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ORGANISATIONAL LEARNING FROM FAILURE AND THE NEEDS-BASED HIERARCHY OF PROJECT-BASED ORGANISATIONS

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ORGANISATIONAL LEARNING FROM FAILURE AND THE NEEDS-BASED HIERARCHY OF PROJECT-BASED ORGANISATIONS

Abstract

Purpose: In his 1943 paper "A theory of Human Motivation" Maslow suggested a 'Hierarchy of Needs' as a classification system that described the stimuli for human behaviour. Hence, the purpose of this paper is to analyse project-based organisations (PBOs) reluctance in engaging in organisational learning from past projects failures by relying upon institutional theory Maslow's model.

Methodology: Interviews were held with construction professionals from the UK construction industry, and data was analysed using thematic analysis.

Findings: Besides the need to learn from failures, PBOs' main competing needs revolve around their 'competitiveness'; 'profitability and 'productivity'; (need for) 'repeat business', and; 'reputation and partnering'. Mirroring these needs against Maslow's hierarch of needs, 'competitiveness' and 'profitability' are analogous to foundational 'physiological' and 'safety' needs. The need for 'repeat business' and 'reputation' are approximated with Maslow's 'affiliation' and 'self-esteem' needs, and organisational learning is associated with 'self-actualization'. From an institutional theory's point of view, such response to failure is influenced by the need to show legitimacy and conformity imposed by institutional factors.

Originality: Unlike past studies, that present organisational learning within PBOs as though it is a straightforward process, this study highlights the need of understanding various competing needs within a PBO and the external pressure.

Practical Implications: Instead of solely relying on technological tools for purpose of organisational learning from failure, PBOs and the sector at large should appreciate the influence of institutional factors and the external environment on learning from failure.

Keywords: Failure, Needs, Organisational Learning, Project-Based Organisations.

INTRODUCTION

Organisational learning from ~~instances of~~ past experiences, ~~—~~ such as project-related failures, ~~—~~ is encouraged in many project-based sectors. ~~A, since s this such learning can result in offers~~ benefits such as ~~innovation, innovation, organisational~~ resilience, and mitigation of worse or similar failures from ~~reoccurring in future~~ (Madsen and Desai, 2010; Zaharee *et al.*, 2021). However, project-based organisations (PBOs) in the construction sector rarely seem to engage in learning from project-related failures. Considering ~~Turabik and Baskan's (2015)~~ (Dekker's, (2013) observations ~~s~~ that organisations have business goals that they need to meet, ~~the~~ low engagement in learning from project-related failures amongst PBOs may be associated with the challenge of trying to meet more immediate competing business goals. Therefore, the main objective of this study is to ~~contribute to the growing body of project behaviour research~~ (Unterhitzberger, 2021) ~~by~~ identifying the competing needs of construction PBOs and understanding their influence on the process of learning from failures. This is ~~also~~ based on the understanding that though opportunities present themselves in learning from past experiences or adopting new technological advancements and methodologies, PBOs tend to respond otherwise by focusing on meeting ~~more their immediate~~ organisational needs which in most instances are profitability and competitiveness.

THEORETICAL BACKGROUND

Though it is acknowledged that learning from past experiences ~~within PBOs~~ enhances ~~organisations' their~~ performance, there are challenges that hinder the successful implementation of that process (Zaharee *et al.*, 2021). To better understand PBOs' rather slow response to learning from failure, the study adopts ~~institutional~~ Institutional theory ~~t~~ theory which elaborates the influence of norms and practices on organisations' strategic responses or behaviour. ~~In addition, unlike past studies that have reviewed strategic responses from an institutional perspective such as Oliver (1991) and Santos and Pache~~

(2010) by only identifying generic internal motives or demands, this study then attempts to provide specific examples, based on as related to Maslow's (1943) hierarchy of needs. This is also more focused on PBOs learning from failure within the construction sector.

Institutional Factors Influencing PBOs Strategic Response

Fundamentally, (Yin and Jamali, (2021) contend that organisational strategic responses are in-part influenced by the external environment via institutional factors. These include demand for social legitimacy, professionalism, competition, conformance and economic efficiency (DiMaggio and Powell, 1983; Oliver, 1991; Yin and Jamali, 2021). This leads to a conflict between the internal and external demands of an organisation (Santos and Pache, 2010). In view of such, scholars (Oliver, 1991; Santos and Pache, 2010) contend that organisations will either comply or avoid conforming to such external demands as observed in a recent studies by (Kerlin, et al. Peng and Cui, (2021) and Yin and Jamali (2021). -To illustrate such responses or behaviour amongst within a PBOs with respect to learning from failures, it is worth considering strategic responses identified earlier by Oliver (1991) shown in Table 1 below. For purposes of scoping, this study is focused on 'acquiescence' and 'avoidance' type of responses.

