**Academic perspectives on metrics: Procedural justice as a key factor in evaluations of fairness**

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**Abstract**

The research literature emphasises the emergence - in the English context particularly- of individualised, performative accountabilities associated with metrics-based evaluation. Recent studies have observed uneven effects of such evaluations at organisational level. This UK-based study examines academics’ perceptions of the fairness of organisational accountabilities, drawing on organizational studies literature to identify dimensions of organisational justice. A cluster analysis identified four groups who varied in the degree to which they perceived procedural justice (fairness of organisational processes associated with metrics) and distributive justice (performance consequences of metrics). Exploring the responses further, interview respondents emphasised greater concerns with procedural justice and greater variability in accountability practices relating to research metrics than with teaching.  In the groups where procedural justice was evaluated more positively, academics saw metrics being applied in ways which aligned with valued enhancement practices associated with teaching and research.  The study draws attention to institutional practices that contribute to academic perceptions of fairness and increased alignment between organisational and individual goals.

**Introduction**

This paper addresses a contemporary research interest in academic life in the measured university and proposes an analytic orientation to the perceived fairness in which performance metrics are applied at the organisational level. A ‘metric tide’ is observed to be constituting a new mode of governance across a range of publicly-funded institutions (Wilsdon, 2015), reflective of changing funding environments and associated with quasi-market models. Ranson (2003) conceptualises a qualitative change in the nature and forms of governance, manifested in the increased use of measurement technologies, such that accountability, which has historically formed a part of governance processes, constitutesthe governance system to an increasing degree. In the higher education context these strengthened forms of corporate governance and management, such as those associated with metrics, are observed to exert a stronger influence on academics’ working lives (Locke & Bennion, 2011) and demand new forms of organisational accountability.

Within the higher education (HE) literature, there is widespread scrutiny of the forms of governance associated with national metrics-based evaluation systems. Much of the literature focuses on macro-level issues, critiquing the evaluation systems used on ‘technical and procedural grounds’ (Oancea 2008) and draws valuable attention to structural inequalities and performative effects. However, this critique can give undue weight to the influence of the national evaluation system and overlook the local organisational practices that define the particular form that these accountabilities take**.** Grealy et al (2017) criticise the prevalent use ‘strong theory’ which problematises metrics explicitly as a neoliberal technology of measurement. They make an argument for ‘weak’ theory in which accounts of neoliberalism must be constructed empirically through analytic attention to ‘disparate and heterogenous practices’ in which professional accountability practices are formulated (2017:465). Several empirical studies have highlighted unevenness of the effects of metrics in the HE context (Harley, 2002; Kolsaker, 2008; Oancea, 2014; Locke and Bennion, 2011). Such empirical work suggests the possibility that spaces exist within these evaluative systems, for differing articulations of accountabilities at organisational level.

Much of the literature on the impact of metrics focuses on either research or teaching-related assessment regimes individually even though HE organisations are now subject to multiple jurisdictions of measurement. As is the case in several national contexts, research and teaching evaluation is carried out via separate structures at the national level. Recent research in Australian and British contexts exploring how these evaluative systems are reconciled at organisational and individual level, shows a bifurcation of teaching and research roles to varying extents (Locke, 2014; Brew et al, 2017). A research focus on the interplay of teaching and research metrics at organisational level is therefore important given that both have an impact on the nature of academic work and employment contracts (Brew et al, 2017).

The study explores two central questions: the perceived fairness of the uses of metrics at organisational level and the extent to which fairness evaluations differ in relation to research and teaching. The paper begins by considering how the metrics for evaluating teaching and research are constituted at the national level. In the following section we draw on the concept of organisational justice, discussed widely in the organisational studies literature, as a theoretical frame for analysis. In the subsequent sections we describe the empirical methods and the research findings which draw attention to the varied forms of metrics-based accountability that have developed at organisational level.

