# Rewards Exercise:
Part 5 – Cumulated pensionable rewards

The aim of this paper, the fifth part in a series of publications on the rewards exercise 2022 (part 1, part 2, part 3, part 4), is to identify patterns in the way rewards are being distributed and compare such patterns with the rewards policy of the new career system (NCS) and/or the former career system. One useful method is to observe histograms reflecting how staff have been similarly or differently rewarded over several years.[1]

The reward distribution of cumulated steps

Figure 1 shows how many staff members have received a number X of steps over eight appraisal cycles with X ranging from 0 to 14. Only staff members who can be compared with one another are considered, i.e., colleagues who have been eligible for a step in each of the eight years during the period 2015 – 2022. On average staff received 5,63 steps in 8 years.

Fig. 1 Rewards over eight years in the New Career System (2015-2022)
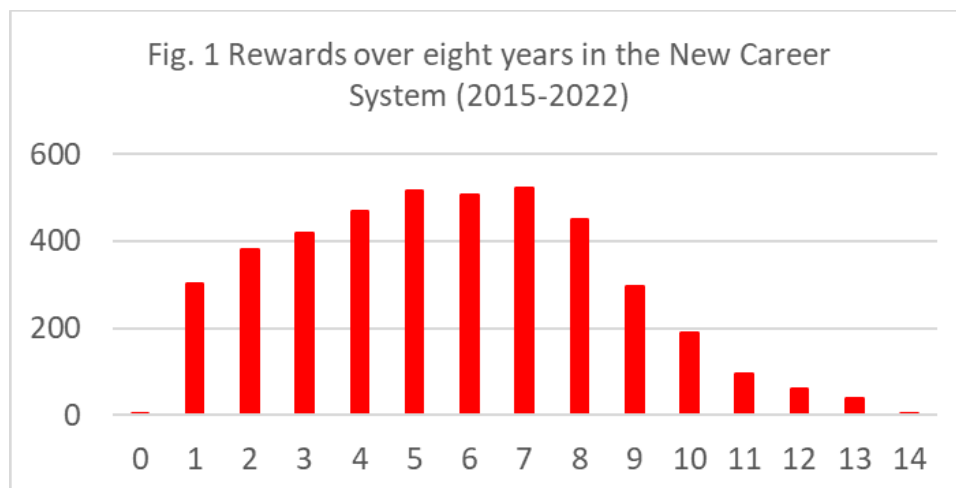
A sharp peak means more equally distributed rewards, and a broader curve means more unequally distributed rewards. So how sharp or broad is this distribution compared to other distributions?

As an illustration, we can first compare it with the spread that would be observed if staff had received seniority-based steps according to the former career system. In that system, staff in a grade used to receive a step each year if they were in steps 1-9 and an "oversized-step"

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[1] Once a pattern is identified for a sufficiently large population, staff not eligible during the entire period can nonetheless determine from the data if their case fits with the pattern.

(125% of a normal step) every two years if they were in steps 10-12, step 13 being the last in a grade[2]. There were few grades, and many colleagues were promoted to the next grade (sometimes retroactively) before reaching the steps of biennial rewards.

Figure 2 depicts an estimate of the general rewarding pattern of the career system in force until 2015[3] (All staff eligible).

Fig 2 Rewards over eight years in the "old" career system (estimate)
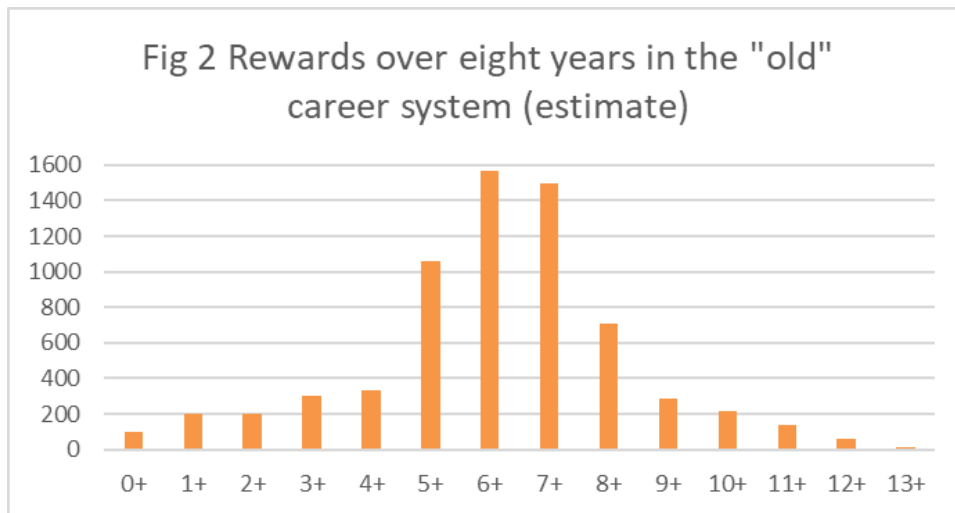
Is the career system based on "merit"? And what is "merit"?

