1 **Normalizing White-Collar Wrongdoing in Professional Service**

2 **Firms**

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ABSTRACT

17 There is extensive literature on top managers committing wrongdoing, but few studies

18 examine white-collar wrongdoing. Drawing on the experiences of a professional

19 service firm, we examine why and how engineering consultants normalize wrongdoing.

20 Leveraging bounded rationality theory, we find that organizational myopia promotes

21 inadequate administrative systems that holds consultants' prisoners to their rules and

22 procedures, leading to normalized wrongdoing. Our theoretical contributions are

23 threefold. (1) We contribute to the literature on wrongdoing presenting the relation

24 between organizational myopia and normalized wrongdoing. (2) We contribute to the

25 administrative systems literature showing their link with poor project performance. (3)

26 We show how administrative systems and normalized wrongdoing play a role in project

27 scope creep. We introduce an "iceberg model" to show that the failed project (the tip

28 of the iceberg) is due to organizational myopia and inefficient administrative systems

29 that need to be addressed before starting any project.

30

31 **KEYWORDS**: Bounded rationality theory; normalized wrongdoing; project

32 performance; organizational behavior; organizational myopia.

33

1 Introduction

34

35 Vaughan (1996) defines wrongdoing as doing a wrong thing and/or failing to do the

36 right thing or any behavior or act that deviates from both formal design goals and

37 normative standards or expectations. Wrongdoers stray from right-doing in a mindless

38 and boundedly rational way subject to the influence of their immediate social context,

39 slipping into [normalized] wrongdoing in a crescive way, without ever developing a

40 positive inclination to do so (Palmer 2012).

41 Most of the literature, discussion and training about wrongdoing deal with how top

42 managers commit wrongdoing to protect their interests or to, maximize their profits, or

43 to draw out of the competition rival firms (Lee et al. 2018; O'Reilly and Chatman 2020;

44 Wang et al. 2018, 2020). By contrast, this paper deals with "regular white-collar

45 employees" such as engineering consultants. We leverage the case of a Professional

46 Service Firm (PSF) where wrongdoing was normalized and widespread across the

47 consultants. Like many firms, wrongdoing was not an exceptional act but embedded

48 in everyday practice and thus normalized (Palmer 2012, 2013; Pinto 2014; Vaughan

49 1996). The theoretical motivation of our study is the struggle to reconcile what we

50 observed in the case described in this paper, with the dominant theories attributing

51 poor project performance to optimism bias, strategic misrepresentation (Flyvbjerg

52 2008; Flyvbjerg et al. 2009), or managerial capabilities (Morris 1994). Thus, while the

53 performance literature takes a behavioral economics or project management view, our

54 data guided us to take an administrative systems view (March and Simon 1958).

55 This theoretical perspective views organizations as structures for coordinating via

56 administrative systems, people engaged in interdependent tasks. Hence, we ask the

57 following research question: *"why and how PSFs' administrative systems normalize*

58 *the wrongdoing of white-collar employees?"* To answer this question, we conducted

3

59   a longitudinal case study. We investigated normalized wrongdoing at three levels of

60   analysis: governance, project, and individual. We navigated between these three

61   levels by examining the administrative system processes that were in place.

62

63   **2   Theoretical background**

64   *2.1   The nature of Professional Service Firms*

65   PSFs, e.g., architects, engineers, quantity surveyors, provide consultancy services to

66   clients for a fixed fee or on a cost-plus basis (Winch and Schneider 1993a). PSFs, the

67   focus of this paper, operate with established knowledge and codes of conduct in a

68   body of knowledge. Project-based work and projects, in general, are often prone to

69   failing (Denicol et al. 2020; Flyvbjerg et al. 2009), and adversely impact the

70   performance and reputation of the PSF, but they can also impact their clients' goals.

71   To cope with these demands, their training emphasizes innovation and problem-

72   solving. Service organizations are also distinct from builder's organizations in the built

73   environment. Winch and Schneider (1993b) summarize the peculiarities of this sector:

74   i. The service is intangible, i.e., clients purchase their capacity to service rather than a

75   product; ii. Performance is heterogenous from client to client; and iii. Production and

76   consumption are inseparable; their service cannot be stored. Because of the above,

77   PSFs are appointed based on their good reputation – in terms of quality of past

78   projects, to obtain repeat work from existing clients or be appointed by new clients

79   (Bos-De Vos et al. 2019a; Winch 2011).

80   PSFs often choose to prioritize quality over profit when profit conflicts with quality (Bos-

81   de Vos et al. 2016). In this case, they choose to do extra work for the project despite

82   the financial risk (Bos-de Vos et al. 2016). However, profit is still important since these

83   organizations are cash generators, not asset-rich organizations (Smyth 2011). Bos-de

4

84   Vos et al. (2019b) adopted a portfolio management perspective to investigate how

85   PSFs manage value slippages and found that PSFs adopt three different strategies: i.

86   Postponing; ii. Compensating and iii. Rejecting a project. However, the study

87   concludes: *"different value slippages risks … pose severe threats, they also provide*

88   *opportunities for enhanced value capture when they are managed well in and across*

89   *projects",* hence balancing value creation and value slippages can be a challenging

90   task.

91

92   ***2.2   Wrongdoing***

93   There are two schools of thought regarding wrongdoing: the "dominant" school and

94   the "alternative" school. Studies of the dominant school offer several assumptions to

95   help define wrongdoing (Palmer 2012, 2013). First, they assume that wrongdoing is a

96   *rare phenomenon*. If employees could draw a line that separates right from wrong,

97   then it is assumed that they could easily identify where the line is drawn and can

98   choose not to cross it (Flyvbjerg et al. 2009). Second, studies view *wrongful behaviors*

99   *as aberrant*, that is, as clear, important and shocking departures from acceptable

100   behavior. For example, Wang et al. (2018) developed a tool for predicting corporate

101   misconduct using a support vector machine to construct its model. Third, the research

102   considers *wrongdoers as "bad apples"*, organizational members who have bad

103   personality traits, are greedy and possess status and powers to control others (O'Reilly

104   and Chatman 2020; Wang et al. 2021). For example, bid riggers engage in a series of

105   illegal procedures to coordinate their pricing strategies in the construction business

106   (Wang et al. 2021). Finally, they assume flawed or distorted *organizational structures*

107   *as "bad barrels",* as the causes of wrongdoing (Lee et al. 2018). These structures

108   include organizational cultures, norms, values, and beliefs that directly or indirectly

109   endorse wrongdoing.

110   Instead, the alternative school assumes wrongdoing as a *normalized* phenomenon.

111   Normalized wrongdoing is a deviant behavior that may violate civil, criminal or

112   administrative law, disobeys explicit industry or professional codes, or breaks less

113   codified organizational rules, social norms, and ethical values (Palmer et al. 2016).

114   The key insights of *normalized* wrongdoing are:

115   • wrongdoing is produced by mindless and *boundedly rational* actors who

116   deliberately engage in misconduct.

117   • wrongdoing is a *common phenomenon*. Employees cannot draw a line that

118   separates right from wrong, thus, they cannot easily identify where the line is

119   drawn.

120   • *wrongful behaviors are considered normal*, that is, they are not clearly

121   distinguished, nor they are important or shocking departures from acceptable

122   behavior.

123   • *wrongdoers are not "bad apples"*, organizational members who have bad

124   personality traits are not necessarily greedy nor possess status and powers to

125   control others.

126   • *organizational structures are neither* flawed nor distorted. Organizational

127   cultures, norms, values, and beliefs may directly or indirectly endorse

128   wrongdoing.

129   The case presented in Section 4 is consistent with this second school of thought.

130   Furthermore, employees engage in interdependent efficient, effective, and

131   coordinated tasks to achieve organizational goals (Mintzberg 1989). Organizational

132   participants are subject to uncertainty, and the more uncertain a situation or task is,

133   the greater the likelihood that these individuals will become more susceptible to

134   influences associated within their contexts. Thus, organizations design administrative

135   systems to minimize uncertainty and enable effective coordination of resources.

136

137   ### 2.3   *Administrative systems*

138   Administrative systems enable employees to act in a programmed fashion by adhering

139   them to rules and guidelines, and organizations to economize on the volume of

140   resources they devote to decision making (Perrow 1972; Simon 1997). Administrative

141   systems are designed to reduce employees' need to conduct mindful and thorough

142   rational analyses of each situation by providing them with guidelines (March and

143   Simon 1958; Palmer 2012). Therefore, the administrative systems view can be

144   summarized to this: *"organizational environments present organizational participants*

145   *with a multitude of complicated decisions. And organizational participants are limited*

146   *in their ability to accumulate and process information needed to make these many*

147   *complicated decisions."* (Palmer 2012 p. 128). Administrative systems help employees

148   cope with the organizational complexity/bounded rationality dilemma. Administrative

149   systems also serve as a common denominator to the competing and conflicting

150   demands of professional and bureaucratic logics that are shared in these

151   organizations (Alvehus 2018). For example, change order management is a challenge

152   for PSFs due to the associated disputes, claims, productivity losses, delays, and cost

153   implications (Naji et al. 2021), Seo et al. (2021) found that a more consistent claim

154   management process aids in the commercial performance of the construction project.