**Examining accountability practices surrounding metrics**

Metrics-based evaluation of research and teaching quality is a widespread international phenomenon but it is hard to find many parallels with the level of reform to research and teaching evaluation systems that have occurred over the past three years within the English HE sector. The Teaching Excellence Framework (TEF), launched in 2015, proposed to address a perceived imbalance in organisational practices skewed towards research by the Research Excellence Framework (REF). As widely observed, such sectoral evaluation systems impose new organisational accountabilities for the individual and are perceived to be influencing the shape and form of academic work in ways that challenge epistemic and professional identities (Brew et al, 2017).

Ranson (2003) characterises a broad shift from professional to instrumental forms of accountability in publicly-funded institutions. As distinct from professional accountability, where the mandate for scrutiny and evaluation resides within the professional sphere, four contrasting forms of ‘instrumental accountability’ are defined (consumer, contract, performative, and corporate) which differ in respect of the stakeholder group privileged in evaluative terms but are each associated with a heightening of bureaucratic accountabilities at the expense of democratic dialogue (2008:157). Harley (2002) observed a ‘hybrid’ quality to such governance as, for example, research metrics are applied in some organisations as a tool for management control or as a means of strengthening professional accountability within the academic community. In later, empirical work examining effects of research evaluation, Oancea (2014) identified the varied impacts of these systems of accountability on academics as local practices, meanings and values are attached; emphasising the value of focussing on organisational practices through which democratic dimensions of governance might be sustained (Oancea, 2008). At the organisational level, Ranson (2003) draws a conceptual distinction between managerialist modes of governance manifested in organisational practices expressed as ‘holding to account’ and ‘relational modes’ which reflect more democratic practices of ‘giving an account’. Ranson advocates orientation to the latter mode of accountability though the methodological approaches by which this might be discerned or developed is not fully elaborated.

Of particular interest to our study is the way teaching and research evaluation systems are interpreted at the organisational level. At sectoral level the two regimes associated with teaching and research differ in the way they measure, reward and sanction performance as illustrated in table 1 below.

[Table 1 around here]

In certain aspects, REF is more aligned with forms of democratic accountability discussed by Ranson with the emphasis on peer review and stakeholder impact evaluation (through the recently introduced ‘impact indicator’).Arguably, more leeway exists at organisational level to decide what evidence to submit for REF evaluation in comparison to TEF. Local decisions are taken on which academic staff and publications are included and the narrative accounts of research environment and impact. In the case of TEF, data parameters are less negotiable by organisations. The exercise is largely data-driven with a limited narrative opportunity to contextualise data. Temporally, the systems differ in the frequency of evaluation. TEF is heavily reliant on annual student satisfaction data and employability data returns.

Much of the higher education literature offers a relatively weak theoretical framing of human behaviour at the organisational level. There is a tendency to characterise academics either as passive subjects rendered auditable and conformative through these external assessment regimes (Shore & Wright, 2000, Smith 2017) or as individualistic actors, drawing on metrics to validate their professionalism and maximise individual outcomes (Kolsaker, 2008, Blackmore 2015). Recent critiques highlight a tendency in the literature to impose binary distinctions between supposed managerial and collegial practices that are more associated with instrumental and relational accountability practices respectively. More nuanced empirical accounts emphasise the democratic and relational practices that are maintained in some organisational contexts subject to the same national evaluative frameworks (Clegg, 2005, Tight, 2014).

There is a call for research approaches that enable close examination of the effects of new forms of governance in different organisational contexts and among different groups of staff (Locke and Bennion, 2011; Kolsaker, 2008; Tight, 2014). In the following section, the concept of organisational justice is examined as a way of operationalising and examining Ranson’s concept of democratic accountability (2003) in HE organisational contexts.

**Organisational Justice as a theoretical resource**

There has been considerable interest in the concept of organisational justice in the organisation studies literature given its apparent association with workplace commitment, employee satisfaction and organisational citizenship behaviour (Niehoff and Moorman, 1993). Through empirical insights, the concept is articulated in two aspects: distributive justice (fair allocation of rewards) and procedural justice (fairness of procedures and processes which underpin the distribution of rewards) (Greenberg, 1990).