The new career system has been introduced and maintained as a system intended to reward "merit" without ever defining merit. The reward exercises have relied upon the line managers in charge of determining what merit is supposed to mean and to a "Harmonisation" Committee to allegedly handle the inevitable discrepancies. Consequently, staff has always been at a loss to understand how their merit is compared to their peers'.

For the purpose of this paper, we will look at the interpretation of merit which has been applied over many years to staff monitored by numerical KPIs, i.e., examiners and part of the formality officers. The following analysis will show that even when considering a productivity-based interpretation of merit, the outcome of the rewarding exercise over multiple years is incompatible with the alleged purpose of the career system.

By far, the most prevailing KPI used to monitor EPO staff is productivity. If "merit" in the years 2015-2021 was essentially measured by the productivity ranking, one would expect a distribution of rewards having the same shape and spread [4] as the distribution of productivities.

After the reward exercise of 2021, the distribution of productivities could be modelled by a Gaussian shape for each of the three sectors that existed in 2021 in DG1. Figure 3 shows the distribution of productivities over 10 months in 2021 in DG1 (orange histogram)[5] compared to a Normal (Gaussian) distribution (blue curve)[6].

[2] The yearly step was available below step 9 in A2 to A5 (+A4(2)) and below step 10 in the B grades.
[3] The values are estimates from the number of staff in each grade C1-C6, B1-B6, A1-A7 in the years 2012-2014 and assuming an even distribution in each grade, a promotion rate within 8 years of 55%, application of the normal career progression and decreasing rate of double promotions. The estimated average is of 6,3 steps in 8 years.
[4] The width at one, two or three standard deviations (sigma, σ) from the average.
[5] The shape and spread of the histogram for the 12 month of 2022 is similar the one depicted.
[6] The purpose of this comparison is to have an expression of the distribution of productivities that can be compared in a similar fashion with the outcome of the cumulated reward exercises, because reward exercises take into account the appraisals and the appraisals take into account the ranking of productivities. The comparison at this stage is independent of any assumption. It can be *observed* that the distribution of productivities fits well with a Gaussian distribution. This is however expected because

Fig. 3 Normal fit of the number of staff vs productivity [days/product]
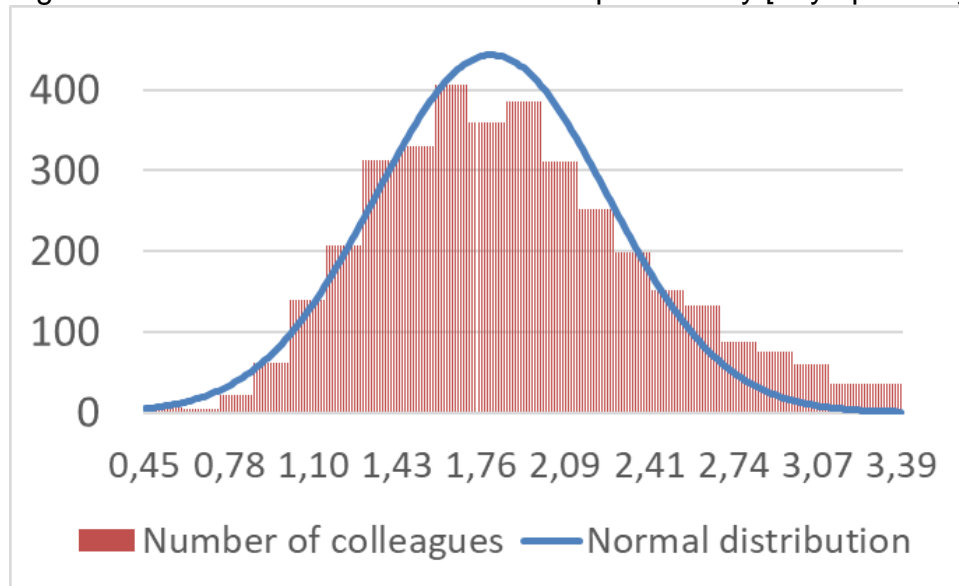
It can be observed that the distribution of rewards 2015-2021 does not match at all with the distribution of productivities. Figure 4 shows that the real distribution of rewards over seven years (in red) is much flatter and spread-out than it should be (the blue bars represent the distribution of rewards expected from the Normal distribution fitting with the distribution of productivities the blue curve in the previous graph)[7].