155   However, administrative systems do not always work the way they were intended and

156   as shown in this paper, can lead to wrongdoing.

157

3   Methodology

This study is inductive in nature (Neuman 2014) and is based on a longitudinal case study (Yin 2017), a multi-million consultancy project presented in Section 4. Consistent with inductive reasoning, we started by observing the consultants working on the project and then reflecting on what is taking place and thinking in increasingly more abstract ways, to move toward theoretical concepts (Neuman 2014). We began with a generic topic - what caused the project to fail – and later refined our thinking into more precise concepts. After we analyzed the symptoms of the failed project, we were able to make sense of our case (Weick et al. 2005) and build a coherent story that explained the underlying reasons for the symptoms visible on the surface. Hence, during and after data collection, our focus became to understand what caused consultants to normalize wrongdoing.

3.1   Data collection

The data collected include both real-time primary and secondary data. We collected 35 semi-structured interviews (27 PSF employees and eight client representatives) and 137 archival data of various categories (Table 1) enabled data triangulation (Yin 2017). We triangulated our primary data with secondary sources to minimize bias from retrospective sensemaking. The secondary sources also allowed us to understand better how the case unfolded. A significant source of secondary information was the online contract management system used to govern the project and the weekly-updated progress dashboards the PSF consultants used to monitor and report project performance internally. For the primary data, the interviews and project meetings attended occurred on-site at the PSF offices. The lead author used informal semi-structured interviews over three years with employees and senior managers at several levels: Operations directors and deputies of the PSF, middle managers (project

184 managers, commercial managers) working on the project, and consultants from both

185 organizations delivering the project. Interviews allowed us to describe the struggles of

186 employees and senior managers to understand why and how scope creep[1] occurs.

187 The lead author attended 12 project meetings which lasted between 60-75 minutes.

188 The purpose of those meetings was to discuss the progress of the various project

189 tasks, opportunities, and risks. During those interviews, the concept of "booking on

190 bench"[2] (detailed in Section 4) emerged. Hence, the research team shifted the focus

191 of observations towards the interplay of scope creep and "booking on bench".

192

193   Table 1. Data collection

194

195 **3.2 Data analysis**

196 Our data analysis and research design is inductive. In line with Locke (2020 p. 8), we

197 coded   by   engaging   with   the   literature   *"as   a   source   of   ideas*

198 *that researchers use to help make sense of and theorize about the categorization*

199 *schemes in the project"*. Leveraging administrative systems literature, we were able to

200 structure our qualitative data (Table 2) (Saldaña 2021). We started the data analysis

201 with an exploratory approach, to investigate why and how scope creep occurs. Soon

202 we understood that "booking on bench" is closely linked to scope creep and margin

203 erosion. Thus, the research team went through a second round of analysis to develop

204 a better understanding of the interplay between scope creep and "booking on bench".

205 Our data showed that employees are normalizing wrongdoing out of fear of "booking

206 on bench" (as detailed in Section 4.3). Consulting the administrative systems literature,

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[1] Scope creep is the uncontrolled expansion to a project's scope without adjustments to time, cost, and resources.
[2] The term "booking on bench" is used metaphorically by PSF managers to describe a consultant becoming idle.

207 we understood that the normalized wrongdoing we observed is caused (intentionally

208 or not) by rules rooted in administrative systems.

209 Following this finding, we asked what causes organizations to have inefficient

210 administrative systems in place that force employees to normalize wrongdoing.

211 Consulting the literature once more, we found that organizational myopia promotes

212 inadequate administrative systems leading to normalized wrongdoing (see Section

213 6.1). Ultimately, we developed our process model using administrative systems as the

214 unit of observation.

215 Along with the qualitative analysis of the interviews and text, we did a quantitative

216 analysis. Among other information for each Work Package (WP), we calculated:

217 • *Original contract value*: the sum that the client and PSF agreed on for the originally

218   planned work; this data is available at a single WP level. This is stated in the letter

219   of Acceptance/Contract Agreement.

220 • *PSF fee*: This is the sum requested by PSF to the client. The PSF charges for the

221   work done. The fee is calculated as the sum of person-hours multiplied by the

222   consultant's charge hour. This data is available at a single WP level. The person-

223   hours include all the time spent on the WP, therefore, the original work plus the

224   extra work due to scope changes. The client may disagree/challenge this value,

225   refuse to pay this value, and start the negotiation process.

226 • *Final contract value*: the total amount payable by the Client to the PSF. The value

227   negotiated between the PSF and the client considers the Original contract value,

228   the PSF fee, and the work done. Again, this data is available at a single WP level.

229 • *PSF performance index*: The difference between the "Final contract value" and the

230   "PSF fee" is the PSF performance index calculated as (PSF fee – Final contract

231   value) / PSF fee. It measures the ability of PSF to recover costs. This data is

232   available for each WP.

233   • *Project cost performance index*: this indicator is calculated as (Final contract value

234   - Original contract value) / Original contract value. It measures the cost overrun

235   from the client's perspective. This data is available for each WP.

236   • *Compensation events (CE)*: CE are when the PSF consultant or client issues an

237   official scope change request. According to the official controls, the task relating

238   to the event is put on hold, and the consultant should work on another task. The

239   task related to the CE will proceed only when the two parties *officially* agree.

240   • *Change orders*: The PSF, regularly (about once a month), puts together all the

241   accepted CE and issues in the form of a "change order" to the client. The client

242   pays the agreed fee.

243   The next section describes the empirical setting and introduces how wrongdoing was

244   normalized.

245

246   **4 Empirical setting**

247   ***4.1 The Company***

248   The PSF is the lead engineering consultant, managing the design and the design

249   support of a major project. The PSF has more than 20,000 employees and is organized

250   into various business units focused on different regional market segments with a

251   strong presence in the US, the UK, Europe, Asia and Australia. Its annual revenue is

252   over $5 billion. In the case of the consulting project discussed in this paper, everybody

253   knew that consultants were not adhering to the standards and expectations that the

254   PSF had laid down. Instead, consultants were engaged in a process where

255   wrongdoing was normalized.

256 *4.2 The Project*

257   The project discussed in this paper consists of the PSF producing design work

258   (technical documents) for its client (the development contractor). The original budget

259   was about £7 million pounds. The overall program where the project was set consisted

260   of designing, delivering and maintaining a major infrastructure. The development

261   contractor (hereinafter referred to as a client) was responsible for undertaking the

262   physical construction using its resources, sub-contractors, or a combination of both.

263   The PSF and the client intended to facilitate the production of works through an online

264   contract management system to foster collaborative behaviors, increase productivity,

265   reduce waste and risk. With this system, the two organizations can register scope

266   changes in the form of compensation events (CE). However, as later detailed, the

267   production of design works proved far more challenging than anticipated, resulting in

268   328 registered CE. Only 173 CE were approved (52.7%) by the client.

269   As detailed in Figure 1, despite the initial five-year contract, the relationship soured

270   and became unsustainable after two years and terminated with a settlement figure of

271   £6,77 million. The settlement figure was realized through a series of approved CE

272   issued by the client to cover a portion of the incurred PSF costs. The PSF absorbed

273   the costs not covered by the client due to scope creep resulting in significant margin

274   erosion. The PSF consultants were asked to be assigned to other projects, stressed

275   by the project. Wrongdoing was a key element for this failure and took several forms.

276   A relevant form was the interplay between "scope creep" and "booking on bench", as

277   described in the following section.

278   Figure 1. Project Gantt chart with milestones

12

TASK	START	END	Q2 2014/15	Q3 2014/15	Q4 2014/15	Q1 2015/16	Q2 2015/16	Q3 2015/16	Q4 2015/16	Q1 2016/17	Q2 2016/17	Q3 2016/17	Q4 2016/17
Project start	Q2 2014/15												
Project mobilized			*										
Project execution	Q3 2014/15	Q3 2016/17											
Settlement period	Q3 2016/17	Q4 2016/17											
Settlement agreement												*	
PSF incurs revenue losses	Q4 2016/17												
Project end revised	Q4 2016/17												
Early termination of the contract													*

4.3 The phenomenon: wrongdoing in scope creep and booking on bench

There are many ways scope creep may occur in project-based work, including schedule constraints, poor scope management, requirement volatility (Aizaz et al. 2021; Ajmal et al. 2020; Komal et al. 2020).

In our case, scope creep occurs when a consultant works on unapproved features of a project, devoting time to unauthorized changes. Incorporating these changes must usually be done within the original time and budget estimates, leaving less time for approved scope features. Thus, approved features of the project cannot be completed; hence the project is delivered over budget and late.