Preliminary research interest within the literature centred on determinants of distributive justice, the perceived fairness of the ends achieved (Greenberg, 1990) but a developing empirical interest has been evident in the processes by which distributive outcomes are achieved, referred to as ‘procedural justice’. Early work, conducted in the context of legal dispute resolution emphasised the importance of ‘process control’ (often conceived as employee voice) which became the foundation of what would become known as ‘procedural justice’ (Thibault & Walker, 1978). Subsequent work identified further elements of procedural justice, including procedures that reduce bias and enhance ethical standards in performance evaluation (Leventhal, 1980). Komaki (1986) discusses the temporal aspects of process control in terms of scope for joint deliberation and employee voice in influencing performance antecedents (instructions, clarifying work), performance monitors (the nature and perceived fairness of monitoring methods) and performance consequences (the nature and type of rewards associated with performance). This’ fair process effect’ is identified as a significant determinant of employee satisfaction and, in a meta-review by Andrews (2015), is observed to be one of the most replicated findings in the justice literature.

A broad span of empirical work suggests that perceptions of procedural justice serve as strong determinants of perceived workplace fairness. Through this body of work, the concept of procedural justice has been further distinguished in two aspects. Informational justice relates to the explanations or information provided by decision makers as to why certain procedures are used or why outcomes are distributed in particular ways*.* Interactional justicereflects the sensitivity, politeness,and respect people are shown by authority figures in the way such procedures are enacted *(*Andrews, 2015*)*.

[Figure 1 around here.]

Research over the last three decades has enhanced understanding of the multi-dimensionality of organisational justice. Initially conceptualised as an adjunct of distributive justice, research evidence has demonstrated that the effects of procedural justice are independent of distributive justice (Nowakoski et al, 2005). Subsequent re-conceptualisation of these two concepts proposed that procedural justice is associated with system satisfaction whereas distributive justice is associated with individual outcome satisfaction (Andrews et al, 2015). (See figure 1).

Relatively few studies of organisational justice have been located in the higher education environment and have tended to focus on student fairness evaluations of assessment (Navarro-Abal et al 2018) or broader evaluations of human resources policies across staff populations (Hartman et al, 1999). However, empirical work has validated the construct independence of procedural and distributive justice in the university setting and has further elaborated the distinct elements of interactional and informational justice as predictors of leader evaluation and organisational commitment respectively (Colquitt, 2001).

From this conceptualisation, it is possible to gain insight into the factors influencing academic responses to metrics. It is anticipated that academics may evaluate accountabilities associated with metrics according to the extent to which they are applied with procedurally just principles and are associated with outcomes that are evaluated as distributively just.

**Method**

The current study draws on online survey responses from 233 English academics drawn from the disciplines of Education and Economics as well as follow-up interviews with 30 academics. The selection of disciplines was informed by a broader comparative study (forthcoming) of academic responses to metrics in English and German academic contexts. The two disciplines are subject to varying extents of regulation by external bodies and less institutionalised than some research laboratory-based groupings than is the case in some science disciplines.

The survey gathered personal details from participants including their grade, contract and number of years of research and teaching experience as well as organisational details such as whether their institution was primarily research or teaching-focused (see appendix 1). Survey questions explored the concept of procedural justice through the perceived clarity with which metrics-based targets were communicated (i.e. informational justice), the extent of institutional dialogue on ways metrics could be used responsibly and context-sensitively and whether there was scope to negotiate these targets (i.e. interactional justice). The concept of distributive justice was explored through questions on the extent to which metrics were associated with promotion criteria, recruitment and resource allocation.

Respondents were located in different types of organisation (defined in the survey as ‘research-intensive’, ‘teaching-intensive’ or ‘teaching and research oriented’) and represented a range of academic positions including those in research-only and teaching-only roles. The majority were on teaching and research contracts and the largest groups within the sample were lecturer and senior lecturers (see appendix 1).