Fig. 4 Real distribution 2015-2021 (red) vs theoretical Normal distribution (blue) for the same number of staff
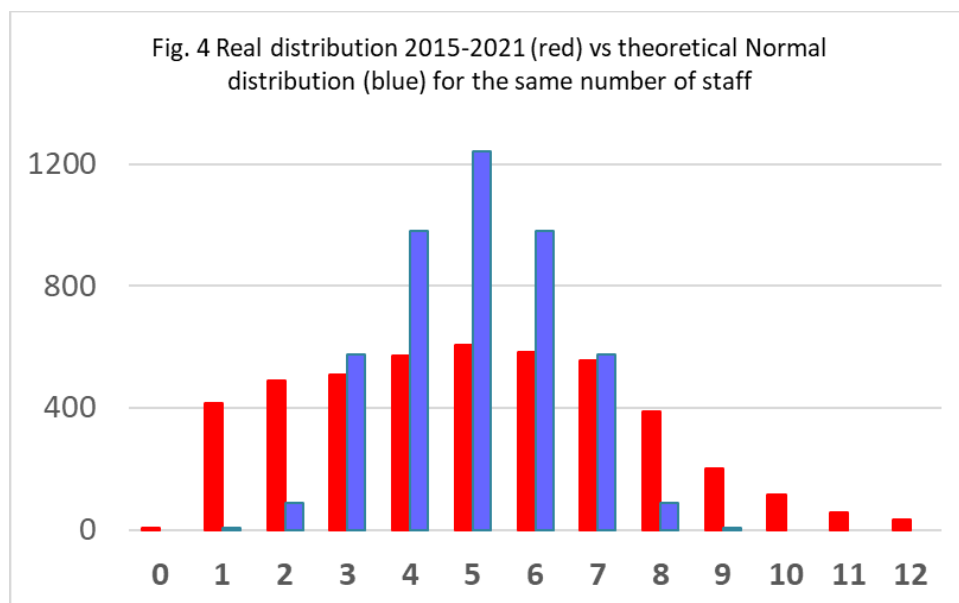
In 2022, the productivity distribution appears to be identical in shape, peak and width as last year. Thus, the same conclusions apply this year after the reward exercise 2022.

This analysis confirms that other criteria than productivity might be taken into account for assessing "merit" in the reward exercise. These other criteria are unknown and their influence on the outcome undefined. The reward exercise is definitely untransparent.

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the values of productivities for each staff member differ from one another because of many factors that are random (e.g. technical field, type and variety of activity)

[7] The interpretation of a Gaussian distribution in the context of reward exercises is that since only 60% of staff receive a reward, staff members have each year *a priori* a probability of 0,6 of receiving a pensionable reward (one or two steps). Cumulated over 8 years this produces a binomial distribution that can be approximated by a Gaussian distribution.

What is the trend of the rewards exercise?