The accumulation of scope creep puts pressure on the consultants to justify their time on the project. Because their work includes unapproved features and unauthorized changes, their booked time on the project is often a case of dispute (Cheung et al. 2020). if a project must stall more often than anticipated due to an increasing number of unauthorized changes, the consultant may become idle for a few days. Therefore, the organizational official controls require the consultant to "book on bench". In this instance, the consultant is required to book their time to a company code (overhead cost) instead of a specific project code, which is billable to the client, worsening the project's economics for the PSF.

"Booking on bench" has negative connotations and is detrimental to a consultant's career progression since they look lazy or less ambitious, incapable of managing relationships with the clients, and ultimately unable to generate profits for the PSF.

13

302   Consequently, "booking on bench" is negative for the consultant's career, considering

303   the sector's "up or out" culture (Mcgrath and Van Putten 2017). This widely accepted

304   policy requires PSF employees to race up the promotion ladder or face being eased

305   out.

306   Under these accumulated circumstances, wrongdoing became normalized. "Booking

307   on bench" is codified by both official and unofficial controls. Therefore, when a client

308   representative repeatedly requests the consultant to work on unapproved features or

309   unauthorized changes, the consultant is confronted with an ethical and practical

310   dilemma, i.e., choosing between: (A) follow the official controls and "book on bench"

311   until unapproved changes become authorized, or (B) follow the unofficial controls

312   informally explained to them. Under scenario (A), the consultant will "book on bench",

313   and if this is done repeatedly, their career could take a downturn. Under (B) scenario,

314   the consultant will do the task required by the client representative, asking for the

315   authorization retrospectively from both the client - that need to pay for it - and the PSF

316   - that need to agree on the number of hours charged. Under (B), the consultant

317   normalizes wrongdoing by *gradually* conducting additional tentative unauthorized

318   work, leading to scope creep. Normally, the consultant expects that an agreement for

319   further compensation between the two organizations will be reached.

320   However, we show in Section 5 that often, this agreement is not reached, generating

321   scope creep and margin erosion for the PSF. Moreover, we show that the process of

322   reaching the agreement (or not) requires time and resources, causes delays,

323   decreases trust between project parties, and reduces the project's overall financial and

324   non-financial benefits.

325 ### *4.4 Theoretical motivation: Administrative systems*

326 Considering what was discussed in the previous section, the reader might wonder,

327 "what puts the consultant in this position?" The answer is "Inadequate Administrative

328 systems". Issues arise when there is tension between official and unofficial controls.

329 So, if the PSF official control rule asks the consultant to "book on bench" in case of a

330 scope change, why should consultants be penalized for that? PSF Top management

331 has a quick and simple way to check consultants' performance: checking their billable

332 time. The more one consultant books on company code (overhead), the worse their

333 billable time will be. In their resource team pool, because their billable hours are low,

334 they cannot be considered as outstanding performers, so they won't get the max

335 bonus in their pool, and they won't be considered for promotion. This puts pressure on

336 the consultant to increase their billable hours. So, on the one hand, they must put up

337 with clients' shenanigans or "book on bench", on the other hand, they will be penalized

338 if their billable hours are low despite doing the right thing and book on company time.

339 The PSF consultants are not "bad apples": the wrongdoing is caused (intentionally or

340 not) by rules rooted in administrative systems (Palmer 2012). To perform our analysis,

341 we navigated among three levels (project governance, project, individual).

342 ## 5 Findings

343 ### *5.1 Governance-level - PSF Performance*

344 The final contract value (£6,77 million) following the settlement negotiation deviated

345 significantly from the PSF incurred fee (£8,32 million), resulting in a 19% loss of

346 expected revenue for the PSF. For PSFs, profit margins tend to be 20%-35% for

347 projects like the one discussed our study (Nanda and Narayandas 2021); therefore,

348 the PSF did not make any profit.

349   PSF top managers use *rules* to develop performance prescriptions and set

350   organizational performance targets, incentives, and evaluation criteria. In this case,

351   during performance meetings among the project management consultants and the top

352   management team, the expectation was that a steady stream of secured, completed

353   and therefore billable WPs would be coming through the project. The revenue stream

354   estimates were derived from the current year's growth target calculated as the

355   performance of the past year plus a percentage (e.g. 10%). Robust and constant

356   growth is an unrealistic rule of thumb (*schemas and scripts*) (Mcgrath and Van Putten

357   2017). This created pressure on the consultants to deliver the project on time and

358   budget and increase the scope of work (adding more WPs) through an aggressive

359   client relationship management approach.

360   Administrative systems played a crucial role in shaping behaviors and actions during

361   project delivery. The PSF's top management set *standard operating procedures* to

362   obtain periodically a clear view of how projects perform. The PSF's project manager

363   had to prepare a project dashboard and report *opportunities* regarding business

364   development and *performance* in terms of project management efficiency. During

365   these meetings, top management was inflexible that projects could deviate from their

366   target gross margins. Their motto was *"it's what's [originally] registered on the system*

367   *that counts"*, so projects ought to produce an expected level of margins, e.g. 20%-35%

368   to cover overheads. If projects yielded lower margins, top management was upset,

369   and the project manager would be under severe scrutiny going forward.

370   ### 5.2 Project-level - Project Cost Performance

371   From the client's point of view, the original contract value of the project was £2.90

372   million; the final contract value was £6.80 million, with a cost overrun of 133.80%. A

373   total of 328 CE were raised, but only 173 CE were approved by the client (£3.90

374   million). The PSF fee was about £8.32 million but received only £6.80 million.

375   Therefore, a project originally agreed for £2.90 million ended up at £6.80 million,

376   leaving both client and PSF dissatisfied. Scope creep and "booking on bench" were

377   the key explanatory reasons.

378   To get a better view of how scope creep works, Figure 2 shows the approved change

379   orders (aggregated approved CE paid by the client in a period) and the non-approved

380   change orders raised by the PSF. The vast majority of change orders are minor,

381   therefore, cost overrun is not explained by a single CE. Instead, it is distributed in a

382   plethora of small scope changes that contributed to scope creep. The histogram is

383   highly skewed due to scope creep because of the many small changes (<£25k) that

384   the client did not approve.

385

386   Figure 2. Size of approved and non-approved change orders by value
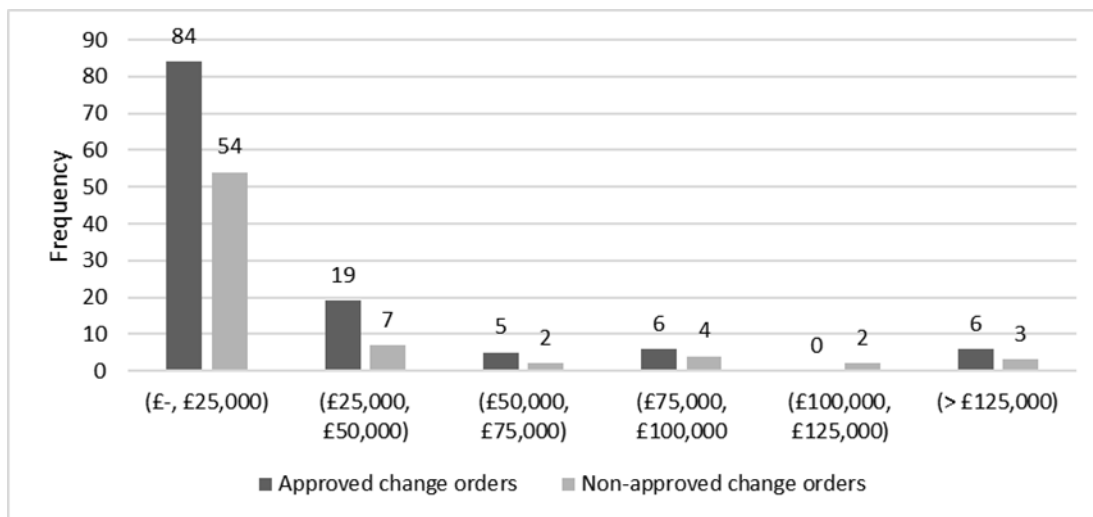
387

388

389   Initially, all contracts and CE followed a *formal documented project governance*

390   *process* through the online contract management system. However, soon, the client

391   took powers through their *formal client representative roles*, used *informal*

17

392 *communication controls* to hint the fee deemed acceptable for the scope of work, such

393 as using informal calls and chats in the client's office corridors and recalling on

394 previous WPs to price the work. This created issues as the fees were already

395 predetermined without having a full scope of works prepared by the PSF, quoting:

396

397 *PSF: "As per email request from [client rep] on 10 February 2016, additional time was*

398 *spent preparing and submitting documents for input into the [WP]. This is additional to*

399 *our [original] scope of works and will incur additional cost."*

400

401 The cumulative pressure to increase the volume of works imposed by the PSF's top

402 management forced the PSF project manager - who was responsible for making the

403 project a financial success - to submit proposals based on the fees the client hinted,

404 even though this was not allowed, and therefore committing wrongdoing. Eventually,

405 the PSF consultants' intentions quickly shifted from providing the best technical

406 solution to equipping themselves with strict risk management practices.