A hierarchical cluster analysis was conducted using four variables, perceptions of Distributive Justice - in the REF, perception of Procedural Justice in the REF, perception of Distributive Justice in the TEF and perception of Procedural Justice in the TEF. The purpose of this analysis was to determine if the participants’ responses on these measures identified any underlying groups within our sample. An ANOVA statistical analysis was conducted on each of the clusters to examine association between fairness evaluations and perceptions of the extent to which metrics were associated with positive or negative outcomes as measured by four enhancement statements: ‘Enhanced the quality of my teaching/research’; ‘Enhanced my motivation to do teaching/research’; ‘Enhanced my sense of belonging to teaching/research culture’; and ‘Enhanced my career prospects’.

Follow up interviews with 30 survey participants enabled fuller elaboration on the organisational accountability practices associated with metrics. A profile of interviewee roles, institutional affiliations and justice orientations is summarised in Appendix 2. The analysis presented below was shared with interview respondents as a means of ensuring veracity in our interpretation of respondent accounts.

**Analysis**

1. Variability in fairness evaluations

Analysis of survey responses (table 2) indicated some similar patterns of organisational practice in relation to teaching and research metrics across the two disciplines. The extent of centralised monitoring was greater for teaching metrics. The influence on staff recruitment strategy and promotion criteria was more pronounced for research metrics. Research metrics were perceived to shape individual priorities and targets to a greater degree than teaching metrics though there appeared to be greater scope for individuals to define these targets in their research. Disciplinary differences were more pronounced in the extent to which there was scope to define metrics at individual level (for both teaching and research) and in the extent to which research metrics influenced recruitment and progression criteria.

[Table 2 around here]

The results of the hierarchical cluster analysis showed a four-cluster pattern as the outcome (see figure 2). The clusters are displayed on two axes with a low score indicating a positive view. In the case of Procedural Justice the four clusters are spread fairly evenly along the whole length of the dimension. By comparison, for Distributive justice the clusters appear to be split into two groups, potentially indicating a rather binary view in relation to both metrics.

[Figure 2 around here]

Cluster 1 and 2 represents the largest grouping of survey respondents (N=65 and N=65 respectively). Clusters 3 and 4 were smaller in proportion (N=33 and N=29 respectively). Of particular interest is cluster 3, which is one of the two groups which sees evidence of distributive justice in both metrics but also sees the least evidence of procedural justice. On all the other clusters, academics are shown either to view metrics as having less of an impact or believe they have more input on how they function, or both. This was confirmed by an ANOVA statistical analysis which showed that cluster 3 had a significantly more negative perception of the REF and TEF than all other clusters as measured by the four ‘enhancement’ statements relating to organisational uses of metrics. Comparatively, cluster 2 respondents who gave more positive evaluations of procedural justice perceived more positive effects of REF and TEF on their research and teaching practice.

1. Academic justice evaluations

*Distributive justice*

Perceptions of distributive justice were based on the degree to which the respondents believed that their performance in the REF and TEF had an impact on resource allocation, recruitment strategy and career progression. REF was perceived as more significant in promotion criteria than teaching-related metrics (see table 2) and the cluster analysis suggested a polarised distribution of these evaluations.

Interview respondents who perceived less evidence of distributive justice (clusters 1 and 4), offered a variety of explanations on why performance in the metric in question had little impact on resource allocation. This ranged from perceived disparities in the way teaching and research were valued by the organisation, to unevenness in the allocation of rewards and remoteness from this form of evaluation**.**

Respondents identified negative performance consequences associated with the allocation of organisational rewards, in some cases as being distinguished as ‘research probable’ and ‘research possible’ and the preferential treatment that was perceived for these groups:

*REF seems a very self-centred callous game. There has been a visible change in the [organisational] research culture…If you are identified as REFable you just need to get your 4\* papers out into the field and you are done…you don’t need to go to conferences or set up internal events*. (James, Cluster 4)

With the NSS, scepticism was expressed in how the ‘rewards’ were allocated:

*The brownie points go to programme manager.* (Penny, Cluster 1)

*With the TEF, clearly, vice-chancellors greatly enjoyed the kudos of getting a [top rating], but I’m not sure who else benefits [..] Certainly, staff don’t benefit. It’s just another set of emails and spreadsheets to fill in, really. (David, Cluster 4)*

Of those respondents who saw evidence of distributive justice(clusters 2 and 3), metrics were associated with career progression, career navigation, fulfilment of probationary requirements and in maintaining a balance in valued practices at the organisational level:

*There is more reward for being a good teacher than there used to be...once, if you were a research superstar and a terrible teacher it used to be ok.* (Martin, Cluster 2)

Whilst there was wide acknowledgement that research metrics influenced career progression criteria, interview respondents tended to emphasise the role played by national metrics in maintaining fairness at the sectoral and organisational level. As such, these responses suggest justice orientations which appear to be reflective of collective rather than individual concerns.

*…we need some kind of dampener on some of the assumptions that there are around what a good university is, which is so often about prestige.* (June, Cluster 2)

*…in a world where you only have the REF, the teaching aspect [...] can be completely poor. In a world where you have both REF and TEF, ...they can be played against each other .. in a sense that one side cannot be completely ignored. …in that sense, it is important that there is a balance that forces universities into making that step.* (Steven, Cluster 3)

*Nobody is really positive about [REF] …it is a process that everyone hates but it is good in aggregate terms*…. (Diana, Cluster 2)

*Procedural justice*

Perceptions of procedural justice were based on the degree to which the respondents believed the methods by which performance in the REF and TEF were measured were fair and proportional. In the survey, only a quarter of academics perceived the rationale for metrics-based targets being clearly communicated by senior managers. Of those interviewees who perceived this form of informational justice there appeared to be some alignment of metrics with broader organisational values and ethos, particularly in respect of research.

*I think, [University’s] probation and promotional structure is very clear. It’s very transparent, and the research aspect of it is clearly tied in with REF standards. So, for me, that gives a sense of transparency and clarity, in terms of what I need to achieve. I think that’s only the case because it is supported by the developmental aspect of the internal research review exercise, and by the quality of mentorship that I’ve received.* (Christine, Cluster 2)

*Our institution has stopped short of having numbers as targets …it’s really talking about more and better and finer quality …it comes all the way down from the values of the vice-chancellor, who is, I think very fair and actively trying to promote a collegiate atmosphere…and has made some decisions about limiting the negative impacts of such things*.  (Emma, Cluster 1)

Accounts of the interactional dimension of procedural justice (the manner in which procedures are enacted at an interpersonal level) were more prevalent amongst interviewees who gave more positive evaluations of procedural justice (i.e. Cluster 2). Within these accounts, aspects of negotiability, context-sensitivity and a degree of ‘process control’ were salient. In relation to research metrics, Christine (Cluster 2) emphasised transparency and flexibility in the university’s performance expectations:

*…there seems to be a degree of flexibility in terms of different people having different types of research profile.*

Dale (Cluster 2) who holds research management responsibilities described a formalised organisational system of annual research plans, linked to the organisational workload model within which a degree of flexibility could be accommodated:

*Every year we fill in a personal research plan. …In terms of research it is clear from the workload planning what is required from everyone so one 3\* paper and a bid for £50k and you keep your category. … we have a lot of conversations, listen to people’s needs. ...If they say I already have 2-3 publications and want to focus on funding this year then we will take them out of metrics system.*

Among early career researchers represented in cluster 2, dialogue and sense-making of organisational targets from close colleagues was valued:

*Senior managers are very concerned with the number of stars of your paper. But my [research mentor] says you need to enjoy it, don’t worry… they make it a bit better’* (Marcus, Cluster 2)

In relation to teaching metrics, a degree of context-sensitivity was apparent:

*With REF you can strategise but I’m not sure anyone knows how to get a high NSS score. …Maybe there is a bit more respect that it is down to the individual how to teach … I don’t see anything coming from the Faculty.... other than ‘you must get a good NSS and enough students filling it in’.* (Martin, Cluster 2)