Figure 5 shows the evolution of the distribution from the year of introducing the New Career System (2015) until the year 2019, 2020, 2021 and 2022 respectively.
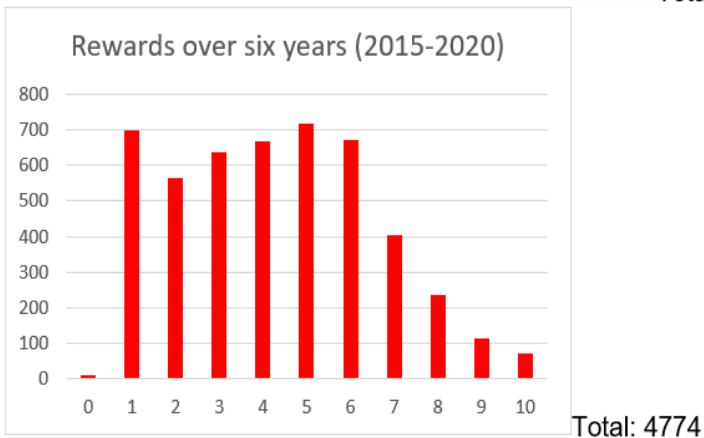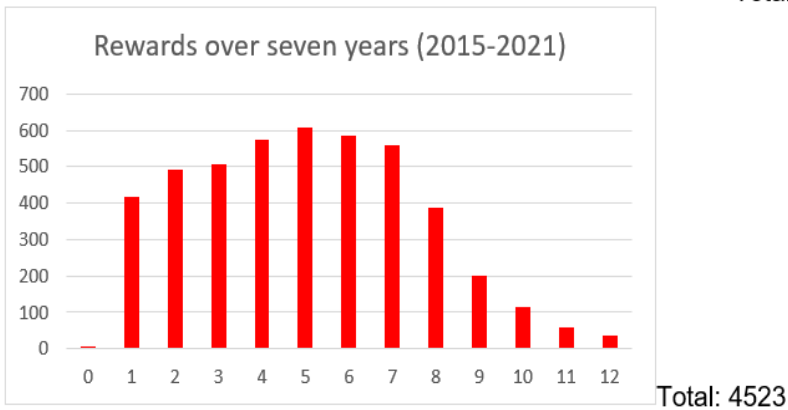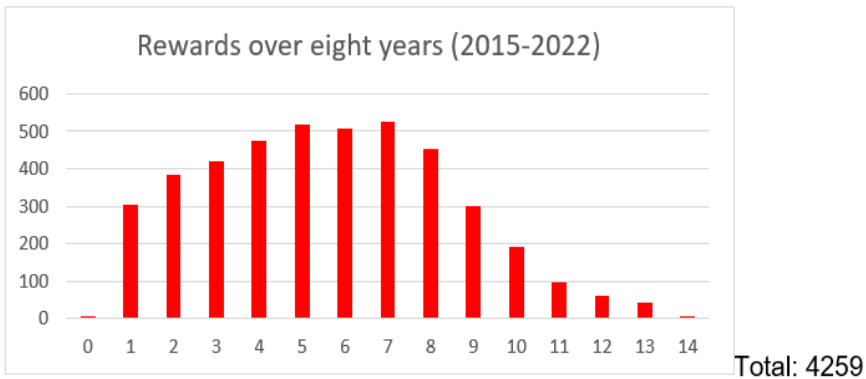
The first observation is that the vast majority (>85%) of staff having received 8 or more steps after the reward exercise of 2021 have received one step or a double step in 2022[8]. A large majority (>75%) of those that had received 6 or 7 steps or more after 2021 received at least one step in 2022.

The second observation is that the 8-year distribution shows a slightly improved decrease of values in the range 4,3,2 steps, i.e., the distribution over 8 years has a slightly more normal (gaussian) shape than the distribution over 7 years. However, this is essentially due to the catch-up mechanism, which was introduced to overcome the worst effects of the new career system, i.e., staff receiving no career progression at all, despite performing work at a satisfactory level (this will be further elaborated below with figure 6).

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[8] The sum of staff (198) in the range of steps 11-14 in the 8-year distribution is almost identical to the sum of staff (203) in the range of steps 10-12 in the 7-year distribution. Similarly, the sum for "10-14" after 8 years (387) is almost the same as for "9-12" after 7 years (402), etc.

Fig. 5 Bundle of histograms showing the number of steps received by eligible staff over several years[9]

Rewards over eight years (2015-2022)

Total: 4259

Rewards over seven years (2015-2021)

Total: 4523

Rewards over six years (2015-2020)

Total: 4774

Rewards over five years (2015-2019)

Total: 5027

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[9] The total of staff in a histogram decreases as years are added to the timespan under consideration since only staff having been active during the entire timespan can be compared with one another.

Trend of the rewards exercise: fixed timespan

Figure 6 shows the distribution of cumulated rewards over 6 years for three consecutive timespans of 6 years, 2015-2020, 2016-2021, 2017-2022. Each of these distribution show how many staff have received X steps (X=1,2,…,11) during those 6 years. Only staff having been active during all six years is taken into consideration, otherwise the distribution would be skewed.

