solutions. However, it is important to note that the fact that the feedback-recipient had undergone the process of problemistic search cannot be construed to predict that the subsequent performance will indeed improve. This is because there are many other factors that can aid or hinder the intention to improve performance. These factors may be variable upon different organisational contexts but the most common is the availability of resources and the supportive environment.

This is said notwithstanding the possibility of the need to do nothing. This is because one of the possible secondary effects of negative performance feedback can be a decision to defend the status quo, as determined by the feedback-recipient. The possibility of encounter with this position of stalemate is when the feedback-recipient is convinced that all the possible avenues have been addressed. As a result, the feedback-recipients' adoption of the 'protect or defend'

strategy is not informed by emotional regulation but the assessment that all that could be done is exhausted. The scholars have not interrogated this avenue at length at least to the best of the evidence provided in this literature review.

4.2.2 The effects and influence the subsequent performance at the firms' level of analysis

At the level of the firms, decision-making groups are critical players in the context of negative performance feedback relative to the performance of the firm. The literature confirmed that the decision-makers in the firm are the ones who determine the direction of the effects of the negative performance feedback. At this point of analysis, the direction of the effects of negative performance feedback is determined by the feedback characteristics, and not necessarily the personal emotions of the feedback-recipient. That is, at this level, the personality traits, skill and competency, experience, details, frequency, and properties of the feedback play a critical part in determining the effects of the negative performance feedback to the firm. Based on the understanding that all of the moderating factors emanate from within the organisation; and mostly the practice of governance, it is important to test the effects of managerial perception of negative performance feedback using other research designs that are field-based but longitudinal in nature (Saraf et al., (2022).

Through a field-based a longitudinal study, researchers may establish whether managers' who are willing to change strategy following the receipt of negative performance feedback, eventually manage to do so. That is, the research avenue is to establish whether willingness to change strategy translates into the actual strategy change. The research taken along this path will also have to look into the contextual factors that apply. This is motivated by the assumption that the willingness to change strategy does not always translate into readiness for the firm to engage into the due processes required for a successful change in strategy (Villagrasa et al., 2018; Gjedrem& Kvaløy, 2020).

Additionally, Choi et al. (2019)'s concept of decision-makers outsidersness is identified as not-so-readily observable moderating variable required to stimulate decision-makers' intentional capacity. In their findings, Choi et al. (2019) established that effectiveness of managers in driving the subsequent firms' performance is vested on their effective use of their decision-making rights. This presents an opportunity for future research to test the requirement for outsidersness and its influence to managing the effects of negative performance feedback not only at firm's performance level, but in other levels as well. This variable may attract further

research scrutiny in other contextual orientations for the purpose of refining the arguments around the effectiveness of decision-makers in modelling the response strategies. Moreover, one could also be interested to establish whether the outsidersness moderates the managers or as put otherwise, the directors' expert power that is claimed to be a requisite to influencing the firm's response strategy (Blagoeva et al., (2020).

On the upper hand, it is the governance structures of the organisations and the environmental factors that are reported to moderate the direction of the effects of negative feedback at the level of firms' performance. Indeed the fact that different firms will be exposed to all these factors to varying degrees means they will have different encounters with the negative performance feedback. At this point, the primary resolution on the contradiction in the literature reporting on the effects of negative performance feedback is to adopt the practice on reporting in relative terms. This however, does not on its own resolve the contradiction as through this review; I was also able to establish the issues around the replicability of the reported effects. This fact highlights the significance of the context within which the reported effects apply and the extent to which such effects apply. As mentioned herein above, there are contextual factors that determine the extent to which an encounter of negative performance feedback will leads to improvement in the subsequent performance feedback. These contextual factors are therefore responsible to the inconsistencies reported in line with the effects of negative performance feedback.

This therefore presents a need for a careful grounding in the options available to classifying the effects of negative performance feedback relative to each level of analysis; highlighting specificity of the applicable domains; decision space; and the boundary conditions. Domain specific reporting and application should be the framework through which the effects of negative performance feedback are classified. This presents an opportunity for future researchers to pursue the need to examine the extent to which negative performance feedback presents attainment discrepancy towards the desired performance standard (Kotiloglu et al., 2021; Billinger et al., 2021). As advanced by Deb et al. (2019), the need to explore prospects of success in addressing attainment discrepancy in the case where the will, effort, resources, and supportive systems or conducive environment at the organisational level are well aligned to yield the intended repair in the subsequent performance.

4.3 The methodological constraints presenting avenue for future research

As such management scholars should refocus their attention to engage in studies that seek to test and confirm different contextual and boundary delineation. This will include the need to also establish different decision spaces within which specific sets of effects can be claimed. This is based on realisation of the evidence that reflects a tendency of the literature to mimic the seminal findings. Mostly prone to this challenge are the studies that adopted historic methods, as they used historic archival datasets to make predictions that are intended to resolve the current scholarship and the practical avenues. However, a drawback is that these studies were lacking the details of the reference groups, except for the disclosure of their industries.

As supported by Saraff et al. (2022) the disclosure of the reference groups could have provided a sense of identity of the origin of the findings, for the purpose of simulation. The lack of identity of the origin of the findings compromises on the specificity of the contexts within which the findings apply. Additionally, with the clearly defined reference groups, it could be easier to conduct research interviews or the surveys to corroborate the findings of a historical analysis.

Moreover, this research norm tends to overlook the dynamism associated with the human nature, and that surrounding organisational behaviour which constantly challenges even upon the tried and tested methods, interactions and interventions. The call for the scholarship on negative performance feedback to adopt a forward looking, on the need to be more proactively predictive that to lean on the reactive viewpoint is highlighted as of critical importance to the scholarship (Gnepp et al., 2020).

In addition, the other methodological constraint identified during this structured literature review is the reliance on the use of the laboratory experimental designs; and their reliance on the use of student samples. This tendency of the laboratory experimental designs exposes the subjects of the study to controlled and highly manipulated environment. The level of control and manipulation is out of bounds of that of the corporate world. As a result, maintaining accuracy in reporting on the behaviourally subjective phenomenon like the effects of negative performance feedback becomes abortive in its predictions. Although they are usually resorted to as the basis for determining the causal relationships; their use in examining the subjective corporate phenomena is not recommended, as they usually give artificial findings emanating from the artificiality of their interventions (Podsakoff & Podsakoff, 2019).

Additionally, the use of students' samples exposed these studies to constraints facing both internal and external validity. This is because even if the subjects were employed elsewhere during the conduct of the study, the behaviour and reactions under the learning environment

may not be construed to be valid to resemble how they would truly respond in the organisational setting (Podsakoff & Podsakoff, 2019). This presents a concern as a learning environment is not representative of interactions in the corporate world.