407 At a meeting, the two project consultants, the PSF's project manager was heard saying

408 to the project's commercial manager:

409

410 *"Submit the proposal with the suggested fees, and if they [the client] want changes,*

411 *we'll hit them with CE".*

412

413 In another instance, the client refused to cover additional costs incurred by the PSF

414 because no early warnings were raised on the contract system. However, the PSF

415 consultants were informally asked to provide other documentation which was not

416 initially part of the scope on a WP:

417

418 *Client: "No* **formal** *instruction was given to assist with the [WP]. [WP] costs should be*

419 *attributed to each change (CE), this is a global catch-all assessment and is not a*

420 *change to the contract. In addition, this is a late assessment of costs that have already*

421 *been incurred in which were not previously raised."*

422

423 When CE were raised, the client did not immediately record their response on the

424 system, as illustrated in Figure 3. Indeed, Figure 3 shows that about half of the raised

425 requests took one year to be approved. As a result, the PSF consultants had to work

426 under risk instead of freezing all ongoing work and "book on bench" if required until a

427 resolution was reached.

428

429 Figure 3. No. of days it took the client to approve CE
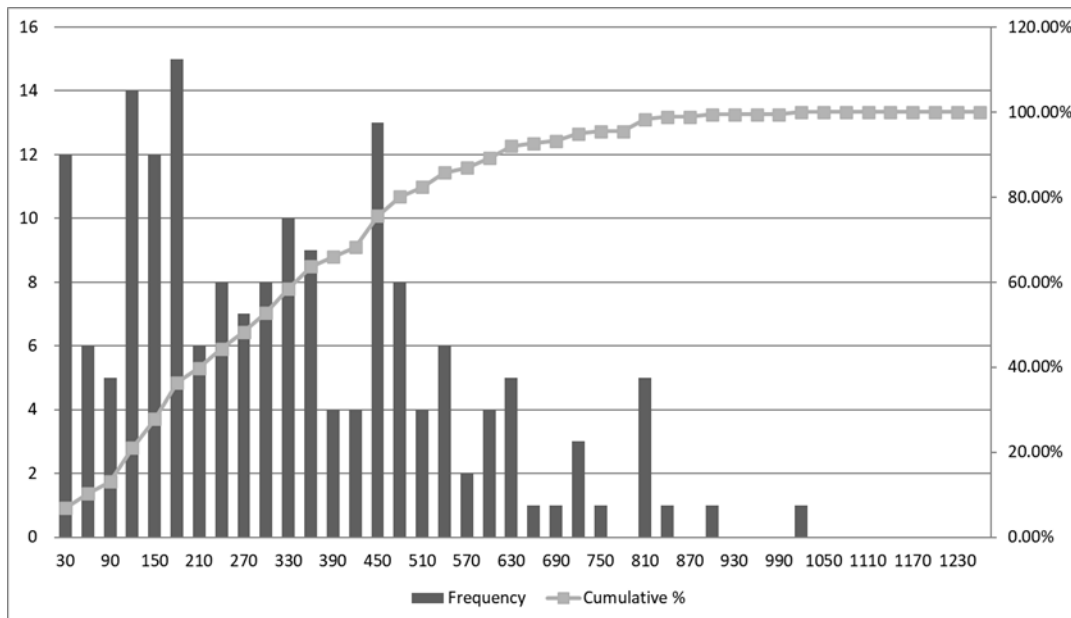
430

431

432 Soon, the PSF project consultants caught up in a storm of CE pending approval and

433 requests for work that were not authorized but were only informally communicated.

434 Again, this is an issue rooted in the administrative systems. If, for instance, the median

435 time to respond to a CE was a few days instead of one year, there would hardly be an

436 issue. However, the systems and project actors made the process of approving CE

437 extremely long, creating an avalanche effect leading to all kinds of inefficiencies and

438 perverse incentives.

439

5.3   Individual-level – The Consultants

441 Considering the above, an information barrier between the PSF technical and the

442 project management consultants emerged, each caught in their issues due to the way

443 projects are organized in various sub-disciplines *(division of labor)*. Using official

444 controls (i.e., intranet project reports), the PSF project management consultants

445 received past week's timesheets booked on the project and could see if any

446 discrepancies exist against the originally planned resource plan. After a short period,

447 this resulted in a build-up of additional person-hours implemented across the 120 WP

448 that the PSF project management consultants could not verify contractually, and the

449 PSF technical consultants could not justify. Assuming that everybody followed the

450 official rules, the PSF technical consultants carried on working, considering that the

451 project management consultants between the two organizations would have reached

452 an agreement. Because of the division of labor, the PSF technical consultants were

453 not even aware of their wrongdoing; instead, they casually worked following the official

454 rules.

455 As a result, the PSF project management increased their project time to a whopping

456 average of 28%. This finding is in stark contrast with recent studies that report that

457 supply chain project management costs are circa 10% and, in general, anywhere

458 between 2% and 15% (Haaskjold et al. 2021; Kerzner 2017).

459 Two instances of normalized wrongdoing are discussed to illustrate the interplay of

460 scope creep and "booking on bench" further.

461   In the first instance, to meet the quarterly targets, the PSF's project management

462 consultant registered as income in the system the work that had been tentatively

20

463   confirmed but not yet invoiced to the client. Following the official controls protocols,

464   the consultant should not have documented this as registered revenue in the system.

465   This was categorically against the standard operating procedures of the PSF because,

466   if the client submitted an instruction to descope, this revenue would not exist. However,

467   the consultant was confident that, similarly to his past experiences (*schemas and*

468   *scripts*) delivering projects for other clients, the scope would increase because the

469   relationships with the client and PSF would be improved. In an interview, he justified

470   his actions as: *"I need to get out [go to the client offices] and win us more work,*

471   *otherwise people will be made redundant!".*

472   In another instance, during project delivery, the PSF consultants found themselves

473   working under severe risk with the possibility of "booking on bench" if a solution is not

474   found soon between the two organizations. Under the contract, the consultants ought

475   to carry on and meet the project milestones laying ahead. The amount of scope creep

476   created a backlog of work which created further confusion for the consultants. The

477   PSF's project manager took leadership of the situation in a desperate move to keep

478   the project alive, as the PSF's commercial manager informed the client's counterpart:

479

480   *"As advised previously, the current design program is delayed, and the design duration*

481   *is being squeezed yet again. To work collaboratively to help [the project] deliver the*

482   *WP, [PSF's project manager] assessed the current program/activities and advised that*

483   *the following key activities could be progressed now at RISK [sic] to gain some ground*

484   *on the program."*

485

486   The PSF consultants working on the project were too busy to meet the project

487   milestones and complete the tasks. At this point, it did not matter to them which tasks

21

488   have been authorized and which tasks were pending authorization. In one interview,

489   PSF's operations director argued:

490

491   *"It's not their (the PSF consultants) money who is at stake here, if they were spending*

492   *their money, they would not do the work".*

493

494   The consultants' actions were justified by two types of controls to avoid "booking on

495   bench", which inevitably lead to wrongdoing. Formally, the PSF consultants were

496   registering the hours worked on the project. This way, they justified their time as

497   billable in the eyes of the PSF. After all, they were indeed working on the project.

498   Informally, they deluded themselves that eventually, the PSF would receive

499   compensation for their work hours. Ultimately, they did the work the client asked them

500   to do.

501

502   **6   Discussion**

503   *6.1   Theoretical lens: Bounded Rationality and Organizational Myopia*

504   Thus far, we showed how and why administrative systems led to wrongdoing and

505   ultimately to the failure of this project. The PSF was full of experienced and highly

506   educated managers who unfortunately set up those inefficient administrative systems.

507   Despite the projects slowly failing in front of their eyes, the managers could not see

508   the inadequacy of those administrative systems. This ultimately led to a major

509   economic loss for the organizations and highly stressful environments for managers

510   and consultants. Why organizations full of experienced and educated people behave

511   irrationally is explained by bounded rationality theory.

512   Bounded rationality concerns the people's (and institutions) cognitive limits in dealing

513   with and making sense of complex and large volumes of information in their decision-

514   making process (Mellahi and Collings 2010; Simon 1997). The theory of bounded

22

515 rationality *is "as much concerned with procedural rationality, the quality of the*

516 *processes of decision, as with substantive rationality, the quality of the outcome"*

517 (Simon 2000 p. 25). Bounded rationality theory is multifaceted. In this paper, we

518 consider a relatively new concept, that has relevant explanatory power: Organizational

519 myopia.