Insert - Table 1 : Strategic Responses by Organizations to Institutional Processes

For purposes of scoping, this study is focused on 'acquiescence' and 'avoidance' type of responses. Such responses shown in Table 1 above can be attributed to two factors identified by Oliver (1991) namely: the 'context' or external pressure, and; 'internal interests or motives' of an organisations.

Context Factors

Context factors highlight the fact that organisations are interconnected with (Yin and Jamali, (2021) recommending that it is either organisations 'collaborate' or 'collide'. Consequently,

for survival, organisations should be responsive to external demands and expectations such as social worthiness and stability (Santos and Pache, 2010). Specifically, the external environment/context is influenced by the three institutional pillars, these being the: Rthe regulatory pPillar – vVia regulatory bodies such as the Hhealth and Ssafety Eexecutive and, government bodies demanding conformance to specifications and regulations; Nnormative Ppillar – Tthrough related organisations such as professional bodies demanding good practice, and; Ccultural-cognitive Ppillar related organisations- influence from such as peer PBOs and end users. In view of that, (Yin and Jamali, (2021) contend that organisations are faced with the challenge of institutional complexity ingleading to struggles such as profit maximization versus social benefits.

Accordingly, though PBOs are expected to learn from failure, the external institutions such as the client and regulatory bodies expect them to deliver projects without any 'failures' such as for example, or project delays. Hence, ifn an event of a PBO experiencing failure(s) on a project, itsuch a PBO risks losing itstheir competitiveness or 'social worthiness'. ThereforeIn that regard, PBOs may hide their failures in order for them to show 'social worthiness' or 'stability' and remain competitive. Consequently, the response to the sector's call for sharing and learning from past failures is 'avoidance'.

Internal Demands

IFrom an institutionally perspective, it is argued that organisations are interest driven and endeavour to attain stability and legitimacy (DiMaggio and Powell, 1983; Oliver, 1991; Santos and Pache, 2010; Yin and Jamali, 2021). More recently, Yin and Jamali (2021) contend that such varying interests or institutional logics include profit maximization, value creation, social benefits, political control and public service. On the other handYetHowever, whilst PBOs may be pursuing internal organisational interests, the power to attain stability and legitimacy is associated with the external environment as observed by (Oliver, (1991). Faced with such a struggleConsequently, though organisations may have motives that are

socially motivated, in a not so explicit manner organisations-PBOs tend to focus more on self-interest behaviour such as productivity and profitability (Oliver, 1991). Thus, PBOs tend to focus more on internal motives of productivity and profitability. Additionally, any organisation sharing their past failures openly risks denting their competitiveness or social worthiness. In such a caseConsequently~~Therefore~~, PBOs would rather engage less in learning or sharing failures since it is regarded as a non-revenue generating activity and a threat to their competitiveness.

PBOs and Maslow's Hierarchy of Needs

Unlike past studies that have identified specific strategic responses shown in Table 1, -this study further analyses internal PBOs' demands that lead to a lack of engagement in learning from past failure. This is by considering Maslow's (1943) hierarchy of needs which highlights motivation as the underlying influence of human behaviour. In addition, past studies present learning from failure as a straightforward process by relying on past project reviews. Yet this study highlights the need to pay particular attention to vying institutional needs such as profitability, social legitimacy and competition. Worth stating is that there are several motivation theories. However, Maslow's theory was chosen based on its emphasis on an organisation/individual focusing on a present need to structure and organise their future activities. This aligns with this study's argument that faced with the desire to meet internal needs such as competitiveness and profitability, PBOs rarely engage in learning from failures. Additionally, Bozyigit (2021) notes that Maslow's theory has similarities (and also serves as basis of understanding/developing other theories) with other motivation theories such as Herzberg's dual factor theory and 'existence, relatedness and growth' theory by Alderfer (1989). Maslow's theory structured approach to needs (Bozyigit, 2021) also serves as a guide in classifying contractors' vying needs.

Furthermore~~T~~, though it is argued that Maslow's (1943) hierarchy of needs cannot be considered for 'organisational' analysis, the study relies on two aspects. Firstly, the structure

and features of PBOs and secondly, understanding whether organisational learning occurs via 'individuals' or the 'organisation'. ~~Therefore, Of~~ particular interest ~~to this study with regard to this research~~ is Gemünden's *et al.* (2018) and Miterrev's *et al.* (2017) inclusion of the 'human resource' and 'people' respectively in the structure of PBOs. ~~Th~~userefore, unlike the general perception of PBOs as organisations which deliver projects, the study agrees with Gemünden *et al.* (2018) view of PBOs as a 'premise' 'where learning occurs'. This also aligns with ~~Morgan's (1986)the~~ metaphoric view of ~~an~~ organisations as a 'brain' and not necessarily a 'machine' since learning takes place within them ~~(Yeo, 2005)~~.