In resolving these research constraints, the use of non-experimental designs is recommended. These would include the use of longitudinal and case studies that are field based (Gjedrem & Kvaløy, 2020; Drouvelis & Paiardini, 2022). The relevance of the use of field-based designs which are longitudinal in nature is supported on the need to establish if short-term effects of negative performance feedback can change with time. It is my understanding that some of the negative effects are simply short-term, temporal but can change to positive effects overtime. This therefore poses a question of whether or not the reported effects of negative performance feedback could or couldn't be sustained in real organisational settings. This question needs to be explored.

4.4 Contributions of this structured literature review

Deduced for the aforementioned argument, it is therefore unquestionable that negative performance feedback has effects that influence the subsequent performance of the feedback-recipient. However, what varies is the direction of the effects of negative performance feedback to the recipient and to the subsequent performance. This presents the possibility of negative performance feedback to influence there positioning of the subsequent performance anywhere along the performance feedback continuum. That is, presenting the possibility that it can improve, stagnate or even be detrimental to the subsequent performance. Tracing it from the findings of Villagrasa et al. (2018) the baseline effects of negative performance feedback are therefore not universal but are contingent on contextual interventions.

As such, this structured literature review has successfully managed to establish the basis of the reported inconsistencies in the literature addressing the effects of negative performance feedback. This is by no means a new discovery. However, the persistence of this finding triggers curiosity to the management research to undertake research that is intended to reconcile the reported disparities in the empirical results. This review, however, managed to establish the relationship between perception and performance in the context of negative performance feedback. It further contributed to the prior reviews that identified the need for more thoughtfulness in establishing the boundary conditions and decision-space that apply different encounters involving negative performance feedback (Lv et al., 2021; Martínez-Noya &

Garcia-Canal, 2021). This will help to establish the extent to which the findings maintain cross-context applicability, if not to re-establish it. This calls for the analysis of possible moderators which may be methodologically challenging but worth pursuing through appropriate methodologies.

4.5 Limitations of the study

The fact that the articles used in this review are homogeneous with respect to their high quality, and are recent in terms of their years of publication; satisfy the requirement for validity and reliability of the findings of this review. The sample of more than 50 studies is fairly good for this exercise, even though I believe it would have given more robust results if I decided to focus on only one level of analysis. Besides that, the studies included for this review are highly heterogeneous on the basis of their differences in populations; the nature of their samples; their sample sizes; and their study designs. This poses a challenge as it relatively compromises the findings. Furthermore, the corpus of literature addressing the construct negative performance feedback is quite extensive, as a result, the prospects of using a larger sample than this one were quite high.

Chapter 5: Formulation of research questions and Conclusion

5.1 Presentation of the formulated research questions

In this review, I have observed a trend in research that adopts the use of archival historical data sets and the laboratory based experiment. On one hand, there are many research constraints that are posed by the use of archival data sets. The outstanding constraint is the use of historical sets of data to study subjective phenomena like the effects of negative performance feedback in organisational settings as it tends to evade the construct stability (Alam & Singh, 2021). On the other hand are the shortcomings associated with the use of the laboratory-based experiments. The outstanding constraint that is posed by the use of laboratory-based experimental designs, and the tendency to also use students' samples compromises the ecological validity of these studies (Podsakoff & Podsakoff, 2019).

These therefore present several questions: whether or not the reported effects of negative performance feedback could or couldn't be sustained in real organisational settings?; whether the amalgamation of the reported various effects of negative performance feedback are only experienced immediately upon receipt of the feedback or can be sustained over a longer period of time (Motro et al., 2021); and whether emotions associated with the receipt of negative performance feedback can be best studied using subjective, objective or both methods (Posen et al., 2018; Alam & Singh, 2021; Ye et al., 2021). The other critical question that is posed by Grandnumm et al. (2021) explore the bounds of the notion of emotional regulation in the context of negative performance feedback; with the intention to establish the extent to which the model of motivated performance feedback disengagement holds true. Moreover, I have also established interest on the question of whether there are incidents where encounters with negative performance feedback elicit positive emotions at first point of conduct. As such, these questions need to be explored, with the intention to confirm or disconfirm the reported finding of the studies that relied of the historical and laboratory-based research experiments. As such, the use of field-based designs is recommended.

However, this opportunity should not necessarily be construed to negate the use of laboratory-based experimental designs or the archival datasets, but should rather be considered to present a confirmatory opportunity intended to improve among other things, both the internal and external validity of the findings. That is, the field-based research designs could be helpful in support of the extended explorations on the phenomena under scrutiny. This could be helpful in

testing if the reported effects can be sustained overtime; for how long; and the trends in which the reported effects could manifest overtime are of key importance.

For instance, in their study, Song et al. (2018) discovered the positive effects of negative performance feedback can emerge from at least 3 to 6 months post feedback receipt, while the extent of the effect can be measurable at least 12 months later. In their review, Tagliabue et al. (2020) established that studying the subjective construct like the effect of negative performance feedback requires time to monitor the effect overtime to allow for measurement of attainable levels of performance relative to feedback frequency and applicable properties of the feedback. The use of research methods like longitudinal studies that incorporate mixed methods such as content analysis, observation or focused groups and interviews are ideal for application in organisational settings (Bear et al., 2017; Lourenço et al., 2018; Alam & Singh, 2021; Xing et al., 2021).

The relevance of these research methods is justified by the need to observe the trend on how feedback-recipients respond to feedback over a longer period of time. This would help to establish/ identify trends and antecedents that may aid or hinder specific patterns over the spectrum of possible responses to negative performance feedback. That is, it presents a fair opportunity to observe post-feedback performance, and how the interim feedback encounters might help or distract improvement efforts. In such cases, the field-based studies could be constructive in providing the evidence-based interventions, and as a result control for susceptibility of management research on dwelling of the designs that only give abstract findings.

For instance, in their study, Xing et al. (2021) established that negative performance feedback elicit shame which in their view only pose temporary impairment on the subsequent performance encounters. So the need for researchers to simulate their study over a longer term to study the long-term effects of negative performance feedback is supported. Based on all the aforementioned arguments, I propose the exploitation of longitudinal field experiments to study the effects of negative performance feedback in organisations. The following are the ways in which I believe the longitudinal studies will benefit management research.

5.2 The need for research to address contextual and boundary specificity

With this review, I have identified the need for specificity of contexts in which the reported theoretical predictions apply. This requirement is informed by the review conducted by Tagliabue et al. (2020), and the confirmatory empirical research findings in Itzchakov et al. (2020), Wang and Lou (2020) and Ref et al. (2021). The gist of the reports is vested on the need for exploration of different contextual factors and boundary conditions that moderate specific effects of negative performance feedback. According to Tagliabue et al. (2020), the complexity of the organizational phenomena is ever increasing, within which the phenomena of performance feedback are not isolated. Tagliabue et al. (2020), argue that it is the level of complexity surrounding different types of performance feedback contexts that are responsible for the non-resolute effects. Thus calling for establishment of contextual specificity which will set out the boundary conditions on which specific effects apply (Choi et al., 2019; Lu & Wong, 2019; Itzchakov et al., 2020; Xing, et al., 2021).