520 Organizational myopia is a condition *"where the sense-making capabilities among the*

521 *members in collectivities are limited to their contexts. Emerging orders or patterns are*

522 *like the flocks of sheep that are nicely organized. Each sheep knows how to behave*

523 *and watch out for each other in a collectivity. But none observes their collective*

524 *behaviors as a whole. […] In collective myopia, [managers or decision makers] can no*

525 *longer monitor as a whole the emerging orders or patterns that are created by*

526 *themselves. The sense-making of these members is, thus, confined to the limited*

527 *context of their own concerns."* (Chikudate 2015 p. 16).

528 Organizational myopia is the bounded rationality of the people collectively working in

529 an organization. Organizations develop myopia when the status quo is no longer

530 challenged: "we do things in this way because this is our way of doing things". We

531 found that organizational myopia promotes inefficient administrative systems which

532 normalize wrongdoing. We use the metaphor of an iceberg to illustrate our model

533 (Figure 5). Visible is the tip of the iceberg, i.e., a failed project.

534

535 *6.2   Cross-level Model of Organizational Myopia and Normal Wrongdoing*

536 Our study was originally motivated to answer the following question: *"why and how*

537 *PSFs' administrative systems normalize the wrongdoing of white-collar employees?"*

538 To answer this question, we showed that normalized wrongdoing by white-collar

539 employees is rooted in the administrative systems. However, administrative systems

540 are not naturally occurring phenomena; they are systems designed by managers

23

541   (Simon 1997), so it is quite surprising that managers cannot improve or redesign them

542   when they are not working. The case study of this paper is not exceptional; in our

543   experience, we went through several inefficient administrative systems, and probably

544   the reader has experienced their fair share of them. So, a follow-up question to our

545   original research question is: Why don't managers improve administrative systems

546   that are not working? To answer this question, we introduced the lens of Bounded

547   rationality and Organizational Myopia.

548   At the governance level, the model (See Appendix 1) begins with the PSF's top

549   management setting actions around performance goals, coupled with the client's top

550   management actions of hinting the 'right' fee to the PSF's consultants. At this level,

551   myopia promotes these behaviors, and as a result, it drives the PSF to be shortsighted

552   in its pursuit of revenue and the client to downplay quality over project cost.

553   Post-contract award, the PSF's top management goes by the book, without realizing

554   due to organizational myopia, that the project was underbid and heavily relying on risk

555   to increase revenue dumping all the pressure on the consultants. At the same time,

556   the client's top management is urged to keep the project at the original fee and pushes

557   back on paying premiums due to requests for scope change. Therefore, actions that

558   are forced by myopia result in margin erosion and, inadvertently, reputational damage

559   to the PSF.

560   At the project level, the project consultants are underbid to satisfy the client requests

561   and PSFs growth targets. The PSF consultants are forced to equip the project with

562   risk management approaches, anticipating the client demands will rise as the project

563   matures. The consequences of these actions grant a suboptimal technical solution

564   and increased use of risk management methods. However, misuse of risk

565   management practices causes more harm than good (Krystallis et al. 2020, 2021;

566　Lenfle and Loch 2010). This environment permitted by myopia also promotes trust

567　issues between the two project parties since their relationship becomes transactional

568　instead of collaborative.

569　As the project matures, the PSF consultants are caught in a storm of pending CE,

570　unapproved CE, and agreed on new business. The consultants find it difficult to

571　communicate scope changes on time. Eventually, work needs to get done, so the

572　consultants are working at risk, and due to bounded rationality, they expect that

573　everything will be sorted eventually. Myopia promotes behaviors and actions at this

574　level, resulting in increased project costs, time overruns, and client dissatisfaction.

575　At the individual level, the PSF consultant forced by the cumulative pressure to

576　increase the volume of work imposed by the PSF's top management, as discussed in

577　Section 5.3, underbids the proposal to secure it and does not worry about the project's

578　actual deliverability. As a result, the consultant registers revenue that is not realized

579　to satisfy both 'masters' (i.e., the PSF and the client organization), thereby normalizing

580　wrongdoing. As the project matures, the consultants are stressed and face a dilemma,

581　that is, booking on bench or working under risk. Eventually, they choose the latter, yet

582　they bill their worked hours to the project to justify their actions. Yet, they commit

583　wrongdoing because no authorization is given to carry the work through official

584　controls, and they are therefore breaking the rules. Ultimately the project was not

585　delivered, despite the actual cost being more than the budget cost. This situation led

586　to the early termination of the contract and to project failure, as the case discussed in

587　this paper.

588

589   **6.3   Sense-making and Generalization**

590   Our findings provide several insights into white-collar wrongdoing, which can be

591   generalized to a wide range of project-based organizations. The generalization of our

592   findings is shown in Figure 4. Our data shows that organizational myopia promotes

593   inefficient administrative systems and, in turn, white-collar wrongdoing. This

594   wrongdoing ultimately led to a failed project.

595   *Top management wrongdoing vs white-collar wrongdoing*. Our study found that

596   wrongdoing exercised by the top management is vastly different from white-collar

597   wrongdoing. Indeed, the dominant view in the literature of wrongdoing is that top

598   managers commit wrongdoing intentionally and mobilize followers to pursue

599   dangerous and unethical goals, therefore, putting organizations at risk.

600

601   Figure 4. Synthesis of findings
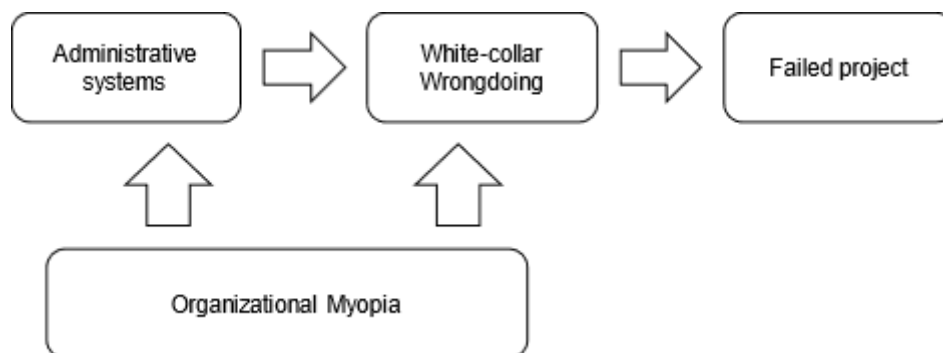
602

603

604   Several studies unpacked the personality traits of top managers, suggesting that they

605   are narcissists, have lower levels of conscientiousness, are likely to be excessive risk-

606   takers, and often make bold actions to obtain frequent praise and admiration from

607   others (Lee et al. 2018; O'Reilly and Chatman 2020; Wang et al. 2018, 2020). Instead,

608   we find that wrongdoing by white-collar employees is unintentional and is also not an

609   aberrant phenomenon. Our findings align with the few studies that investigated white-

        26

610 collar wrongdoing (Pinto 2014; Vaughan 1996), which views wrongdoing as a

611 normalized phenomenon exercised by white-collar employees in a mindless, bounded

612 way.

613 *Relationship between white-collar wrongdoing and project performance*. We

614 operationalized white-collar wrongdoing by measuring project performance. Previous

615 studies linked wrongdoing and project performance as the deliberate actions (strategic

616 misrepresentation) top executives employ to deceive their clients (Flyvbjerg et al.

617 2009). Our findings offer a different view. While top management wrongdoing is a

618 result of discrete decision-making (Palmer 2012), in this study, we show that white-

619 collar wrongdoing is a subtle behavior resulting from an accumulation of decisions that

620 leads projects to slip and ultimately fail. This finding extends the current understanding

621 of the effects of wrongdoing on project performance and expands previous findings

622 that situated wrongdoing in the low bidding process (Gransberg 2020).

623 *Relationship between inefficient administrative systems and white-collar wrongdoing.*

624 We found that inefficient administrative systems influence white-collar wrongdoing.

625 This was a surprising finding because organizations place administrative systems to

626 help facilitate work and prevent employees from making inappropriate decisions

627 (Simon 1997). Recent work has looked to address the problem of how organizational

628 rules are violated by its employees (Busby and Iszatt-White 2016), but how

629 organizational rules and, more generally, administrative systems program wrongdoing

630 either by design or inadvertently is underexplored. In turn, our findings provide new

631 insights on this very important assumption.

632 *Relationship between myopia, inefficient administrative systems and white-collar*

633 *wrongdoing.* Wrongdoing and inefficient administrative systems were found to be

634 promoted by organization myopia. This finding resonates with the literature and

635 connects myopia to wrongdoing and administrative systems. Previous studies connect

636 normal wrongdoing to inefficient administrative systems (Palmer 2012), but we still do

637 not know why these systems are inefficient in the first place. Our data showed that

638 myopia promotes inefficient administrative systems and how these systems, in turn,

639 enabled white-collar wrongdoing. Specifically, the consultants become ethically blind

640 and cannot distinguish anymore what is right from what is wrong (Palazzo et al. 2012),

641 leading to normalized wrongdoing.

