Career-salary trajectories, advancing through the ranks at fixed merit levels

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Context

- MAUT pre-CASC meetings, 2025;
- MAUT-SSCOW Merit, Compensation, and Governance Survey Fall 2024, Report March 2025;
- Report of the MAUT ad hoc Committee to Examine the Status of Salaries and Benefits at McGill, 2025.

Acknowledgment: Thanks to B. Coish for sharing many insightful and independent views and information related to this study.

Inflation rates in Canada, Quebec, Montreal

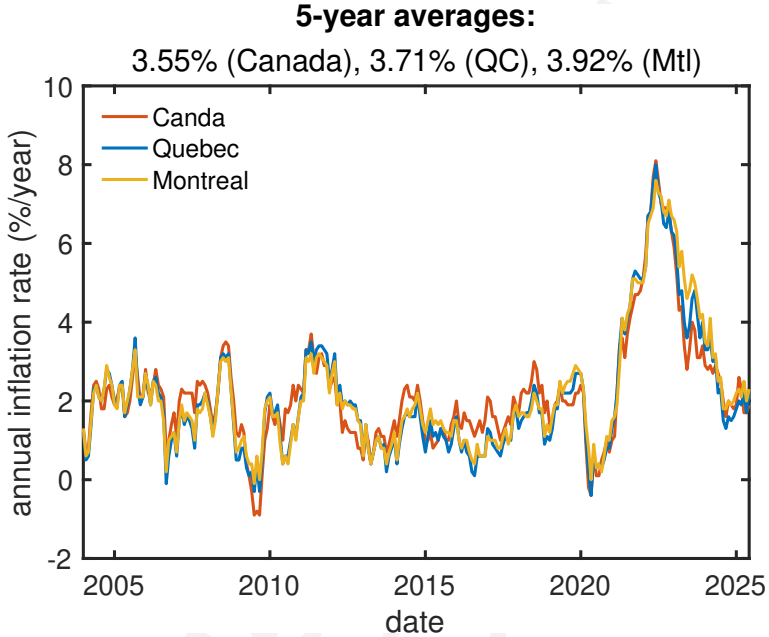

Figure 1: Annual inflation rates[1].

Table 1: n-year average IRs:

n	Canada	Quebec	Montreal
10	2.61	2.51	2.68
5	3.55	3.17	3.92
3 (last salary policy)	3.58	3.74	4.13[2]

[1] Consumer Price Index (CPI), overall index, Canada, Québec, Montréal CMA and Québec CMA, monthly data not seasonally adjusted. [2] Equivalent to 13.0% over the last 3 years.