Notwithstanding, it is however important to notice that the context of performance feedback is multifaceted. According to Busse, Kach and Wagner (2017), the boundary condition of a specific context refers to the delineated conditions on which the same effect applies, at least with the same level of accuracy. The contexts on which specific theoretical predictions are made are usually multidimensional with respect to space and time related factors. For the purpose of illustration, Choi et al. (2019), Lv et al. (2019) and Goyal and Goyal (2022) reported their findings specific to the manufacturing industry and relative to R&D intensity. In their case, the industry and performance area are boundary delineating variables that moderates the reported effects of negative performance feedback.

It is a common cause that almost all of the studies on which this review was based contributed to the prospects of the behavioural theory of the firm with its problemistic search model. Thus, debating on whether it is correct to correlate negative performance feedback to improvement in performance. With the current degree of scholastic debates, I have established that the extent to which effects of negative performance feedback purports or not purports the anticipated performance improvement goals is dependent on the context of the performance feedback. That is, the boundary variable factors that entail the negative performance feedback climate attract scrutiny (Tagliabue et al., 2020; Grundmann et al., 2021).

In this review at least five conceptual articles were used (e.g. Bear et al., 2017; Klingebiel, 2018; Murphy, 2020; Alam & Singh, 2021; Grundmann et al., 2021). Although they conceptually modelled the effects of performance feedback at different levels of analysis, their theoretical predictions present the need for confirmatory empirical research. For instance, Grundmann et

al. (2021) theorised contrary to the anticipated effect of performance feedback relative to decision-making and strategy, by presenting the motivated performance feedback disengagement model. This presents an opportunity for research to explore the tenants of the model with the purpose of establishing the boundary condition that favours or disfavors this model. This could be done through empirical research through which the conditions that present high or low favourability of the predictions of the model could be identified (Busse et al., 2017). Through the empirical research, their boundary conditions can therefore be redefined, if not setting the new context while presenting the possibility to amend the theoretical predictions through identification of other moderating variables.

5.3 The need for research to set out context-specific decision space

I have established through this review that a lot of studies have reported the effects of negative performance feedback on the feedback-recipients as though they are the effects of negative performance feedback on the organisation itself. This trend is mostly common in the cohort that addressed the effects of performance feedback relative to organisational performance. For instance, Ref and Shapira (2017) and Eggers and Suh (2019) reported on the effect of negative performance feedback on firms' market expansion; Lucas et al. (2018) and Xu et al. (2019) on research and development investment; Lu and Wong (2019) on firms innovation; and Deb et al. (2019), on investment attainment. However, when reporting the findings of the studies, the reports assumed the effects of negative performance feedback directly on the firm, and only considered the effects of the feedback on the managers as moderating effects. Instead, through this review, I emphasise that the immediate effects of the negative performance feedback can be traced from the feedback encounters with the managers upon receipt of the feedback and not directly with the firms. Rather, what could be explored with regard to the firms' performance is the influence of the effects of negative performance feedback as encountered by the management teams (governing structures of the firms in question).

The review findings indicated in the preceding paragraph lend me to the recommendation of Klingebiel (2018), where they identified the need to establish the reasonable decision-space for each category of the reported effects of performance feedback at any level of analysis. Considering the analogy of the effects of negative performance feedback indicated in the preceding paragraph, it is evident that from the immediate effect and in the short-term; the effect of negative performance feedback can be evaluated from the conduct of the management

structures of the firm; following which within a specific time frame, it could only be possible to detect if the firms were also influenced by the provision of the negative performance feedback. This therefore presents a justifiable need for research to establish reasonable decision space on which the effects of negative performance feedback could be examined.

The need to identify decision-space relative to specific negative performance feedback conditions and contexts is recommended as a prerequisite for future research. The concept of decision space can be defined as the agreed timeframe that is reasonably considered to meet the minimal requirements for a scholastic investigation of the effects of negative performance feedback to take place. This is required for the purpose of soliciting reliable findings or predictions. In their study, Jiang and Holburn (2018) reported in line with this requirement by highlighting that the short-run predictions made in line with negative performance feedback can be detrimental. Moreover, several studies have also made recommendations pertaining to the need to replicate their studies over a longer time frame to confirm their predictions (e.g. Bipp & Kleingeld, 2018; Hoffmann & Thommes, 2020; Xing et al., 2021; Billinger et al., 2021; Saraf et al., 2022). As such, they advise against the provision of negative performance feedback that is observed over a short timeframe. Deduced from these assertions is that time factors both the quality and the effects of negative performance feedback, the accuracy in predicting the influence it has on the subsequent performance at any level of analysis.

Notwithstanding the above, Martínez-Noya and Garcia-Canal (2021) emphasise the need for short-term adjustments to the reported negative performance feedback, more especially in the technology-intensive industries. According to Martínez-Noya and Garcia-Canal (2021), the need for short-term adjustments is a prerequisite if negative performance feedback is to influence the firm's subsequent performance in a manner that is considerate to the calculated risk involved. That short-term feedback and short-term adjustments are but risk mitigating. Although this study does not specify the duration of time that will suffice to be considered a short-term, of importance is to acknowledge the implied need for the industry-specific decision-space that sets out the applicable timeframes is also emphasised. That is, it is vital to distinguish between the duration of time that could be considered as short-term against that which could be considered as long-term, so as to also distinguish the negative performance feedback effects applicable to either one of the timeframes and those that may be identified as mixed effects that do not bear the effect of time.

Thus, within each industry, a special research attention should be put on establishing empirically tested evidence that proves reasonableness of different time-frames. These may be

configured in a manner that will be consistent with specific levels and units of analysis. This avenue for future research puts emphasis on the need to bind specific decision-space relative to specific industry, providing clearly, on the boundary conditions within which a specific decision-space applies. Based on the arguments highlighted herein above, it is my understanding that there are no contributions to the performance feedback theories that specifically predicts industry-specific decision space. These therefore present possible future research channels on the effects of negative performance feedback.