~~In addition, T~~ this study ~~contends agrees with scholars who contend~~ that organisational learning can only be achieved through the collective learning of individuals by means of social interaction with those who poses the needed knowledge (Friedman ~~et al, Lipshitz and Pepper~~, 2005; Yeo, 2005). ~~This aligns with scholars (Yeo, 2005; Sense, 2007) who appreciate the reciprocal interaction between the individuals and the environment/organisation in the learning process (Yeo, 2005)~~. This is because, it is almost impossible to imagine an organisation that exists without individual members ~~and~~. ~~However~~, for individuals to learn, the organisation should facilitate a conducive environment ~~for learning. This aligns with scholars (Yeo, 2005; Sense, 2007) who appreciate the reciprocal interaction between the individuals and the environment in the learning process.~~

Thus, ~~the study adopts the depiction of~~ an organisation's behaviour towards learning ~~is depicted~~ via the collective response of its people or individual professionals working within construction PBOs. Equally, Maslow's hierarchy of needs theory is here applied at the organisational-level instead of the usual individual-level based on; anthropomorphism, which associates humanlike behaviour to an organisation, in this case learning, and; the understanding that impact on individuals reflects on an organisation (Sharma and Lenka, 2019). ~~See also Singh and Holmstrom (2015) who apply the theory in analysing organisational needs with respect to innovation.~~

Organisational learning from failure and Maslow's Hierarch of Needs

Though several definitions of organisational learning exist, this study subscribes to the view that organisational learning involves a process of learning from disturbances, errors or problems, evaluating of past behaviours, and reinventing new ones (Sharma and Lenka, 2019)(Lipshitz *et al.*, 2002; Sharma and Lenka, 2019). Furthermore, this study focuses on learning from failure(s) instead of success, as these are typically solution oriented and have more lasting influence, ~~than~~ when compared with learning from success (Madsen and Desai, 2010). Yet, even with its supposed benefits such as innovation and competitiveness, [recent studies show that organisations](#) rarely engage in organisational learning from failure ([Zaharee *et al.*, 2021](#)).

To better understand some of the factors that may influence the low engagement in learning from failure-related incidents, Maslow's (1943) hierarchy of needs was adopted to act as an illustrative metaphor for the behaviour of organisations [towards learning from failure](#).

Specifically, Maslow's hierarchy of needs is used to make explicit internal organisational motives identified by Oliver (1991) as one the factors influencing strategic responses. Accordingly, it is argued that PBOs, though encouraged to learn from past project-related failures ~~by the external environment~~, there are seemingly internal needs that they focus on instead. In relation to organisational learning from failure, ~~these PBOs' internal~~ needs [are regarded as analogous to identified by](#) Maslow's (1943) [needs and are are further](#) elaborated as follows:

- **Physiological Needs** - These are basic needs for existence. ~~For people they and~~ include food, shelter and water. If ~~these needs~~ ~~these y~~ are not met, ~~then~~ other needs are pushed in the background with all immediate efforts and future orientation being centred on meeting these needs. ~~For in the case of~~ PBOs, it is theorised that 'physiological needs' may be associated with the 'need' to be competitive, 'win and commence new projects' as the basis of present and future earnings and existence.

Hence, the idea of learning, may be rarely considered on par with these immediate needs. Failures may be hidden or not even realised in order to be 'competitive' or acquire social worthiness [and legitimacy](#) (Kuipers and Wolbers, 2021; Zaharee *et al.*, 2021).

- **Safety Needs** - Maslow's (1943) examples include security, health, stability, and safety. Here, one could associate PBOs' 'safety needs' with 'profitability' and 'productivity'. Hence, learning is rarely considered because PBOs focus more on 'safety-seeking' and 'profit making' activities such as risk management and planning. Anything out of pattern, such as failure is unwelcome. Therefore, learning from failure is rarely considered, as it is perceived as an 'unproductive' and 'unprofitable' activity (RICS, 2016). Consequently, in order to remain competitive, PBOs present their firms or projects as being 'profitable' even when their 'profitability' is 'threatened'. Such may only be noticed when a firm finally goes bust like recent prominent examples presented in the NAO (2020) report.
- **Affiliation Needs** – These are related with belongingness and friendship. In our study, this is associated with the need for 'repeat business'. Primarily, having been competitive and profitable, every PBO would value the opportunity of repeat business. However, experiencing or revealing failure during the project delivery process may be regarded as a threat to achieving the 'affiliation need' of 'repeat business'. This also creates friction between sharing failures and social worthiness of an organisation [which leads to taking defensive measures \(mostly denying or externalising failure\)- referred to as 'impression management' by](#) (Kibler *et al.*, 2021)([Oliver, 1991](#)). ~~Hence, failure maybe hidden or not accepted and externalised by blaming others in the supply chain~~[This is](#) in a bid to sustain the 'repeat business' and in the long quest, maintain social worthiness and conformance.