Fig. 6 Number of steps received in 6 years among eligible staff active during all six years
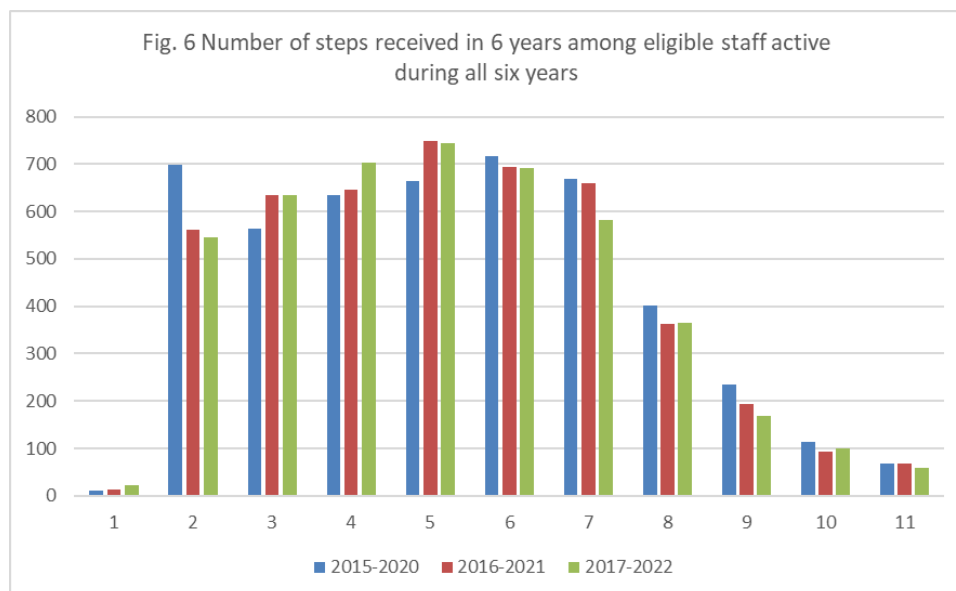
The first observation is that the distributions for 2016-2021 (red distribution) and 2017-2022 (green distribution) are almost identical although the holistic approach has been applied for the 2022 exercise for the first time. Obviously, the intent of a new approach should be to modify the output (assuming that "holistic" is not merely a change of label of the same appraisal/reward system or an attempt to make the outcome of the exercise more difficult to challenge). However, the effect of the new approach of the performance assessment on the reward exercise after one year is negligible.

A second observation is that the distribution for 2015-2020 (blue) showed more staff having received only 2 steps during those 6 years and correspondingly less staff having received 3,4,5 steps compared to the following two 6-year timespans (red and green). The reward exercise of 2020 was the first where the catch-up mechanism was introduced, by which staff which have not received a step for four years in a row will receive a step on the fifth year[10]. The change from the blue to the red distribution and the similarity between the red and the green distributions show that the NCS required an extrinsic[11] catch-up mechanism to get back into the lower end of the distribution (2 steps in 6 years) staff which had received 0 steps between 2015-2019.

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[10] See in figure 5 the more than 450 staff that had not received any step in the five years 2015-2019.
[11] The catch-up mechanism is fundamentally decoupled from the appraisals, thereby demonstrating the inability of the NCS to produce a distribution with a single peak at an average value, let alone an overall shape and spread similar to the performance distribution of staff.

Conclusion

If the rewarding exercise is not arbitrary, the cumulated output over many years for any staff member should match with measurable data resulting from criteria that are clearly defined in the Service Regulations or implementing provisions, that is applicable to the staff member and comparable with peers. Having considered the only collective data ever produced by the management and trying to see if that data could explain the observed distribution of cumulated rewards, it must be concluded that there is a complete mismatch. Since there is no quantitative process that can be identified to justify the distribution of rewards, the latter must be viewed as arbitrary.

The "holistic" approach after one year of implementation has had no appreciable effect on the distribution of rewards. In contrast, the NCS reveals itself more and more as a "winner-takes-all" system for a small minority.

Over time, the discrepancy of rewards among staff grows, giving even more reasons for staff to complain against a career mechanism that has never fulfilled its alleged intent of rewarding "merit" and appears as arbitrary. There is no clear definition of "merit" given by management and the abolition of any seniority component remains contested.

The Central Staff Committee