5.4 Conclusion

This review has established the different categories of the reported effects of performance feedback. These will include among others; the personality driven effects; the timing driven effects and the support driven effects. All of which are moderated to a varying degree, by different contextual factors. Indeed this review has confirmed the call for researchers to maintain specificity of the effects, and to avoid an umbrella application of the reported effects, as it bears an inappropriate generalisation error (Gong et al., 2019). As explained from the perspective of Ye et al. (2021) the future research should undertake to investigate the generalisability of the reported finding to at least give predictions on their applicability. Specificity is a key measure in determining and or assessing the effects of performance feedback. In refining on the aspect of specificity, research presents opportunities to identify different moderating contextual factors and to assess the impact of those contextual factors on the effects of negative performance feedback. This is an avenue to disambiguating the reported effects of negative performance feedback. This could be attained if the effects of negative performance feedback are categorised commensurate with their degree of complexity and diversity (Gong et al., 2019).

Summarily, this review confirms the longstanding conundrum on the research reporting on the effect of negative performance feedback. This review established the fact that the effects of negative performance feedback are indeed heterogeneous across contexts. It is this contextual heterogeneity that research has rather mistreated by assuming an umbrella or an aggregation approach in addressing the effects of negative performance feedback at any level of analysis. The notions of specificity of context and decision space are highlighted as a way to relieve these constraints on the scholarship. This therefore presents with the hope that the future research can address the gaps in knowledge. In support, on one hand is the review conducted by Posen et al. (2018) which calls for the need to align specific characteristics of performance feedback

with specific search decisions. On the other hand, is the call postulated by scholars like Gong et al. (2020) who report the need to extend the scholarship on negative performance feedback beyond the aggregation approach. These will therefore establish the resolute effects of negative performance feedback (Tagliabue et al., 2020).

6. References

- Adam, K. C., & Vogel, E. K. (2018). Improvements to visual working memory performance with practice and feedback. *PloS One*, 13(8), e0203279. <https://doi.org/10.1371/journal.pone.0203279>
- Alam, M., & Singh, P. (2021). Performance feedback interviews as affective events: An exploration of the impact of emotion regulation of negative performance feedback on supervisor–employee dyads. *Human Resource Management Review*, 31(2), 100740. <https://doi.org/10.1016/j.hrmr.2019.100740>
- Ali, N. B., & Usman, M. (2018). Reliability of search in systematic reviews: Towards a quality assessment framework for the automated-search strategy. *Information and Software Technology*, 99, 133-147. <https://doi.org/10.1016/j.infsof.2018.02.002>
- Álvarez Jaramillo, J., Zartha Sossa, J. W., & Orozco Mendoza, G. L. (2019). Barriers to sustainability for small and medium enterprises in the framework of sustainable development—Literature review. *Business Strategy and the Environment*, 28(4), 512-524. <https://doi.org/10.1002/bse.2261>
- Bear, J. B., Cushenbery, L., London, M., & Sherman, G. D. (2017). Performance feedback, power retention, and the gender gap in leadership. *The Leadership Quarterly*, 28(6), 721-740. <https://doi.org/10.1016/j.leaqua.2017.02.003>
- Billinger, S., Srikanth, K., Stieglitz, N., & Schumacher, T. R. (2021). Exploration and exploitation in complex search tasks: How feedback influences whether and where human agents search. *Strategic Management Journal*, 42(2), 361-385. <https://doi.org/10.1002/smj.3225>
- Bipp, T., & Kleingeld, A. (2018). Subconscious performance goals: Investigating the moderating effect of negative goal-discrepancy feedback. *Human Performance*, 31(5), 255-281. <https://doi.org/10.1080/08959285.2018.1531866>
- Blagoeva, R. R., Mom, T. J., Jansen, J. J., & George, G. (2020). Problem-solving or self-enhancement? A power perspective on how CEOs affect R&D search in the face of inconsistent feedback. *Academy of Management Journal*, 63(2), 332-355. <https://doi.org/10.5465/amj.2017.0999>

- Busse, C., Kach, A. P., & Wagner, S. M. (2017). Boundary conditions: What they are, how to explore them, why we need them, and when to consider them. *Organizational Research Methods, 20*(4), 574-609. <https://doi.org/10.1177/1094428116641191>
- Casas-Arce, P., Lourenço, S. M., & Martínez-Jerez, F. A. (2017). The performance effect of feedback frequency and detail: Evidence from a field experiment in customer satisfaction. *Journal of Accounting Research, 55*(5), 1051-1088. <https://doi.org/10.1111/1475-679X.12184>
- Choi, J., Rhee, M., & Kim, Y. C. (2019). Performance feedback and problemistic search: The moderating effects of managerial and board outsidersness. *Journal of Business Research, 102*, 21-33. <https://doi.org/10.1016/j.jbusres.2019.04.039>
- Ciancetta, L. M., & Roch, S. G. (2021). Backlash in performance feedback: deepening the understanding of the role of gender in performance appraisal. *Human Resource Management, 60*(4), 641-657. <https://doi.org/10.1002/hrm.22059>
- Cooks, J. A., & Ciesla, J. A. (2019). The impact of perfectionism, performance feedback, and stress on affect and depressive symptoms. *Personality and Individual Differences, 146*, 62-67. <https://doi.org/10.1016/j.paid.2019.03.048>
- Cyert, R. M., & March, J. G. (1963). *A behavioural theory of the firm, 2*(4), 169-187. <https://doi.org/10.1111/joms.12531>
- Deb, P., David, P., O'Brien, J. P., & Duru, A. (2019). Attainment discrepancy and investment: effects on firm performance. *Journal of Business Research, 99*, 186-196. <https://doi.org/10.1016/j.jbusres.2019.02.047>
- Delavallade, C. (2021). Motivating teams: Private feedback and public recognition at work. *Journal of Public Economics, 197*, 104405. <https://doi.org/10.1016/j.jpubeco.2021.104405>
- Dierdorff, E. C., Fisher, D. M., & Rubin, R. S. (2019). The power of percipience: Consequences of self-awareness in teams on team-level functioning and performance. *Journal of Management, 45*(7), 2891-2919. <https://doi.org/10.1177/0149206318774622>
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research, 133*, 285-296. <https://doi.org/10.1016/j.jbusres.2021.04.070>