- **Esteem Needs** - Examples include one's self esteem and respect, respect from others, reputation, and recognition. The study associates 'self-esteem' needs with 'reputation' and 'partnering'. Trends of 'reputation' and 'recognition' may also be observed from PBOs' desire to be considered for sectoral awards. Faced with such a need, some PBOs may engage in 'self-evaluation', which, essentially is learning. However, failures may be hidden or externalised to protect their 'reputation'. This is also in a bid to present a PBO as being 'capable' and sustain ~~its~~the social worthiness. Such behaviour can be likened to 'self-focused impression management' through self-enhancement and promotion (Kibler *et al.*, 2021).
- **Self-actualisation Needs:** Examples include self-fulfilment and achieving one's potential. Since these vary depending on an individual as observed by scholars (Alderfer, 1989; Kaur, 2013), similarly, one PBO's 'self-actualisation' varies from that of others. For scoping ~~purposes~~purposes, the study associates 'self-actualisation' with organisational learning from ~~the~~ past failures. It is arguedWe contend that having established their 'importance' or 'reputation', PBOs may be willing to share their failures and show how they succeeded in challenging times. However, PBOs may equally hide their failure or externalise them since it may threaten their 'self-actualization' through defensive impression management practices (Kibler *et al.*, 2021).

However, Maslow's theory should be used with caution since the theory has a number of limitations and does not apply to all situations. These include the hierarchical approach to motivation, the assumption that needs can be 'fully satisfied' and a lack of empirical evidence for most of its conclusions (Alderfer, 1989; Kaur, 2013). Kaur (2013) ~~also~~ adds that the theory assumes as though actors and the environment are the same which is not the case, especially in a project setting since PBOs and projects are unique. The dynamic nature of the environment within which PBOs operate can be appreciated from contextual and

organisational motives that are at conflict (Oliver, 1991; Santos and Pache, 2010).

Research Methods

Research Methods

An exploratory approach was adopted involving 18 semi-structured interviews with a purposively selected range of construction professionals including designers, planners, directors and quantity surveyors as (shown in Table 2 below). In order to cover participants in different and distant locations, the study adopted both face-to-face and virtual interviews. For consistency, participants were asked the same standard questions with responses being audio recorded using an audio recorder and reflective notes being taken throughout.

Insert Table 2 Summary of Research Participants' Information

Realising the sensitive nature of failure with participants not being keen to openly engage in sharing failure related information, the study also adopted a snowball sampling approach. This was by gaining trust from initial participants/contacts who further recommended other possible participants who were then vetted for suitability. Only After 18 interviews were conducted, data having reached the level of saturation was seemingly achieved, as with no further limited new information/insights were being generated from the latter interviews (Bryman, 2012).

The responses Data were was then analysed using thematic analysis (Bryman, 2012). Based on that Maslow's (1943) hierarchy of needs have been were identified as the main themes of needs within PBOs. Considering Bryman (2012) the data analysis process involved the following activities. The first stage involved; transcription of interviews using NVivo 12; exploring background of text. The second staged involved thematic data analysis involving the following steps; re-reading the transcript to extract themes; data reduction (summarising and grouping the themes); relating the themes with literature, ; identification of themes and

coding, and; data interpretation and discussion. From a philosophical point of view, an interpretivism epistemological stance was adopted since it aligns with the subjective nature of failure and the following two reasons as observed by Bryman (2012). Firstly, interpretivism does not take a realist approach which argues that there is a 'reality' out there to be captured. Secondly, from an interpretivists perspective, reality is dependent on the members being interviewed and their social setting. Consequently, PBOs' reality of organisational learning from failure is influenced by the struggle between 'internal needs' and the 'external pressure'.

FINDINGS AND DISCUSSIONS

The initial findings are based on responses to the following questions employed in the semi-structured interviews: a) What is project failure? b) How do you measure project failure? c) What are the barriers to organisational learning from failure?

Definition and measurement of failure:

Though participants had variously identified low-levels of client satisfaction, by and not meeting projects objectives (which highlights the external/context demands), when defining and measuring project failure, the emphasis for PBOs was placed on 'profitability' and 'productivity'. Participant 17 indicated that a failed project is "any project that makes a loss. And any project that doesn't meet the client's brief". Similarly, Participant 11 emphasized that "the big one, the success of a project, is 'you have you actually made some money'... you could be success for your client, [but if] you have not made any money, so you would [only] be a success in your client's eye, but you would not be very successful, in our MD's [managing director's] mind". This illustrates a-the struggle between context needs and that of the internal organisation needs which will need to be harmonised as observed by Santos and Pache (2010).