*Another part of the process was to set targets for schools to improve their NSS scores and the targets were tailored to individual schools. …you wouldn’t expect them to have the same target as a school that was doing really, really well.* (Paul, Cluster 2)

Within interviews accounts of dialogue relating to research, target-setting (performance antecedents) was proximate to the individual, located at line management level and often supported by a research group. Whilst ‘cluster 2’ respondents saw more evidence of procedural justice they still displayed criticality in their view of metrics but identified mitigating practices which reduced the more negative effects. However, for some respondents in this group the lack of process control with teaching metrics indicated limited potential to contribute to a meaningful dialogue which created tensions between academic and administrative roles:

*I feel very, very squeezed, both by managers and by students. I feel like there's a massive amount of accountability and administration, without the commensurate support.* (Angela, Cluster 2)

Accounts emphasised a lack of process control in negotiating research and teaching priorities and the means by which performance is monitored:

*… we have to produce almost like an action plan and a report, so it’s written, having to address all of the points, and how things are going to be proved, or what we’re going to do, but you have to do that. There isn’t a dialogue about it, it’s structured responses that you have to give.* (Sarah, Cluster 3)

*My contract is part of a university-wide research fellowship programme, whose goals and targets are set at the university level rather than in my department […] I have relatively little scope for questioning or challenging those metrics*. (Louise, Cluster 3)

*I don’t feel there have been the forums, the opportunities and equally, I don’t feel there has been much information. There’s been a little bit more in terms of information about the NSS or TEF than about REF, but there’s been a similar lack of consultation or opportunities for any direct influence or feedback*. (Rita, Cluster 3)

A salient theme in the accounts of this group was the curtailment of valued research and teaching practices. Respondents reflected an irreconcilability between the demands of the teaching and research metrics and their own professional aspirations. Rita put it in this way:

*There is a disjunction between the publications that we are encouraged to publish in to get a good REF and the ones that I would choose to publish in, which might not be ranked in these lists or are maybe ranked lower and therefore strategically, in terms of the REF, are not a good choice.*

Similarly, Helen describes a loss of academic freedom associated with the REF requirements: “*in order to get published in higher journals you have to fit with their interests rather than your own interests*”. This aspect was further pronounced in Economics where interviewees commonly referred to the practice of targeting journals that are listed on the ‘Association of Business Schools ranking’ as being ‘high impact journals’.

Curtailments of teaching practices was also identified among Cluster 3 interviewees:

*The loss of flexibility and the space to tailor my teaching to suit the needs of my students.* (Rita)

*.. with teaching, everything I do in terms of preparation, design, assessment, feedback, communication with students, everything I do is shaped by the NSS …I feel that it detracts from my ability to actually design interesting courses*. (Louise)

Some interviewees who perceived a lack of proceduraljustice (cluster 3), attributed this to the particularities of their research area, in ways which limited the scope to reconcile the demands of metrics-based evaluation in their research discipline communities. This was illustrated by Rita and Helen who felt that their research areas did not align closely with the ‘target journals’ they were being advised to publish in. However, in more cases respondents attributed injustices to problematic organisational accountability practices as we examine in the following section.

**Institutional practices contributing to fairness evaluations**

The study explored the particular forms of metrics-related accountability practices at the organisational level. Survey data indicated differing levels of process-control in agreeing performance targets and priorities with more negative evaluations associated with teaching metrics. Analysis of interview data indicated varying perceptions of organisational practices in terms of target-setting and performance-monitoring. Particular practices described to illustrate more (relational) and less (performative) democratic forms of accountability are represented below.

[Tables 3 and 4 around here]

Variability in perceptions seemed most pronounced in evaluations of REF, where we saw a wider distribution of evaluative responses (as indicated in figure 2). Qualitative comments ranged from ‘brutal’, ‘utilitarian’ and ‘callous’ to ‘developmental’, ‘supportive’ and ‘professionally rigorous’. In relation to teaching metrics, fewer associated forms of accountability were perceived as legitimate and observations were made on the level of centralised control, reduced scope for professional judgement and erosion of the staff-student relationship.