- Drouvelis, M., & Paiardini, P. (2022). Feedback quality and performance in organisations. *The Leadership Quarterly*, 33(6), 101534. <https://doi.org/10.1016/j.leaqua.2021.101534>
- Dumay, J., Bernardi, C., Guthrie, J., & Demartini, P. (2016). Integrated reporting: A structured literature review. *Accounting Forum*, 40(3), 166-185. <https://doi.org/10.1016/j.acfor.2016.06.001>
- Eggers, J. P., & Suh, J. H. (2019). Experience and behaviour: How negative feedback in new versus experienced domains affects firm action and subsequent performance. *Academy of Management Journal*, 62(2), 309-334. <https://doi.org/10.5465/amj.2017.0046>
- Fong, C. J., Patall, E. A., Vasquez, A. C., & Stautberg, S. (2019). A meta-analysis of negative feedback on intrinsic motivation. *Educational Psychology Review*, 31, 121-162. <https://doi.org/10.1007/s10648-018-9446-6>
- Gao, Y., Yang, H., & Zhang, M. (2021). Too bad to fear, too good to dare? Performance feedback and corporate misconduct. *Journal of Business Research*, 131, 1-11. <https://doi.org/10.1016/j.jbusres.2021.03.041>
- Gavetti, G., Greve, H. R., Levinthal, D. A., & Ocasio, W. (2012). The behavioural theory of the firm: Assessment and prospects. *Academy of Management Annals*, 6(1), 1-40. <https://doi.org/10.5465/amr.2010.0108>
- Geddes, D., & Linnehan, F. (1996). Exploring the dimensionality of positive and negative performance feedback. *Communication Quarterly*, 44(3), 326-344. <https://doi.org/10.1080/01463379609370021>
- Gjedrem, W. G., & Kvaløy, O. (2020). Relative performance feedback to teams. *Labour Economics*, 66, 101865. <https://doi.org/10.1016/j.labeco.2020.101865>
- Gnepp, J., Klayman, J., Williamson, I. O., & Barlas, S. (2020). The future of feedback: Motivating performance improvement through future-focused feedback. *PloS One*, 15(6), e0234444. <https://doi.org/10.1371/journal.pone.0234444>
- Gong, Y., Zhang, Y., & Xia, J. (2019). Do firms learn more from small or big successes and failures? A test of the outcome-based feedback learning perspective. *Journal of Management*, 45(3), 1034-1056. <https://doi.org/10.1177/0149206316687641>

- Goulas, S., & Megalokonomou, R. (2021). Knowing who you actually are: The effect of feedback on short-and longer-term outcomes. *Journal of Economic Behaviour & Organization*, 183, 589-615. <https://doi.org/10.1016/j.jebo.2021.01.013>
- Goyal, L., & Goyal, V. (2022). Performance shortfall, feedback interpretation and R&D search: The differential effects of peers' performance below historical and social aspirations. *British Journal of Management*, 33(3), 1584-1608. <https://doi.org/10.1111/1467-8551.12532>
- Greve, H. R. (2010). Designing performance feedback systems to guide learning and manage risk. *Organizational Dynamics*, 39(2), 104-114. <https://doi.org/10.1016/j.orgdyn.2010.01.004>
- Grundmann, F., Scheibe, S., & Epstude, K. (2021). When ignoring negative feedback is functional: Presenting a model of motivated feedback disengagement. *Current Directions in Psychological Science*, 30(1), 3-10. <https://doi.org/10.1177/0963721420969386>
- Hecht, G., Hobson, J. L., & Wang, L. W. (2020). The effect of performance reporting frequency on employee performance. *The Accounting Review*, 95(4), 199-218. <https://doi.org/10.2308/accr-52601>
- Hoffmann, C., & Thommes, K. (2020). Can digital feedback increase employee performance and energy efficiency in firms? Evidence from a field experiment. *Journal of Economic Behaviour and Organization*, 180, 49-65. <https://doi.org/10.1016/j.jebo.2020.09.034>
- Hong, S. (2019). A behavioral model of public organizations: Bounded rationality, performance feedback, and negativity bias. *Journal of Public Administration Research and Theory*, 29(1), 1-17. <https://doi.org/10.1093/jopart/muy048>
- Huang, N., Burtch, G., Gu, B., Hong, Y., Liang, C., Wang, K., ... & Yang, B. (2019). Motivating user-generated content with performance feedback: Evidence from randomized field experiments. *Management Science*, 65(1), 327-345. <https://doi.org/10.1287/mnsc.2017.2944>
- Ilgen, D. R., Fisher, C. D., & Taylor, M. S. (1979). Consequences of individual feedback on behavior in organizations. *Journal of Applied Psychology*, 64(4), 349. <https://doi.org/10.1037/0021-9010.64.4.349>
- Ilgen, D., & Davis, C. (2000). Bearing bad news: Reactions to negative performance feedback. *Applied Psychology*, 49(3), 550-565. <https://doi.org/10.1111/1464-0597.00031>

- Itzhakov, G., & Latham, G. P. (2020). The moderating effect of performance feedback and the mediating effect of self-set goals on the primed goal-performance relationship. *Journal of Applied Psychology, 69*(2), 379-414. <https://doi.org/10.1111/apps.12176>
- Jaworski, B. J., & Kohli, A. K. (1991). Supervisory feedback: Alternative types and their impact on salespeople's performance and satisfaction. *Journal of Marketing Research, 28*(2), 190-201. <https://doi.org/10.1177/002224379102800206>
- Jiang, G. F., & Holburn, G. L. (2018). Organizational performance feedback effects and international expansion. *Journal of Business Research, 90*, 48-58. <https://doi.org/10.1016/j.jbusres.2018.04.034>
- Jordan, A. H., & Audia, P. G. (2012). Self-enhancement and learning from performance feedback. *Academy of Management Review, 37*(2), 211-231. <https://doi.org/10.5465/amr.2010.0108>
- Klingebiel, R. (2018). Risk-type preference shifts in response to performance feedback. *Strategic Organization, 16*(2), 141-166. <https://doi.org/10.1177/1476127017702568>
- Kotiloglu, S., Chen, Y., & Lechler, T. (2021). Organizational responses to performance feedback: A meta-analytic review. *Strategic Organization, 19*(2), 285-311. <https://doi.org/10.1177/1476127019883361>
- Lechermeier, J., & Fassnacht, M. (2018). How do performance feedback characteristics influence recipients' reactions? A state-of-the-art review on feedback source, timing, and valence effects. *Management Review Quarterly, 68*(2), 145-193. <https://doi.org/10.1007/s11301-018-0136-8>
- Lourenço, S. M., Greenberg, J. O., Littlefield, M., Bates, D. W., & Narayanan, V. G. (2018). The performance effect of feedback in a context of negative incentives: Evidence from a field experiment. *Management Accounting Research, 40*, 1-14. <https://doi.org/10.1016/j.mar.2018.01.002>
- Lu, L. H., & Wong, P. K. (2019). Performance feedback, financial slack and the innovation behaviour of firms. *Asia Pacific Journal of Management, 36*, 1079-1109. <https://doi.org/10.1007/s10490-018-9634-4>

