Background

Dependable prestige measurement criteria will serve four purposes:

A. to create such a "recognition and reward ecosystem" where "high quality research" is rewarded and promoted

B. to help HEC, funding agencies and Policy makers to objectively evaluate the prestige of a journal, in a given subject area, and make informed decisions about the prestige of journals where faculty members typically publish

C. to recognize, with high degree of accuracy within the community of researchers, those researchers who aim for the prestigious journals because they are doing world class research

D. finally, it shall act as a policy instrument to distinguish "quality-centric researchers" from the herd

Objective

The prestige measurement criteria should consist of a number of publically available measures and these measures should be (as much as possible) subject or domain independent. This criteria should make provisions for subject area position of a Journal in a given Knowledge area.

HEC Journal Recognition System

In this concept paper, for the sake of brevity, technical details of the measures will be omitted. The measures will be introduced at an intuitive level so that a reader can comprehend the motivation to use them. The measures are selected from a seminal paper by Bollen et al titled "A principle component analysis of 39 scientific impact measures" is available at arXiv Cornell publishing website (see Bollen J, Van de Sompel H, Hagberg A, Chute R, 2009 A Principal Component Analysis of 39 Scientific Impact Measures. PLoS ONE 4(6): e6022.doi:10.1371/journal.pone.0006022). The paper introduces 39 measures and we have selected only 6 from them that are most influential and are publically available. We now introduce our HEC Journal Recognition System (HJRS).

Definition 1 [Eligible Journal]

A Journal is eligible to be considered for positioning in HJRS if and only if: (1) it is indexed by an indexing agency that is recognized by HEC from time to time; currently, the journals indexed by Web of Science (WoS) and Scopus are only recognized by HEC; (2) it is a local journal and meets the HEC requirements for Y category for local journals; and (3) It is not included in "Removed List(s) of Australian Business Deans Council (ABDC) or Directory of Open Access Journals (DOAJ).

Definition 2 [Eigen Factor (EFT)]

The Eigenfactor™ [EGF] score of a journal is an estimate of the percentage of time that library users spend with that journal. This factor measures the prestige of a Journal because with a prestigious journal, researchers will spend more time. We will display its raw value (EGFRaw) and the percentile value (EGFp).

Definition 3 [Article Influence (AIF)]

The Article Influence Score™ (AIF) for each journal is a measure of the per-article citation influence of the journal. This tells us that how much the articles of a journal have influenced the knowledge in a given subject area. We will display its raw value (AIFRaw) and the percentile value (AIFp)

To cater for diversity, we are taking 3 factors from Scimago website. SCImago is a research group from the Consejo Superior de Investigaciones Científicas (CSIC), Institute of Granada, Extremadura, Carlos III (Madrid) and Alcalá de Henares, dedicated to information analysis, representation and retrieval by means of visualization techniques [http://www.scimagojr.com].

Definition 4 [Scimago Journal Rank (SJR)]

The SJR indicator measures the scientific influence of the average article in a journal; it expresses how central to the global scientific discussion an average article of the journal is and adapts Google Page Rank to measure it. We will display its raw value (SJRRaw) and the percentile value (SJRp)

Definition 5 [H-index (H-Index)]

The H-index is a prestigious measure to determine the quality and quantity of research produced by a researcher, Journal and an institute. If H articles of a Journal are cited at least H times each and the remaining articles are not cited more than H times, then H will be the H-index of a Journal. We will display its raw value (HIRaw) and the percentile value (HIp)

Definition 6 [Cites per Doc (CD2)]

Cites per Doc in last 2 years measures the scientific impact of an average article published in the journal, it is computed using the same formula that journal impact factor ™ (Thomson Reuters). We will display its raw value (CD2Raw) and the percentile value (CD2p).

Definition 7 [Source Normalized Impact per Paper (SNIP)]

This indicator measures the average citation impact of the publications of a journal. Unlike the well-known journal impact factor, SNIP corrects for differences in citation practices between scientific fields, thereby allowing for more accurate between-field comparisons of citation impact. This measure is proposed by well-known CWTS Journal Indicators Project [http://www.journalindicators.com]. We will display the raw value (SNIPRaw) and the percentile value (SNIPp).

The 6 measures described above are publicly available from prestigious projects for journals of knowledge domains.

Definition 8 [Total Journal Prestige (TJS)]

The TJS is a proprietary measure to understand an overall impact that a journal has made on a Subject Area in terms of its Eigen Factor, Article Influence, Scimago Journal Rank, H-index, Impact Factor and Source Normalized Impact per Paper.

If a factor is not available, then a default value of Zero (0) is used for doing calculations.

Definition 9 [Journal Prestige Stability (JPS)]

The JPS is an important proprietary measure that provides a useful insight about the stability of the overall position within a Subject Area of a journal by analyzing its relative prestige indicated by each individual factor: (EGF)p, (AIP)p, (SJR)p, (HI)p, (CD)p and (SNIP)p.

If a factor is not available, then a default value of One (01) is used for doing calculations.

Definition 10 [Journal Prestige Index (JPI)]

JPI is modelled as a function of both TJS and JPS and provides a final proprietary measure of the prestige of a Journal within a Subject Area.

Definition 11 [HEC Journal Recognition System]

Currently, the W and X categories of HJRS for each Subject Area are determined on the basis of the JPI score of a Journal; whereas different thresholds for different Subject Areas (or disciplines) are chosen by the respective Scientific Review Panels of HEC.

Definition 12 [Validity of HJRS X List]

HJRS X List means that the list is for the X year and is computed on the basis of 6 parameters for the Year X and it remains applicable and valid from July 01, X+1 to June 30, X+2. For example HJRS 2019 List remains applicable from July 01, 2020 to June 30, 2021.

Definition 13 [Snap & Freeze]

HJRS X List uses the Snap & Freeze approach for enlisting the journals at start of each fiscal year which means that it takes a snapshot of lists from HEC Recognized databases on a given date and then categorizes the journals into W, X and Y on the basis of their JPI scores within a Subject Area.

Definition 14 [Medallion]

HJRS is a relative threshold-based system that assigns W, X and Y categories to Journals; W being the highest and Y being the lowest. Since thresholds are relative; therefore, it is important for authors to know the predictive assessment of any W Category Journal being downgraded to X or Y categories at any time in the future. Similarly, the predictive assessment of any X or Y category journal being promoted to W category at time in the future.

The purpose of Medallion is to provide that predictive assessment based on the distance from the relative threshold selected for W Category in a given year. The following are descriptions of different Medallions:

i. **Platinum:** The Journals with *Platinum Medallion* have nearly negligible probability of losing "W" Category at any time in the future

ii. **Gold:** The Journals with *Gold Medallion* have very low probability of losing "W" Category at any time in the near future.

iii. **Silver:** The Journals with *Silver Medallion* have low probability of losing "W" Category at any time in the near future.

iv. **Bronze:** The Journals with *Bronze Medallion* are at a significant risk of losing "W" Category at any time in the future. It means these journals are very close to the relative threshold chosen for the "W" Category.

v. **Honorable Mention:** The Journals with *Honorable Mention* Medallion have low probability of being promoted to "W" Category at any time in the near future. It means these journals are also close to the relative threshold chosen for "W" Category.

vi. **Clay:** The Journals with *Clay Medallion* have very low probability of being promoted to "W" Category at any time in the future.

vii. **Null:** The Journals with *Null* Medallion have negligible probability of being promoted to "W" Category at any time in the future.

The authors, therefore, might find Medallion information significantly helpful in making an informed judgement to select a journal for their publication.