642

643 **7 Conclusions, Implications and Future Directions**

644 A common sense-making of our case could follow the narrative that service firms take

645 unprofitable projects to build/keep a portfolio of projects or keep a continuous workflow

646 to retain their staff. Thus, such undertakings are neither 'wrongdoing' nor

647 'organizational myopia'. They are simply strategic decisions for higher long-term good.

648 However, the evidence of our case does not align with this narrative. We had access

649 to a case of a PSF where normalized wrongdoing is a routine and widespread across

650 the consultants. We provided a cause-and-effect process model that identifies poor

651 PSF performance, a failed project and normalized wrongdoing as the effects at the

652 three levels of our investigation (governance, project, individual-level), whereas

653 myopia promotes inefficient administrative systems and how these systems, in turn,

654 enabled white-collar wrongdoing.

655 The contributions of our paper are threefold. First, we contribute to the literature on

656 wrongdoing bringing together myopia and wrongdoing as interconnected phenomena.

657 The literature is extensive on how top managers commit wrongdoing (Lee et al. 2018;

658 O'Reilly and Chatman 2020; Wang et al. 2018, 2020). Significantly less is known from

659 the perspective of white-collar employees and why and how they normalize

660 wrongdoing. We show how organizational myopia can explain their wrongdoing. PSF

661 employees such as consultants can also be the source of wrongdoing, albeit differently

662 from top managers. Employees may also appropriate wrongful behaviors without even

663 having the inclination to do so. As such, our study reconciles two seemingly divergent

664 perspectives, wrongdoing (Palmer 2012), and organizational myopia (Chikudate

665 2015).

666 Second, we contribute to administrative systems literature showing their link with

667 project performance. Whilst the narrative that individuals (suppliers) are deceitful

668 acting for their benefit (Flyvbjerg et al. 2009; Wang et al. 2021), we take a bounded

669 rationality perspective that assumes individuals as prisoners held by their

670 surroundings. We derived a model that explains how administrative systems drive

671 employees to normalize wrongdoing. Thus, our study sheds light on previously

672 overlooked gaps in our theoretical understanding of project performance. Third, we

673 contribute to the growing stream of studies researching scope creep. Research on

674 scope creep has often addressed the causes of scope creep from a stakeholder

675 perspective; project type-specific or within the project boundaries, and project

676 management perspective (Aizaz et al. 2021; Ajmal et al. 2020; Komal et al. 2020). For

677 example, recent studies (Aizaz et al. 2021; Komal et al. 2020) classified scope creep

678 factors and methodologies from countering such factors. Aizaz et al. (2021) proposed

679 a conceptual model that could help project managers effectively evaluate the impact

680 of scope creep in agile projects. Ajmal et al. (2020) adopted a stakeholder view and,

681 relying on stakeholder theory, proposed a framework for managing scope creep,

682 showing that communication is the major cause of scope creep. However, fewer

683 studies have considered an organizational perspective (e.g., administrative systems)

684 and the bounded rationality of consultants (e.g., engineers) on scope creep. Our study

29

685   shows that both administrative systems and consultants play a role in project scope

686   creep.

687   Often organizations staffed with intellectual and trained people have inefficient

688   administrative systems. We show how these systems lead to negative consequences

689   for organizations, projects, and employees. Like an iceberg, where only the tip

690   emerges, the normalized wrongdoing of individuals is not the cause of these issues

691   but the most visible phenomenon of something rooted in organizational myopia. In this

692   paper, supported by a practical case, we aim to frame this undesirable situation and

693   provide the first steps toward a solution.

694   Our findings would benefit future research and the need for an integrated model that

695   considers anti-wrongdoing measures (Lehtinen et al. 2022; Müller et al. 2014, 2016,

696   2019; Owusu and Chan 2019). Normal wrongdoing is difficult to spot and measure. It

697   is very different to red-handed wrongdoing and much less likely to be penalized by

698   legal enforcement (Signor et al. 2020a; b). Our study relied on a deep investigation of

699   a case study that captured the everyday activities of white-collar employees. We had

700   to adopt this approach because previous literature is limited in this area. Our findings

701   pave the way for future studies in this novel area. Ultimately, we found that inefficient

702   systems and organizational myopia promote normal wrongdoing leading to project

703   failure. This new proposition contributes to the project studies literature and needs

704   further testing. This new proposition adds to the debate whether biases or heuristics

705   (Love et al. 2021) is the dominant explanation of project performance.

706

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713   their constructive feedback.

714   **Data Availability Statement**

715   Some or all data, models, or code generated or used during the study are proprietary

716   or confidential in nature and may only be provided with restrictions. Descriptive data

717   referring to project performance are available from the corresponding author upon

718   request.

719

720   **References**

721   Aizaz, F., S. U. R. Khan, J. A. Khan, Inayat-Ur-Rehman, and A. Akhunzada. 2021. "An

722   Empirical Investigation of Factors Causing Scope Creep in Agile Global Software

723   Development Context: A Conceptual Model for Project Managers." *IEEE Access*,

724   9: 109166–109195. IEEE. https://doi.org/10.1109/ACCESS.2021.3100779.

725   Ajmal, M., M. Khan, and H. Al-Yafei. 2020. "Exploring factors behind project scope

726   creep – stakeholders' perspective." *International Journal of Managing Projects in*

727   *Business*,   13   (3):   483–504.   Emerald   Publishing   Limited.

728   https://doi.org/10.1108/IJMPB-10-2018-0228.

729   Alvehus, J. 2018. "Conflicting logics? The role of HRM in a professional service firm."

730   *Human Resource Management Journal*, 28 (1): 31–44. John Wiley & Sons, Ltd.

731   https://doi.org/10.1111/1748-8583.12159.

732   Bos-De Vos, M., B. M. Lieftink, and K. Lauche. 2019a. "How to claim what is mine:

733   Negotiating   professional   roles   in   inter-organizational   projects."   *Journal   of*

734   *Professions and Organization*, 6 (2): 128–155. Oxford Academic.

735   https://doi.org/10.1093/JPO/JOZ004.

736   Bos-de Vos, M., L. Volker, and H. Wamelink. 2019b. "Enhancing value capture by

737   managing risks of value slippage in and across projects." *International Journal of*

738   *Project Management*, 37 (5): 767–783. Pergamon.

739   https://doi.org/10.1016/J.IJPROMAN.2018.12.007.

740   Bos-de Vos, M., J. W. F. H. Wamelink, and L. Volker. 2016. "Trade-offs in the value

741   capture of architectural firms: the significance of professional value." *Construction*

742   *Management and Economics*, 34 (1): 21–34. Routledge.

743   https://doi.org/10.1080/01446193.2016.1177192.

744   Busby, J. S., and M. Iszatt-White. 2016. "Rationalizing Violation: Ordered Accounts of

745   Intentionality in the Breaking of Safety Rules." *Organization Studies*, 37 (1): 35–

746   53. https://doi.org/10.1177/0170840615593590.

747   Cheung, S. O., M. Asce, K. Li, and O. Y. Chow. 2020. "Reactive Devaluation as a

748   Psychological Impediment to Construction Dispute Negotiation." *Journal of*

749   *Management in Engineering*, 36 (4): 04020025. American Society of Civil

750   Engineers. https://doi.org/10.1061/(ASCE)ME.1943-5479.0000787.

751   Chikudate, N. 2015. *Collective myopia in Japanese organizations: A transcultural*

752   *approach for identifying corporate meltdowns*. Springer.

753   Denicol, J., A. Davies, and I. Krystallis. 2020. "What are the causes and cures of poor

754   megaproject performance? A systematic literature review and research agenda."

755   *Project Management Journal*, 00 (0): 1–18.

756   https://doi.org/10.1177/8756972819896113.

757 Flyvbjerg, B. 2008. "Curbing optimism bias and strategic misrepresentation in

758   planning: Reference class forecasting in practice." *European Planning Studies*,

759   16 (1): 3–21. Routledge. https://doi.org/10.1080/09654310701747936.

760 Flyvbjerg, B., M. Garbuio, and D. Lovallo. 2009. "Deception in large infrastructure

761   projects: Two models for explaining and preventing executive disaster." *California*

762   *Management Review*, 51 (2): 170–194. SAGE Publications Sage CA: Los

763   Angeles, CA. https://doi.org/10.2307/41166485.

764 Gransberg, D. D. 2020. "Does Low Bid Award Facilitate Wrongdoing? US Implications

765   of Quebec's Charbonneau Commission Report." *Journal of Legal Affairs and*

766   *Dispute Resolution in Engineering and Construction*, 12 (1): 03719004.