- Lucas, G. J., Knoben, J., & Meeus, M. T. (2018). Contradictory yet coherent? Inconsistency in performance feedback and R&D investment change. *Journal of Management*, *44*(2), 658-681. <https://doi.org/10.1177/0149206315584821>
- Lv, D. D., Chen, W., Zhu, H., & Lan, H. (2019). How does inconsistent negative performance feedback affect the R&D investments of firms? A study of publicly listed firms. *Journal of Business Research*, *102*, 151-162. <https://doi.org/10.1016/j.jbusres.2019.04.045>
- Lv, D. D., Zhu, H., Chen, W., & Lan, H. (2021). Negative performance feedback and firm cooperation: How multiple upward social comparisons affect firm cooperative R&D. *Journal of Business Research*, *132*, 872-883. <https://doi.org/10.1016/j.jbusres.2020.11.018>
- Makarevich, A. (2018). Performance feedback as a cooperation “switch”: A behavioral perspective on the success of venture capital syndicates among competitors. *Strategic Management Journal*, *39*(12), 3247-3272. <https://doi.org/10.1002/smj.2722>
- Martínez-Noya, A., & Garcia-Canal, E. (2021). Innovation performance feedback and technological alliance portfolio diversity: The moderating role of firms' R&D intensity. *Research Policy*, *50*(9), 104321. <https://doi.org/10.1016/j.respol.2021.104321>
- Massaro, M., Dumay, J., & Guthrie, J. (2016). On the shoulders of giants: undertaking a structured literature review in accounting. *Accounting, Auditing & Accountability Journal*, *29*(5), 767-801. <https://doi.org/10.1108/AAAJ-01-2015-1939>
- Motro, D., Comer, D. R., & Lenaghan, J. A. (2021). Examining the effects of negative performance feedback: the roles of sadness, feedback self-efficacy, and grit. *Journal of Business and Psychology*, *36*(3), 367-382. <https://doi.org/10.1007/s10869-020-09689-1>
- Murphy, K. R. (2020). Performance evaluation will not die, but it should. *Human Resource Management Journal*, *30*(1), 13-31. <https://doi.org/10.1111/1748-8583.12259>
- Oehler, P. J., Stumpf-Wollersheim, J., & Welp, I. M. (2019). Never change a winning routine? How performance feedback affects routine change. *Industrial and Corporate Change*, *28*(5), 1101-1124. <https://doi.org/10.1093/icc/dty049>
- Podsakoff, P. M., & Podsakoff, N. P. (2019). Experimental designs in management and leadership research: Strengths, limitations, and recommendations for improving publishability. *The Leadership Quarterly*, *30*(1), 11-33. <https://doi.org/10.1016/j.leaqua.2018.11.002>

- Posen, H. E., Keil, T., Kim, S., & Meissner, F. D. (2018). Renewing research on problemistic search—A review and research agenda. *Academy of Management Annals*, *12*(1), 208-251. <https://doi.org/10.5465/annals.2016.0018>
- Redifer, J. L., Bae, C. L., & Zhao, Q. (2021). Self-efficacy and performance feedback: Impacts on cognitive load during creative thinking. *Learning and Instruction*, *71*, 101395. <https://doi.org/10.1016/j.learninstruc.2020.101395>
- Ref, O., & Shapira, Z. B. (2017). Entering new markets: The effect of performance feedback near aspiration and well below and above it. *Strategic Management*, *38*(7), 1416-1434. <https://doi.org/10.1002/smj.2561>
- Ref, O., Feldman, N. E., Iyer, D. N., & Shapira, Z. (2021). Entry into new foreign markets: Performance feedback and opportunity costs. *Journal of World Business*, *56*(6), 101258. <https://doi.org/10.1016/j.jwb.2021.101258>
- Rhee, L., Ocasio, W., & Kim, T. H. (2019). Performance feedback in hierarchical business groups: The cross-level effects of cognitive accessibility on R&D search behaviour. *Organization Science*, *30*(1), 51-69. <https://doi.org/10.1287/orsc.2018.1237>
- Saraf, N., Dasgupta, S., & Blettner, D. P. (2022). How do managerial perceptions of performance feedback affect innovation?. *Strategic Organization*, *20*(3), 451-480. <https://doi.org/10.1177/14761270211019484>
- Schumacher, C., Keck, S., & Tang, W. (2020). Biased interpretation of performance feedback: the role of CEO overconfidence. *Strategic Management Journal*, *41*(6), 1139-1165. <https://doi.org/10.1002/smj.3138>
- Sengul, M., & Obloj, T. (2017). Better safe than sorry: Subsidiary performance feedback and internal governance in multiunit firms. *Journal of Management*, *43*(8), 2526-2554. <https://doi.org/10.1177/0149206316677298>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, *104*, 333-339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Song, H., Tucker, A. L., Murrell, K. L., & Vinson, D. R. (2018). Closing the productivity gap: Improving worker productivity through public relative performance feedback and validation of best practices. *Management Science*, *64*(6), 2628-2649. <https://doi.org/10.1287/mnsc.2017.2745>

- Steffens, N. K., Fonseca, M. A., Ryan, M. K., Rink, F. A., Stoker, J. I., & Pieterse, A. N. (2018). How feedback about leadership potential impacts ambition, organizational commitment, and performance. *The Leadership Quarterly*, 29(6), 637-647. <https://doi.org/10.1016/j.leaqua.2018.06.001>
- Swift, V., & Peterson, J. B. (2018). Improving the effectiveness of performance feedback by considering personality traits and task demands. *PloS One*, 13(5), e0197810. <https://doi.org/10.1371/journal.pone.0197810>
- Tagliabue, M., Sigurjonsdottir, S. S., & Sandaker, I. (2020). The effects of performance feedback on organizational citizenship behaviour: a systematic review and meta-analysis. *European Journal of Work and Organizational Psychology*, 29(6), 841-861. <https://doi.org/10.1080/1359432X.2020.1796647>
- Tarakci, M., Ateş, N. Y., Floyd, S. W., Ahn, Y., & Wooldridge, B. (2018). Performance feedback and middle managers' divergent strategic behaviour: the roles of social comparisons and organizational identification. *Strategic Management Journal*, 39(4), 1139-1162. <https://doi.org/10.1002/smj.2745>
- Theobald, M., Breitwieser, J., Murayama, K., & Brod, G. (2021). Achievement emotions mediate the link between goal failure and goal revision: Evidence from digital learning environments. *Computers in Human Behaviour*, 119, 106726. <https://doi.org/10.1016/j.chb.2021.106726>
- Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*, 15(3), 398-405. <https://doi.org/10.1111/nhs.12048>
- Villagrassa, J., Buyl, T., & Escribá-Esteve, A. (2018). CEO satisfaction and intended strategic changes: The moderating role of performance cues. *Long Range Planning*, 51(6), 894-910. <https://doi.org/10.1016/j.lrp.2017.12.002>
- Wang, X., & Lou, T. (2020). The effect of performance feedback on firms' unplanned marketing investments. *Journal of Business Research*, 118, 441-451. <https://doi.org/10.1016/j.jbusres.2020.07.015>
- Wong, S. I., Bunjak, A., Černe, M., & Fieseler, C. (2021). Fostering creative performance of platform Crowdworkers: The digital feedback dilemma. *International Journal of Electronic Commerce*, 25(3), 263-286. <https://doi.org/10.1080/10864415.2021.1942674>