A divergence in responses was apparent in whether research accountabilities were framed in collaborative or individualised terms, which varied according to organisational strategy:

*One of the things which it has done here [..] was to move away from a situation where everybody was acting almost like an autonomous unit [..]…to a situation where we’re much more focussed. We’ve identified a smaller number of areas where we feel we have specific expertise and tried to concentrate our efforts on those areas to build a community of scholars rather than a whole group of people who just happen to be in the same building*. (Paul)

*The way in which the REF has been organised in my business school [..] is to basically separate people out. It's no longer really joined up [...] Those are the people that do impact, there are the people that do academic research. In a way, it discourages, rather than encourages, me, to do more impact and knowledge exchange, because of how my university understands what that is.* (Angela)

More positive accounts emphasised organisational strategies which contributed to research accountability practices which strengthened the professional sphere:

*…there’s all sorts of things that are iffy about REF and because this is actually a mechanism for simply distributing money rather than anything else. At the same time, I think this has broadened the degree of rigour and professionalism and collegiality to academic work, which I think is good*…. (Paul)

*I think research is being seen as something we are being seen to do ‘in the light … I do think I’ve got a good sense of what other people are doing… and talking about making links. It adds to this sense of maybe we should be talking about what we are doing.* (June)

These positive dimensions were emphasised by respondents in Education. In Economics, a caveat was expressed widely by respondents in relation to the common practice of specifying target journals for publication which was perceived as privileging particular types of research and instilling an orthodoxy in the field.

**Discussion**

The purpose of this study was to apply the concept of organisational justice to examine various aspects of accountability associated with metrics and to draw attention to institutional practices that can shape academic perceptions of fairness.

As discussed earlier, more leeway is afforded in the REF framework at sectoral level, enabling varying organisational responses in how metrics are applied. Organisational practices evaluated negatively by respondents were those which offered limited scope for dialogue on target-setting. In these cases, respondents identified organisational accountabilities that were expressed in transactional terms, and individualised in the way these accountabilities were expressed. Survey and interview data indicated less scope for process control on the way teaching metrics were applied in the organisational context.

Methods of performance monitoring and performance consequences associated with teaching metrics tended to be located at management level with respondents generally providing lower evaluations of both procedural and distributive justice. Evaluations of the uses of teaching metrics were negative from respondents in both teaching-intensive and research-oriented institutions. Evaluative accounts highlighted limited but unsatisfactory, instrumental uses of teaching metrics in performance management and course management processes. A prevalent critique of the use of teaching metrics from respondents centred on the erosion of the organisational dialogue associated with teaching evaluation and an unhelpful framing of the staff-student relationship. Respondents in leadership roles identified some ways of mitigating these effects: engaging in a scholarly scrutiny of research on metrics on teaching committees, applying context-sensitivity in interpreting evaluative data and maintaining spaces for professional judgement in performance monitoring processes.

Attention is drawn in this study to the individualising practices associated with metrics in many organisational contexts and the apparent irreconcilability of research and teaching accountabilities for the majority of respondents. However, for some respondents, metrics provided a means of maintaining a focus on teaching and research. Those who had been dis-incentivised from research or teaching due to contractual status or organisational uses of metric-based evaluation (e.g. Non REF-able) had continued to engage in these activities on a discretionary basis suggesting a persistent orientation to professionally valued practices.

Respondent evaluations indicated that procedural justice evaluations were not predicated on distributive justice outcomes. In the HE context, procedure information typically precedes outcome information in temporal terms; and, in the case of REF evaluation, by several years. In such contexts, and as suggested by this study, justice perceptions are influenced by perceptions of procedural process control as a proxy for organisational justice.