767   https://doi.org/10.1061/(asce)la.1943-4170.0000357.

768 Haaskjold, H., B. Andersen, and J. A. Langlo. 2021. "Dissecting the project anatomy:

769   Understanding the cost of managing construction projects." *Production Planning*

770   *& Control*, 1–22. Taylor & Francis.

771 Kerzner, H. 2017. *Project management: a systems approach to planning, scheduling,*

772   *and controlling*. New York, NY: John Wiley & Sons.

773 Komal, B., U. I. Janjua, F. Anwar, T. M. Madni, M. F. Cheema, M. N. Malik, and A. R.

774   Shahid. 2020. "The Impact of Scope Creep on Project Success: An Empirical

775   Investigation." *IEEE Access*, 8: 125755–125775. IEEE.

776   https://doi.org/10.1109/ACCESS.2020.3007098.

777 Krystallis, I., G. Locatelli, and N. Murtagh. 2020. "Talking About Futureproofing: Real

778   Options Reasoning in Complex Infrastructure Projects." *IEEE Transactions on*

779   *Engineering Management*, 1–14. IEEE.

780   https://doi.org/10.1109/tem.2020.3026454.

781 Krystallis, I., G. Locatelli, and N. Murtagh. 2021. "Futureproofing Complex

782   Infrastructure Projects Using Real Options." *IEEE Engineering Management*

783   *Review*, 49 (1): 127–132. IEEE. https://doi.org/10.1109/EMR.2020.3036446.

784 Lee, C.-J., R. Wang, ; Cheng-Yu Lee, ; Cathy, C. W. Hung, S.-C. Hsu, and A. M. Asce.

785   2018. "Board Structure and Directors' Role in Preventing Corporate Misconduct

786   in the Construction Industry." *Journal of Management in Engineering*, 34 (2):

787   04017067. American Society of Civil Engineers.

788   https://doi.org/10.1061/(ASCE)ME.1943-5479.0000593.

789 Lehtinen, J., G. Locatelli, T. Sainati, K. Artto, and B. Evans. 2022. "The grand

790   challenge: Effective anti-corruption measures in projects." *International Journal of*

791   *Project Management*,. https://doi.org/10.1016/J.IJPROMAN.2022.04.003.

792 Lenfle, S., and C. Loch. 2010. "Lost roots: How project management came to

793   emphasize control over flexibility and novelty." *California Management Review*,

794   53 (1): 32–55. SAGE Publications Sage CA: Los Angeles, CA.

795   https://doi.org/10.1525/cmr.2010.53.1.32.

796 Locke, K., M. Feldman, and K. Golden-Biddle. 2020. "Coding Practices and Iterativity:

797   Beyond Templates for Analyzing Qualitative Data." *Organizational Research*

798   *Methods*. SAGE PublicationsSage CA: Los Angeles, CA.

799   https://doi.org/10.1177/1094428120948600.

800 Love, P. E. D., L. A. Ika, J. Matthews, and W. Fang. 2021. "Risk and Uncertainty in the

801   Cost Contingency of Transport Projects: Accommodating Bias or Heuristics, or

802   Both?" *IEEE Transactions on Engineering Management*. IEEE.

803 March, J. G., and H. A. Simon. 1958. *Organizations*. New York: John Wiley & Sons.

804 Mcgrath, R., and A. Van Putten. 2017. "How to Set More-Realistic Growth Targets."

805   *Harvard Business Review*, 1–8.

806 Mellahi, K., and D. G. Collings. 2010. "The barriers to effective global talent

807 management: The example of corporate élites in MNEs." *Journal of World*

808 *Business*, 45 (2): 143–149. Elsevier. https://doi.org/10.1016/j.jwb.2009.09.018.

809 Mintzberg, H. 1989. "The Structuring of Organizations." *Readings in Strategic*

810 *Management*, 322–352. Springer.

811 Morris, P. W. G. 1994. *The Management of Projects*. T. Telford.

812 Müller, R., N. Drouin, and S. Sankaran. 2019. "Modeling Organizational Project

813 Management." *Project Management Journal*, 50 (4): 499–513. SAGE

814 PublicationsSage CA: Los Angeles, CA.

815 https://doi.org/10.1177/8756972819847876.

816 Müller, R., J. R. Turner, E. S. Andersen, J. Shao, and Ø. Kvalnes. 2016. "Governance

817 and Ethics in Temporary Organizations: The Mediating Role of Corporate

818 Governance." *Project Management Journal*, 47 (6): 7–23. SAGE

819 PublicationsSage CA: Los Angeles, CA.

820 https://doi.org/10.1177/875697281604700602.

821 Müller, R., R. Turner, E. S. Andersen, J. Shao, and Ø. Kvalnes. 2014. "Ethics, trust,

822 and governance in temporary organizations." *Project Management Journal*, 45

823 (4): 39–54. SAGE PublicationsSage CA: Los Angeles, CA.

824 https://doi.org/10.1002/pmj.21432.

825 Naji, K. K., M. Gunduz, and A. F. Naser. 2021. "An Adaptive Neurofuzzy Inference

826 System for the Assessment of Change Order Management Performance in

827 Construction." *Journal of Management in Engineering*, 38 (2): 04021098.

828 American Society of Civil Engineers. https://doi.org/10.1061/(ASCE)ME.1943-

829 5479.0001017.

830   Nanda, A., and D. Narayandas. 2021. "Professional Service Firms Must Do to Thrive."

831   *Harvard Business Review*, 99 (2): 98–108.

832   Neuman, L. W. 2014. *Social research methods - Qualitative and Quantitative*

833   *Approaches*. Harlow, Essex: Pearson Education.

834   O'Reilly, C. A., and J. A. Chatman. 2020. "Transformational Leader or Narcissist? How

835   Grandiose Narcissists Can Create and Destroy Organizations and Institutions."

836   *California Management Review*, 62 (3): 5–27. SAGE Publications Sage CA: Los

837   Angeles, CA. https://doi.org/10.1177/0008125620914989.

838   Owusu, E. K., and A. P. C. Chan. 2019. "Barriers Affecting Effective Application of

839   Anticorruption Measures in Infrastructure Projects: Disparities between

840   Developed and Developing Countries." *Journal of Management in Engineering*,

841   35 (1): 04018056. American Society of Civil Engineers.

842   https://doi.org/10.1061/(ASCE)ME.1943-5479.0000667.

843   Palazzo, G., F. Krings, and U. Hoffrage. 2012. "Ethical blindness." *Journal of business*

844   *ethics*, 109 (3): 323–338. Springer.

845   Palmer, D. 2012. *Normal Organizational Wrongdoing: A Critical Analysis of Theories*

846   *of Misconduct in and by Organizations*. New York, NY: Oxford University Press.

847   Palmer, D. 2013. "The new perspective on organizational wrongdoing." *California*

848   *Management Review*, 56 (1): 5–23. SAGE Publications Sage CA: Los Angeles,

849   CA. https://doi.org/10.1525/cmr.2013.56.1.5.

850   Palmer, D., K. Smith-Crowe, and R. Greenwood. 2016. "The imbalances and

851   limitations of theory and research on organizational wrongdoing." *Organizational*

852   *Wrongdoing: Key Perspectives and New Directions*, 1–16. Cambridge University

853   Press.

854   Perrow, C. 1972. *Complex organizations; a critical essay*. New York: McGraw-Hill.

855 Pinto, J. 2014. "Project management, governance, and the normalization of deviance."

856   *International Journal of Project Management*, 32 (3): 376–387.

857   https://doi.org/10.1016/j.ijproman.2013.06.004.

858 Saldaña, J. 2021. *The coding manual for qualitative researchers*. sage.

859 Seo, W., ; Young, H. Kwak, M. Asce, and Y. Kang. 2021. "Relationship between

860   Consistency and Performance in the Claim Management Process for

861   Construction Projects." *Journal of Management in Engineering*, 37 (6): 04021068.

862   American Society of Civil Engineers. https://doi.org/10.1061/(ASCE)ME.1943-

863   5479.0000973.

864 Signor, R., P. E. D. Love, A. T. N. Belarmino, and O. Alfred Olatunji. 2020a. "Detection

865   of Collusive Tenders in Infrastructure Projects: Learning from Operation Car

866   Wash." *Journal of Construction Engineering and Management*, 146 (1):

867   05019015. American Society of Civil Engineers (ASCE).

868   https://doi.org/10.1061/(ASCE)CO.1943-7862.0001737.

869 Signor, R., ; Peter, E. D. Love, A. Oliveira, A. O. Lopes, and P. S. Oliveira. 2020b.

870   "Public Infrastructure Procurement: Detecting Collusion in Capped First-Priced

871   Auctions." *Journal of Infrastructure Systems*, 26 (2): 05020002. American Society

872   of Civil Engineers. https://doi.org/10.1061/(ASCE)IS.1943-555X.0000543.