Xie, E., Huang, Y., Stevens, C. E., & Lebedev, S. (2019). Performance feedback and outward foreign direct investment by emerging economy firms. *Journal of World Business*, 54(6), 101014. <https://doi.org/10.1016/j.jwb.2019.101014>

Xing, L., Sun, J. M., & Jepsen, D. (2021). Feeling shame in the workplace: Examining negative feedback as an antecedent and performance and well-being as consequences. *Journal of Organizational Behavior*, 42(9), 1244-1260. <https://doi.org/10.1002/job.2553>

Xu, D., Zhou, K. Z., & Du, F. (2019). Deviant versus aspirational risk taking: The effects of performance feedback on bribery expenditure and R&D intensity. *Academy of Management Journal*, 62(4), 1226-1251. <https://doi.org/10.5465/amj.2016.0749>

Ye, Y., Yu, W., & Nason, R. (2021). Performance feedback persistence: comparative effects of historical versus peer performance feedback on innovative search. *Journal of Management*, 47(4), 1053-1081. <https://doi.org/10.1177/0149206320916225>

APPENDIX 1: Number of articles by academic journal subject field and title

Appendix 1: Number of articles by academic journal subject field and title			
Journal Subject field	Journal title	ABS Quality Rate	# of Articles
Accounting	Accounting Review	4*	1
	Journal of Accounting Research	4*	1
	Management Accounting research	3	1
Business	Human Performance	3	1
	Human Resources Management Review	3	3
	Industrial and Corporate Change	3	1
	Journal of Organisational Behaviour	4	1
	Journal of World Business	4	2
	Labour Economics	3	1
	Leadership Quarterly	4	3
	Orgnisation Science	4*	1
	Strategic Management Journal	4*	5
	Strategic Organisation	3	3
Management	Academy of Management Review	4*	1
	Academy of Management	4*	3
	Asian Pacific Journal of Management	3	1
	British Journal of Management	4	1
	Journal of Business Research	3	7
	Journal of Management	4*	4
	Long Range Planning	3	1
	Management Science	4*	2
Psychology	Current directions in psychological science	4	1
	European Journal of Work & Organisational Psychology	3	1
	Journal of Applied Psychology	4*	1
	Journal of Business and Psychology	3	1
	Journal of Economic Behaviour & Organisation	3	1
Multidisciplinary	Plos One		2
	Research Policy	4*	1
			52

APPENDIX 2: Gross-reference citations per article

Appendix 2: Gross- Reference Citations per Article		
Reference	Title	Gross-reference Citations
Alam and Singh (2021)	Performance feedback interviews as affective events: An exploration of the impact of emotion regulation of negative performance feedback on supervisor–employee dyads.	18
Bear et al. (2017)	Performance feedback, power retention, and the gender gap in leadership.	53
Billinger et al. (2021)	Exploration and exploitation in complex search tasks: How feedback influences whether and where human agents search.	28
Bipp and Kleingeld (2018)	Subconscious performance goals: Investigating the moderating effect of negative goal-discrepancy feedback.	0
Blagoeva et al. (2020)	Problem-solving or self-enhancement? A power perspective on how CEOs affect R&D search in the face of inconsistent feedback.	247
Casas-Arce et al. (2017)	The performance effect of feedback frequency and detail: Evidence from a field experiment in customer satisfaction.	41
Choi et al. (2019)	Performance feedback and problemistic search: The moderating effects of managerial and board outsidersness.	26
Ciancetta and Roch (2021)	Backlash in performance feedback: deepening the understanding of the role of gender in performance appraisal.	7
Deb et al. (2019)	Attainment discrepancy and investment: effects on firm performance.	28
Drouvelis and Paiardini (2022)	Feedback quality and performance in organisations.	5
Eggers and Suh (2019)	Experience and behavior: How negative feedback in new versus experienced domains affects firm action and subsequent performance.	175
Gao et al. (2021)	Too bad to fear, too good to dare? Performance feedback and corporate misconduct.	8
Gjedrem and Kvaløy (2020)	Relative performance feedback to teams.	5
Gnepp et al. (2020)	The future of feedback: Motivating performance improvement through future-focused feedback.	19
Gong et al. (2019)	Do firms learn more from small or big successes and failures? A test of the outcome-based feedback learning perspective.	18
Goyal and Goyal (2022)	Performance shortfall, feedback interpretation and R&D search: The differential effects of peers' performance below historical and social aspirations.	5
Grundmann et al. (2021)	When ignoring negative feedback is functional: Presenting a model of motivated feedback disengagement.	136
Hecht et al. (2020)	The effect of performance reporting frequency on employee performance.	6

Hoffmann and Thommes (2020)	Can digital feedback increase employee performance and energy efficiency in firms? Evidence from a field experiment.	6
Huang et al. (2019)	Motivating user-generated content with performance feedback: Evidence from randomized field experiments.	80
Itzchakov and Latham (2020)	The moderating effect of performance feedback and the mediating effect of self-set goals on the primed goal-performance relationship.	14
Jiang and Holburn (2018)	Organizational performance feedback effects and international expansion.	25
Klingebiel (2018)	Risk-type preference shifts in response to performance feedback.	21
Kotiloglu et al. (2021)	Organizational responses to performance feedback: A meta-analytic review.	49
Lechermeier and Fassnacht (2018)	How do performance feedback characteristics influence recipients' reactions? A state-of-the-art review on feedback source, timing, and valence effects.	52
Lourenço et al. (2018)	The performance effect of feedback in a context of negative incentives: Evidence from a field experiment.	14
Lu and Wong (2019)	Performance feedback, financial slack and the innovation behavior of firms	33
Lucas et al. (2018)	Contradictory yet coherent? Inconsistency in performance feedback and R&D investment change	51
Lv et al. (2019)	How does inconsistent negative performance feedback affect the R&D investments of firms? A study of publicly listed firms.	41
Lv et al. (2021)	Negative performance feedback and firm cooperation: How multiple upward social comparisons affect firm cooperative R&D.	8
Makarevich (2018)	Performance feedback as a cooperation "switch": A behavioral perspective on the success of venture capital syndicates among competitors.	26
Martínez-Noya and Garcia-Canal (2021)	Innovation performance feedback and technological alliance portfolio diversity: The moderating role of firms' R&D intensity.	27
Motro et al. (2021)	Examining the effects of negative performance feedback: the roles of sadness, feedback self-efficacy, and grit.	11
Murphy (2020)	Performance evaluation will not die, but it should.	57
Oehler et al. (2019)	Never change a winning routine? How performance feedback affects routine change.	6
Ref et al. (2021)	Entry into new foreign markets: Performance feedback and opportunity costs.	9
Ref and Shapira (2017)	Entering new markets: The effect of performance feedback near aspiration and well below and above it.	126
Rhee et al. (2019)	Performance feedback in hierarchical business groups: The cross-level effects of cognitive accessibility on R&D search behaviour.	33
Saraf et al. (2022)	How do managerial perceptions of performance feedback affect innovation?.	8
Schumacher et al. (2020)	Biased interpretation of performance feedback: the role of CEO	68