Accordingly, to identify other needs within a PBO, the following 'Maslowesque' themes of PBOs' 'needs' around organisational learning from instances of project failure have been identified. However, it is worth noting that, and as a limitation of Maslow's theory, the listed themes are non-linear since there is no clear distinction when transitioning from 'unsatisfied' to 'satisfied' (Alderfer, 1989; Kaur, 2013). ~~Furthermore, unlike Maslow's proposition of satisfaction of lower needs, Alderfer's (1989) findings indicate that the more individuals have, the more they demand. Hence PBOs continuously struggle to meet the identified needs.~~

Theme 1 - Physiological Needs - Competitiveness and Starting a New Project(s).

PBO's physiological needs have been associated with 'competitiveness' and 'starting new projects' which may distract them from capturing and sharing lessons from project-related failures. For instance, Participant 1 indicated that as a barrier to learning *"it's usually time pressures, that is the biggest thing... as soon as you finish one project you are straight to the next one"*. The focus on competitiveness was also cited by Participant 2 ~~and the~~ (RICS, (2016) in that openly discussing failures risks damaging their competitiveness. Similarly, Participant 11 reasons that (sic) *"...we don't want to share any failures as such with any of our competitors either to be fair"*.

~~Evidently, the need to be, and be seen to be competitive hinders the process of learning.~~

From an institutional ~~point-of-view~~perspective, the process of learning from failure is affected by PBOs' need to respond to social worthiness, legitimacy and conformance (Oliver, 1991). In such instances, failures are hidden, lessons are rarely shared with a lack of reflection on past projects for purposes of learning due to the 'need' to commence new projects or demonstrate 'social worthiness'. This also aligns with other studies which also observe similar defensive responses to failure in order to present a better image of themselves or sustain their legitimacy (De Keyser et al., 2021; Kibler et al., 2021; Zaharee et al., 2021).

Theme 2 - The Safety Needs – Focus on Profitability and Productivity

Amongst PBOs, 'safety needs' ~~in-are associated with form of~~ 'profitability' and 'productivity' or 'finishing the task at hand' ~~also take the centre stage~~. Participant 5 echoed that *"when you watch construction in practice, it's always the pressure of what's happening now... the constant pressure to be working, to be seen to be moving"*. This may be associated with PBOs focusing on 'productivity' in order to claim against the contract sum. In addition, PBOs and also respond to the external pressure from the regulatory pillar in form of the time constraint as per the contract (RICS, 2016). The safety need in form of 'profitability' can also be observed from Participant 5 response to causes of failure that *"it's the low profits; not allowing investments in the systems to improve..."*. Learning in some PBOs with such orientation is there ~~forthere~~ for seen as an opportunity cost, because of loss of time. If learning is to be done, certain PBOs may only consider free training as observed by Participant 7 that *"if somebody wanted to go and do something [learning], they always get to go if there is a bursary or it's free"*. Similarly, Participant 18 indicated that *"learning from failure does not pay the bills"* as one of the reasons for the less engagement in organisational learning from failures which is regarded as 'unproductive' or 'unprofitable'. This also aligns with the RICS' (2016) findings that PBOs rarely engage in lessons learnt event since they do not generate revenue.

Besides that, Participant 7 indicated that they may engage in continuous professional development (CPD) and professional body related training which also shows a response to the external pressure from the normative pillar. Thus, instead of focusing on learning from failures, more time and efforts are spent on risk management, planning so that there is a continuous flow of work to meet the safety needs of 'profitability' and 'productivity' in a bid to achieve 'stability'.

Theme 3 - Affiliation Needs - Repeat Business

Affiliation needs are associated with repeat business since PBOs also regard project failure as a lack of 'repeat business'. Elaborately, Participant 14 in response to how they measure failure indicated that *"Repeat business of course, getting certain works from the same client ... definitely is a success factor"*. Similarly, Participant 16 observed that *"the ultimate success for us as a business is getting repeat business with a client..."*. However, with the focus on 'repeat business', PBOs may not freely discuss failure in order to remain in good standing with the client for 'repeat business' opportunities by ending a project on a good note. This aligns with the (RICS, (2016, p. 10) findings that in construction "Meeting the client is more about impressing them than dwelling on problems and can be a great exercise in self-promotion". Consequently, ~~Instead,~~ failures may be hidden or externalised which hinders possibilities of learning from such failures. Such response to failure may also be associated with what Schwarz et al. (2021) term as 'voluntaristic' perspective which regards failures as terminal and should be avoided.

Theme 4 - Self-Esteem Needs - Reputation and Partnering Need

Self-esteem needs are associated with PBOs' considering 'reputation' and 'partnering'. Therefore, ~~appreciate learning~~ PBOs may engage in self- ~~since they value the need to be~~ 'respected' or 'appreciated'. This also shows the interconnected nature of the PBOs within the sector. To that end, they may ~~reflection~~ reflect and where possible, learn from past failures in order to to better improve their reputation and partnering opportunities. Project failure or success is also measured against being awarded or recognised through industry awards. For instance, Participant 6 echoed that on a *"...successful project...you finish, obviously you get testaments of the client, we also put projects forward for awards, successful ones"*.