Notwithstanding strident critiques of the effects of metrics, a degree of tolerance for a form of external accountability was expressed both by respondents from research-oriented and teaching-intensive institutions. This seemed to be indicative of a particular form of procedural justice orientation more associated with collective rather than individual interests as observed more widely in the organisational justice literature. In seeking to explain why such dimensions of procedural justice exert effects independent of distributive justice outcomes, theorists have drawn upon the psychologically oriented group-value model of organisational relations (Tyler, 1990). From this perspective, perceptions of fairness are associated with ‘feelings of inclusion and standing in the group’ (Lind & Tyler, 1988). This psychologically-oriented conception of employee behaviour proposes that people value long-term group relationships which leads to the valuing of procedures that promote collective interests.

As suggested by this exploratory study, organisational uses of national teaching and research metrics, are shaping accountabilities in varying ways. Previous research has demonstrated that individuals are not uniformly unsatisfied with unfair outcomes and research has accounted for these individual differences in terms of differing equity sensitivities (Nowakoski, 2005:21). Yet individual justice orientations are observed to interact with organisational contexts such that different organisational practices may activate particular justice norms and justice expectations (Deutsch, 1975). Recent research in the HE context suggests that individual justice orientations are not immutable and can be influenced by the work environment. In a study of academics in China and Australia, Li et al (2015) found academics’ individualistic tendencies were more pronounced than their group-oriented behaviour and that this difference was influenced by contextual factors in their organisational context. Further work by the authors, taking a comparative approach of English and German contexts, examines the nature of distributive and procedural justice evaluations in a national context where metrics-based evaluation is less pervasive (forthcoming).

This study centred on the organisational level and demonstrated considerable variability in evaluations of fairness across different organisational contexts. However, the accounts of academics in the Economics discipline highlight how discipline-based academic organisations - not managerial or state agency - can control the research evaluation process to a large extent.

**Conclusions**

The organisational justice perspective applied in this study offers empirical insights on factors contributing to divergent evaluations of fairness in the uses of research and teaching metrics. Contemporary critiques of metrics tend to rely on normative assumptions of a prior context historically guided by fair and meritocratic principles (Bloch, 2018). However, respondent accounts challenge this assumption and point to the ways metrics may exert some emancipatory effects, for instance through raising the level of transparency of academic career progression and in helping to raise the profile of teaching in relation to research.

The widely observed patterns of increasingly individualised, performative accountabilities associated with metrics-based evaluation are broadly confirmed by this study. However, the concepts of procedural and distributive justice draw analytic attention to the heterogeneity of organisational practices that can open up or close down possibilities for process control and gives insight to the conditions in which these technologies of measurement can be operated more democratically and inclusively.

Recent English reforms in the evaluation of research performance propose a move to more collective accounts of research performance (Stern, 2016). Consequently, the individualising of accountability practices observed in particular organisational contexts within this study may run in tension with these changing requirements. In the case of teaching metrics, the rubric of the metrics and the way teaching tends to be organised means that the associated accountabilities are less individualised. However, a proposed move towards discipline-level TEF evaluation (rather than institutional level) may mean more devolved and individualised accountabilities and may introduce a new dynamic.

The current study draws attention to institutional practices that contribute to academic perceptions of fairness and increase alignment between organisational and individual goals. In line with recent literature (Taner, 2015; Colquitt 2013), this study highlights the salience of interactional justice and the importance of interpersonal practices of academics who enact these organisational procedures The limited response from senior academic managers in our sample provided partial visibility of the scope for judgement and strategies available for applying metrics context-sensitively. Further work in this area would be fruitful in giving insight to ways that metrics can be dealt with that can heighten trust, satisfaction and organisational commitment.

The findings have relevance to international audiences given the UK context is acknowledged as a harbinger of metricisation (Spence, 2018). There is growing recognition of the need for responsible use of metrics in organisational contexts which convey clearly the rationale on which metrics are being used to support the development and enhancement of teaching and research as well as academic career pathways. Our analysis points to the potential insights gained from this perspective that can shape organisational accountabilities in ways that can be interpreted as professionally meaningful and socially just.

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