	overconfidence	
Sengul and Obloj (2017)	Better safe than sorry: Subsidiary performance feedback and internal governance in multiunit firms.	35
Song et al. (2018)	Closing the productivity gap: Improving worker productivity through public relative performance feedback and validation of best practices.	118
Steffens et al. (2018)	How feedback about leadership potential impacts ambition, organizational commitment, and performance.	26
Swift and Peterson, (2018)	Improving the effectiveness of performance feedback by considering personality traits and task demands.	10
Tagliabue et al. (2020)	The effects of performance feedback on organizational citizenship behaviour: a systematic review and meta-analysis.	5
Tarakci et al. (2018)	Performance feedback and middle managers' divergent strategic behaviour: the roles of social comparisons and organizational identification.	50
Villagrasa et al. (2018)	CEO satisfaction and intended strategic changes: The moderating role of performance cues.	9
Wang and Lou (2020)	The effect of performance feedback on firms' unplanned marketing investments.	13
Xie et al. (2019)	Performance feedback and outward foreign direct investment by emerging economy firms.	45
Xing et al. (2021)	Feeling shame in the workplace: Examining negative feedback as an antecedent and performance and well-being as consequences.	15
Xu et al. (2019)	Deviant versus aspirational risk taking: The effects of performance feedback on bribery expenditure and R&D intensity.	284
Ye et al. (2021)	Performance feedback persistence: comparative effects of historical versus peer performance feedback on innovative search.	18

APPENDIX 3: Studies that used experimental designs

Research designs	Sample
Laboratory Experiments	No. Students
Billinger et al. (2021)	156
Bipp and Kleingeld (2018)	80
Ciancetta and Roch (2021)	214
Gnepp et al. (2020)	382
Gjedrem and Kvaløy (2020)	515
Motro et al. (2021)	56
Oehler et al. (2019)	184
Hecht et al. (2020)	87
Drouvelis and Paiardini (2022)	241
Steffens et al. (2018)	264
	Professionals
Mixed Method Surveys	
Itzchakov and Latham (2020)	250
Field Experimental (online survey)	
Casas-Arce et al. (2017)	800
Hoffmann and Thommes (2020)	104
Huang et al. (2019)	1129
Lourenço et al. (2018)	181
Song et al. (2018)	73
Swift and Peterson, (2018)	916
Tarakci et al. (2018)	123
Xing et al. (2021)	119

APPENDIX 4: Studies that used historical archival data sets of firms' observations over time

Historical Archival datasets	No. of Firms-year observations	No. Firms	country/Region	Industry	Time-frame	No. Yrs
Blagoeva et al. (2020)	1887	241 Firms	Singapore	Miscellaneous	2002-2014	12
Choi et al. (2019)	9566	N/S	Korea	Manufacturing	1992-2005	13
Deb et al. (2019)	27984	3929 firms	US	Manufacturing	1994-2013	19
Eggers & Sun, 2017	8817	810 Firms	US	Mutual Fund	1962-2002	40
Gao et al. (2021)	12074	1410 Firms	China	Manufacturing	2004-2015	11
Gong et al. (2019)	848	462 Firms	US	Mergers &Acquis	1996-2006	10
Goyal and Goyal (2022)	2691	872 firms	India	Manufacturing	2010-2017	7
Jiang and Holburn (2018)	299	Managers	Japan	Machinery	1976-2002	26
Lu and Wong (2019)	35912	321 Firms	Taiwan	IT &Electronic	1998-2012	14
Lucas et al. (2018)	1750	1750 firms	European Union	R&D	2006-2009	3
Lv et al. (2019)	1865	1824 Firms	China	Miscellaneous	2007-2018	10
Lv et al. (2021)	10170	1865 Firms	China	Manufacturing	2007-2018	11
Makarevich (2018)	N/S	N/S	Japan	Manufacturing	1970-2003	33
Martínez-Noya & Garcia-Canal (2021)	13719	6500 Firms	Spain	Technology	2008-2015	7
Ref and Shapira (2017)	3926	1413 firms	US	Manufacturing	1999-2007	8
Rhee et al. (2019)	1274	1274 Firms)	Korea	Business	2001-2008	7
Saraf et al. (2022)	7535	1946	Canada	Business	1999-2006	7
Schumacher et al. (2020)	5482	824 Firms	America	Manufacturing	1992-2014	22
Ye et al. (2021)	56716	5750 Firms	Worldwide	Miscellaneous	1974-2018	44
Xu et al. (2019)	9633	2224 firms	China	Miscellaneous	2006-2013	7
Xie et al. (2019)	3575	876 firms	China	Manufacturing	2006-2013	7
Ref et al. (2021)	1965	1413 Firms	US	Manufacturing	1999-2009	10
Villagrasa et al. (2018)	N/S	137 Firms	Spain	S&M's	2006-2008	2
Wang and Lou (2020)	2407	412 Firms	China	Miscellaneous	2007-2015	8
Sengul and Obloj (2017)	1206	456 firms	France	Manufacturing	1998-2004	6
						344
					Median	13.231
					Mode	7

APPENDIX 3: Research designs for articles used at individual level of analysis

Research designs	Sample
Laboratory Experiments	No. Students
Billinger et al. (2021)	156
Bipp and Kleingeld (2018)	80
Ciancetta and Roch (2021)	214
Gnepp et al. (2020)	382
Gjedrem and Kvaløy (2020)	515
Motro et al. (2021)	56
Oehler et al. (2019)	184
Hecht et al. (2020)	87
Drouvelis and Paiardini (2022)	241
Steffens et al. (2018)	264
	Professionals
Mixed Method Surveys	
Itzchakov and Latham (2020)	250
Field Experimental (online survey)	
Casas-Arce et al. (2017)	800

Hoffmann and Thommes (2020)	104
Huang et al. (2019)	1129
Lourenço et al. (2018)	181
Song et al. (2018)	73
Swift and Peterson, (2018)	916
Tarakci et al. (2018)	123
Xing et al. (2021)	119