Though learning by observing other competitors' failures may be practised (through case studies as indicated by Participant 14) most PBOs ~~in this category may~~ focus on 'best practice' and 'legislation' related learning, ~~which require conformance and professionalisation of practices (DiMaggio and Powell, 1983),~~ instead of lessons from failures. For instance, Participant 8 indicated that departmental learning follows legislation or best practice needs while Participant 6 indicated quality and environment ISO certification. ~~This is response to regulatory and normative pillar related pressures which require conformance and professionalisation of practices (DiMaggio and Powell, 1983). In doing so, PBOs focus on building and protecting their 'reputation' by engaging in 'legitimate' training and practices.~~ On the contrary, this may hinder the process of ~~organisational~~ learning from failure. ~~This is~~ because PBOs may not ~~be too keen to~~ share their own failures in fear of harming their reputation since that may show a lack of 'good practice' within the firm. ~~This aligns with 'impression management' tendencies (excuses and externalisation of failure) observed by Kibler et al. (2021) in order to maintain their reputation.~~

Theme 5 - Self-Actualisation Needs - The Learning and Sharing of Failures Needs

The typical theoretical argument is that a PBO, having met its other competing needs may now feel that they can openly share their failures and lessons as competitiveness is not threatened. ~~Such a state can be likened- to a 'Show' or 'Demonstrative Impression Management' response to failure where there is full disclosure of failure-related information~~ (Kibler et al., 2021). The interviews provided some evidence of this happening; albeit infrequently. Participant 17 indicated that their company is receptive to being told by subcontractors when they have failed, and equally in turn, have encouraged them to be open about their failures. ~~This is because their firm believes that both parties may become profitable by learning from past mistakes.~~ To support such learning, a PBO may have also built internal systems for learning from failure which enable the identification and sharing of failure lessons (Participant 8). However, the danger at this stage is that a PBO may be

overconfident, and may not consider learning from other PBO's failures by believing in their own systems (Participant 11). In such cases, it may even be difficult to anticipate failures, least accept them when they occur. Hence, the very response to good practice, in institutionalisation (Oliver, 1991), decouples the organisation from reviewing and learning from other players making it vulnerable to failure (Oliver, 1991). This may lead an organisation succumbing to what is referred to as the 'success paradox' (Audia *et al.*, 2000 cited in De Keyser *et al.*, 2021). This is a situation where 'leading or successful organisations' with good practice (in 'project management' and 'risk management'), may be blinded by its own success and may not consider learning from other firms' failures.

However, ~~considering on the basis of~~ Maslow's (1943) assumption that 100% self-satisfaction is not possible to attain ~~and measure, and PBOs at this level still focus on other needs such as 'profitability' and 'productivity'.~~ Similarly, Alderfer's (1989) arguments that when the higher-level needs are met, one will spend twice as much energy on meeting the lower needs, ~~it can be argued that Therefore~~ 'profitability' and 'productivity' remain a perennial focus among PBOs regardless of their present needs. Hence, more resources and time on a project may be dedicated to being 'productive' instead of learning.

DISCUSSION

In a bid to improve project ~~and buildings~~ performance, ~~there is an increased call within the sector to share~~ organisations are being encouraged to learn from past-project failures (RICS, 2016; Zaharee *et al.*, 2021). However, the collective belief among ~~the~~ PBOs is that sharing failure lessons affects their competitiveness negatively. ~~This is influenced by the external environments expectation of conformity.~~ Thus, the study suggests that in order to encourage PBOs to learn from their past failures and share them sector wide, it is worth highlighting how such ~~will will help~~ improve performance instead of it being a threat on their

competitiveness or social worthiness. For instance, Participants 2 and 14 reasoned that lessons learnt from past failures improves their bidding or competitiveness by demonstrating how they handled past projects. Similarly, the RICS (2016) observe that lessons learnt from past projects improves the delivery and performance of future projects while (Zaharee et al., (2021) reasons that learning from failure improves innovation.

On ~~a~~the contrary, such benefits of lessons from failure are never realised since PBOs ~~respond~~(succumb) to institutional pressures as observed by Oliver's (1991, p. 149) that *"....institutional theory illustrates how the exercise of strategic choice may be pre-empted when organizations are unconscious of, blind to, or otherwise take for granted the institutional processes to which they adhere"*. This has seen PBOs focusing more on good practice or ~~tested~~ methodologies from professional bodies without appreciating the value of learning from failures and at times experiencing similar failures or even sharing them with peer PBOs.