873 Simon, H. A. 1997. *Administrative behavior*. New York, NY: The Free Press.

874 Simon, H. A. 2000. "Bounded rationality in social science: Today and tomorrow." *Mind*

875   *& Society*, 1 (1): 25–39. Springer. https://doi.org/10.1007/bf02512227.

876 Smyth, H. 2011. *Managing the Professional Practice: In the Built Environment*. John

877   Wiley & Sons.

878 Vaughan, D. 1996. *The Challenger launch decision: Risky technology, culture, and*

879   *deviance at NASA*. University of Chicago press.

37

880   Wang, R., C.-J. Lee, S.-C. Hsu, and C.-Y. Lee. 2018. "Corporate Misconduct

881   Prediction with Support Vector Machine in the Construction Industry." *Journal of*

882   *Management in Engineering*, 34 (4): 04018021.

883   https://doi.org/10.1061/(asce)me.1943-5479.0000630.

884   Wang, R., C.-J. Lee, S.-C. Hsu, S. Zheng, and J.-H. Chen. 2020. "Effects of Career

885   Horizon and Corporate Governance in China's Construction Industry: Multilevel

886   Study of Top Management Fraud." *Journal of Management in Engineering*, 36 (5):

887   04020057. American Society of Civil Engineers.

888   https://doi.org/10.1061/(asce)me.1943-5479.0000816.

889   Wang, X., K. Ye, ; Mengkai Chen, and Z. Yao. 2021. "A Conceptual Framework for the

890   Inclusion of Exogenous Factors into Collusive Bidding Price Decisions." *Journal*

891   *of Management in Engineering*, 37 (6): 04021071. American Society of Civil

892   Engineers. https://doi.org/10.1061/(ASCE)ME.1943-5479.0000981.

893   Weick, K. E., K. M. Sutcliffe, and D. Obstfeld. 2005. "Organizing and the Process of

894   Sensemaking." *Organization Science*, 16 (4): 409–421. INFORMS .

895   https://doi.org/10.1287/ORSC.1050.0133.

896   Winch, G. M. 2011. "Internationalisation strategies in business-to-business services:

897   the case of architectural practice." *Services Industries Journal*, 28 (1): 1–13.

898   Routledge . https://doi.org/10.1080/02642060701725347.

899   Winch, G., and E. Schneider. 1993a. "Managing the knowledge-based organization:

900   the case of architectural practice." *Journal of management studies*, 30 (6): 923–

901   937. Blackwell Publishing Ltd Oxford, UK.

902   Winch, G., and E. Schneider. 1993b. "The strategic management of architectural

903   practice." *Construction Management and Economics*, 11 (6): 467–473. Taylor &

904   Francis.

905   Yin, R. K. 2017. *Case study research and applications: Design and methods*. Sage

906   publications.

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909   Table 1. Data collection

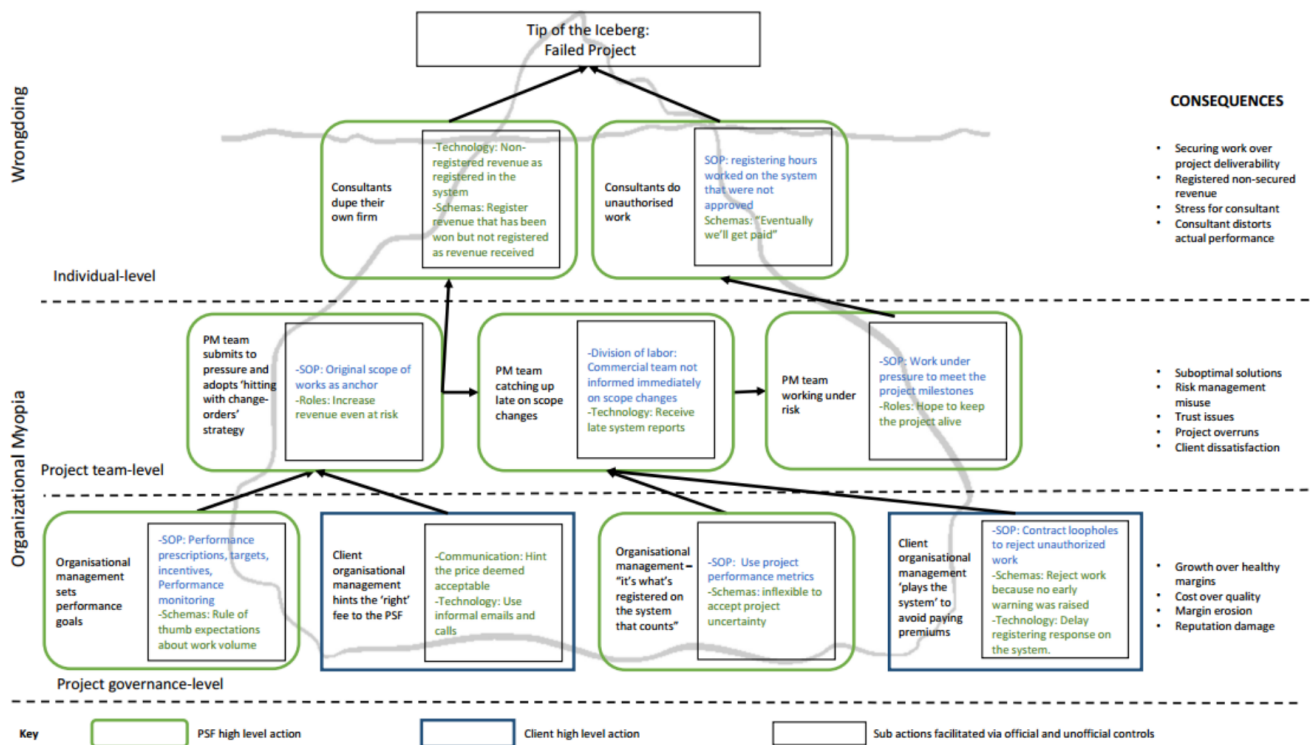| Case	Details
No. of compensation events registered	328
No. interviews	35
No. project meetings attended	12 1-hour meetings
Archival data (categories)	137 archival project data, 332 formal reports, weekly project performance dashboards, commercial data of 120 Work Packages (WP), 328 registered compensation events, 150 early warnings, 41,863 registered timesheets, 301 employee timesheets.

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912 Table 2. Data structure

Level 1	Level 2 - Administrative systems (details)	Level 3 Artifacts	Example Quote
Governance Project Individual	Rules and standard operating procedures (Official controls) *Employees are instructed by rules and standard operating procedures on how to complete tasks.*	Policy statements, memos, project documents, contracts	*"it's what's [originally] registered on the system that counts"*
	Division of labor (Official controls) *Employees are allocated in a limited subset of the organization's/project's full complement of tasks, thus the amount of information available to them is limited, and as a result, and in turn, their decision-making ability is limited.*	Organization charts, Project charts	*"Further to the requirements for a significant number of additional instructions to be delivered under the AWC LSI call-off contract, it has been necessary to prepare quotations and allocate additional hours to compensation events raised against the contract. This has required additional effort from the PMCS [commercial team] team to discuss with the CEM and CREs to determine how these additional hours contributed to the project may be allocated to those additional works identified as being supplementary to the original scope of the contract."*
	Occupational and professional norms (Unofficial controls) *Employees are instructed how to perform their job by superiors, peers, and their subordinates. Their behavior is dictated by their role (occupational and professional norms) in the organization/project.*	Organizational or project role	*The PSF's project manager to his commercial manager:* *"Submit the proposal with the suggested fees, and if they [the client] want changes, we'll hit them with CE".*
	Schemas and scripts (Unofficial controls) *Employees use patterns (schemas) to process information and assimilate emotions. They then use pre-existing event sequences (scripts), which dictate how they should perform tasks when faced with work-related contingencies.*	Patterns, past sequential events	*"I need to get out [go to the client offices] and win us more work, otherwise people will be made redundant!".*
	Communication channels (Unofficial controls) *Employees make wrongful decisions based on limited or incorrect information.*	Documents, brochures, presentations, the flow of information, limited access to data.	*"As per email request from [client rep] on 10 February 2016, additional time was spent preparing and submitting documents for input into the [WP]. This is additional to our [original] scope of works and will incur additional cost."*
	Technology (Unofficial controls) *Employees use technologies and intentionally or unintentionally engage in wrongful behaviors.*	Computer programs, algorithms, online programs	*"No formal instruction was given to assist with the [WP]. [WP] costs should be attributed to each change (CE), this is a global catch-all assessment and is not a change to the contract. In addition, this is a late assessment of costs that have already been incurred in which were not previously raised."*

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914   Appendix 1

915   Figure 5. Cross-level model of organizational myopia and white-collar wrongdoing

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