Additionally, this study we agree with Friedman et al. (2005), who argue against utopian approaches to organisational learning which simplify learning by suggest that it can be achieved by encouraging the use of technology. Evidently, T the needs that PBOs try to meet internally versus the external institutional pressure (Oliver, 1991; Santos and Pache, 2010) demonstrates only one aspect of the dynamic and complex nature of learning from project -related failures (Oliver, 1991; Santos and Pache, 2010). Accordingly, we side with Sage et al. (2013) who argue against the performative approach to understanding failure via success factors (such as productivity), and recommend instead that Therefore, for effective learning from failure, -failure must be viewed from social-cultural-economic, cultural and political factors should be considered point of view. ~~On the contrary, t~~See the findings summarised in Supplementary 1 Table in Table 2 which highlights a focus on performatives such as profitability, competitiveness and productivity. This, which . Such findings which aligns with (Dekker's, (2013)- argument that findings of factors which focusing on profit is one of the key factors that lead to a drift in failure. – Dekker (2013, p. 245) adds that failure

occurs *“While pursuing success in a dynamic, complex environment with limited resources and multiple goal conflicts, a succession of small, everyday decisions eventually produced breakdowns on a massive scale.”*

Insert – Table 2: PBOs Needs – Competitiveness, Profitability and Productivity

Based on Table 2, Therefore, in order to encourage organisational learning from failures, this study argues that PBOs’ profitability should be among the key performance indicators on the performance of the of a building project. This is because since PBOs’ rarely engage in learning due to focusing on their supposedly ‘safety’ needs of ‘productivity’ and ‘profitability’ which also leads to failure.

Therefore, PBOs may be encouraged to learn from failures by demonstrating how such learning enables them achieve their identified needs. Hence Therefore, in cases where PBOs’ ‘safety needs’ and other needs are met, they may fully focus on meeting the client’s needs and may feel “safe” to learn from their failures and share their lessons openly. In addition, the study agrees We also agree with Participant 5 reasoning that clients need to stop *“pressurising people from the top, and just trying to get them to cut costs, [to instead thinking] I want them to do it by being more efficient and more effective because I can get a better product and I will get more for less”*.

In summary, by Table 3 below gives a summary of our framework bconsideringased on Maslow’s (1943) hierarchy of needs, PBOs’ vying needs in relation to organisational learning from failure are grouped in three categories; ‘Social – reputation, networking, partnering, repeat business’; ‘Economic – profitability and productivity’ and, ‘Company Goals – learning from failure and competitiveness’ (SEG). See Supplementary 2 Table for details.

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~~Insert Table 3: Framework of PBOs' Vying Needs and Influence of Institutions on PBOs Learning.~~

From an institutional point of view, ~~Table 3 illustrates~~this illustrates how PBOs struggle to balance learning from past failures with the two aspects of social worthiness and stability or profitability. For instance, in trying to achieve social worthiness through 'reputation', networking and 'partnering', failures are hidden or not shared. Equally, in pursuit of stability in form of productivity and profitability, PBOs engage more in continuous work or pursue future works as opposed to learning from past projects and failures.

CONCLUSIONS AND RECOMMENDATIONS

The study establishes that besides ~~organisational~~ learning from past failures, PBOs are faced with the following vying needs which should be addressed for effective learning from failure: 'competitiveness', 'profitability and productivity', 'repeat business', 'reputation and partnering' and 'self-actualisation in learning from failure (the ability to learn and share the failure lessons). This is because PBOs are required to respond to the external pressures which mostly call for legitimacy, compliance and stability in their operations which are also driven by project constraints. ~~Additionally, we argue that instead of considering learning from project-related failure as a competing need, it must be regarded as an opportunity for satisfying these very needs, both internally and externally. Hence, we conclude that if meaningful learning from failure within and across PBOs is to be achieved it remains important to show how it contributes to meeting these needs.~~

~~The identified needs are not exhaustive because~~Since there are several other demands that PBOs aspire to achieve such as sustainability, innovation and proficiency in project and risk management, the identified needs are not exhaustive.

The findings are limited based on the small number of participants and realising the limitation of Maslow's approach of uniformity of needs and situations. ~~The study being part of an ongoing PhD research, the framework is yet to be verified but serves as basis for further studies in learning from past experiences such as project-related failures.~~ ~~However~~Nevertheless, besides highlighting the institutional influence on learning from failure, the findings, ~~This may~~ also assist in understanding the challenges and context that may lead to PBOs slow adoption or response to external demands such as adopting new regulations, ~~tools~~ and practices. ~~This is because PBOs since they~~ are more focused on meeting their internal needs such as profitability, productivity and competitiveness. Therefore, the implication for actors (including policy makers) within the construction industry, is that for successful adoption and implementation of new regulations or methodologies, there has to be a balance between external demands and internal needs of PBOs. Consequently instead of simply viewing project success via meeting the client's needs, the findings demonstrate that PBOs' profitability (and other needs) should be part of the success criteria. Therefore, instead of considering learning from project-related failure as a competing need, it must be regarded as an opportunity for satisfying these very needs. With regard to future studies, the findings reveal that the influence of institutions and norms on learning within the construction sector is rarely considered. Instead, organisations are more focused on internal technological and strategic mechanisms (Morris and Gerdali, 2011). Unterhitzberger (2021) also notes that studies at this level (organisational) mostly focus on individuals and teams. Hence, future studies should take a wider context (sectoral level) of learning from failure by discussing the influence of institutions on the learning process.

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Table 1 : Strategic Responses by Organizations to Institutional Processes

Strategies	Tactics	Examples
Acquiescence	Habitat, Imitate, Comply.	Following demands; mimic institutional models, obey rules and norms.
Compromise	Balance, Pacify, Bargain.	Balance, accommodating multiple constituents' expectations; negotiate with other institutional stakeholders.
Avoidance	Conceal, Buffer, Escape.	Disguising nonconformity; changing goals, activities or domains.
Defy	Dismiss, Challenge, Attack.	Ignore explicit norms and values; contest rules and requirements; assault the source of institutional pressure.
Manipulation	Co-opt, Influence, Control.	Import influential constituents; shaping values and criteria; dominating institutional constituents and process.

Table 2 Summary of Research Participants’ Information

Participants	Experience	Interview Type	Job Function	Company Size
Participant 1	10 - 19 Years	Face-to-Face	Director	1 - 49 Employees
Participant 2	10 - 19 Years	Virtual	Director	250+ Employees
Participant 3	30+ Years	Face-to-Face	Civil Engineer	250+ Employees
Participant 4	10 - 19 Years	Face-to-Face	Electrical Engineer	50 – 249 Employees
Participant 5	30+ Years	Face-to-face	Project Planner	250+ Employees
Participant 6	20 - 29 Years	Face-to-face	Project Manager	250+ Employees
Participant 7	30+ Years	Face-to-face	Environmental Engineer	1 - 49 Employees
Participant 8	30+ Years	Virtual	Director	250+ Employees
Participant 9	10 - 19 Years	Face-to-face	Director	250+ Employees
Participant 10	20 – 29 Years	Face-to-face	Director	250+ Employees
Participant 11	20 – 29 Years	Face-to-face	Project Manager	250+ Employees
Participant 12	30+ Years	Virtual	Regional Manager	250+ Employees
Participant 13	10 – 19 Years	Virtual	Social Value Manager	250+ Employees
Participant 14	20 – 29 Years	Virtual	Civil Engineer	250+ Employees
Participant 15	10 – 19 Years	Virtual	Civil Engineer	1 – 49 Employees
Participant 16	20 – 29 Years	Virtual	Regional Manager	250+ Employees
Participant 17	10 - 19 Years	Virtual	Commercial Manager	250+ Employees
Participant 18	20 - 29 Years	Virtual	Project Manager	250+ Employees

Supplementary 1 Table: PBOs Needs - Competitiveness, Profitability and Productivity

Context	Subthemes	Participants' Responses	PBOs' Focus
PBOs' definition and measurement of failure.	Redo; reworks; loss of profits, loss of other jobs, projects; negative client feedback (Participant 14).	<i>"Loss of profit... effect on project delay, loose of subsequent projects following on if you couldn't take them on; reworks costs as well"</i> (Participant 14).	Competitiveness; profitability; Repeat business.
Causes of failure.	Poor estimation; omitting some items; under-pricing.	<i>"Margins of profit too tight... get this job done as quick as we can; focusing on cost reduction"</i> (Participant no 14).	Safety (profitability and productivity)
Barriers to learning from failure.	Fear of being blamed; reputation; time pressures;	Low margins. almost like bang, bang, get the job done, put the steel and quality standards at the end (Participant 12).	Profit, reputation, and productivity.

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Supplementary 2 Table: PBOs’ Vying Needs and Influence of Institutions on PBOs

Learning.

TYPE OF NEEDS	PBOs' NEEDS	INFLUENCING INSTITUTIONS
Social – affiliation needs, esteem needs.	Reputation, partnering, network, repeat business.	Regulatory Pillar: via conformance and social worthiness - Failure is hidden to maintain reputation and networks.
Economic - physiological and safety needs.	Profitability, productivity and future jobs.	Regulatory and Normative Pillars: Conformance, social worthiness and stability - No time allocated for learning, learning viewed as a cost; Focused on risk management, planning and PM tools.
Organisational Goals – self-actualisation	Learning from failure.	Normative and Cultural Cognitive Pillars - Seeking stability and social worthiness - Focused on internal lessons.