Local cost of living

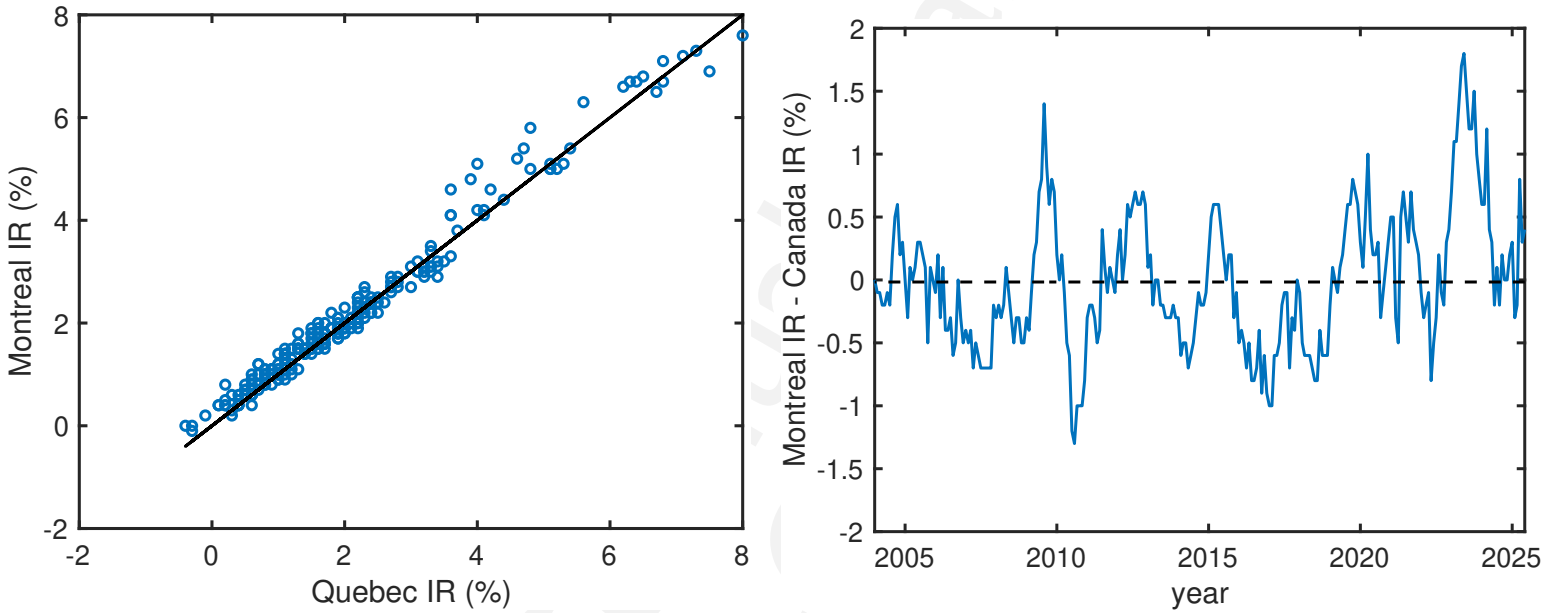

Figure 2: Correlation of Montreal and Canada inflation rates[1]. Error bars (left panel) show the mean $\pm$ one standard deviation for the entire time series (right). Montreal (and Quebec) have had negatively correlated inflation w.r.t Canada, and there are notable periods of higher inflation, e.g., 2022-2024.

[1] Consumer Price Index (CPI), overall index, Canada, Québec, Montréal CMA and Québec CMA, monthly data not seasonally adjusted.

Career-trajectory salary model

Example: salary $s(t)$; starting salary $s_0 = 110$ k (2025 aP 25th percentile); 2025 C2 merit c_2 (to be calculated); annual inflation rate $i = 0$–0.04 (4%); 1st and 2nd promotion amounts $p_1 = p_2 = 7.5$ k in 2023-2025; 1st and 2nd promotion times $t_1 = 6$, $t_2 = 15$ years; across-the-board rate $a = 0.01$ (1%); 2025 FP 50th percentile salary, 197k.

Salary increases due to ATB, merit, promotions:

$$\dot{s} = as + c_2 e^{it} + p_1 e^{it_1}\delta(t - t_1) + p_2 e^{it_2}\delta(t - t_2)$$

gives salary trajectory:

$$s = \frac{c_2 e^{it}}{i - a} + \left(s_0 - \frac{c_2}{i - a}\right) e^{at} + p_1 H(t - t_1) e^{t_1(i-a)+at} + p_2 H(t - t_2) e^{t_2(i-a)+at}.$$

In present \$, with $s' \equiv se^{-it}$:

$$s' = \frac{c_2}{i - a} + \left(s_0 - \frac{c_2}{i - a}\right) e^{-(i-a)t} + p_1 H(t - t_1) e^{-(i-a)(t-t_1)} + p_2 H(t - t_2) e^{-(i-a)(t-t_2)}$$

$$\to \frac{c_2}{i - a} \text{ when } t \gg 1/(i - a).$$

$\delta(x)$, $H(x)$ are Dirac-delta and Heaviside-step functions.

What should the C2 merit in 2025/26 be to reach the 35-year career target at C2?

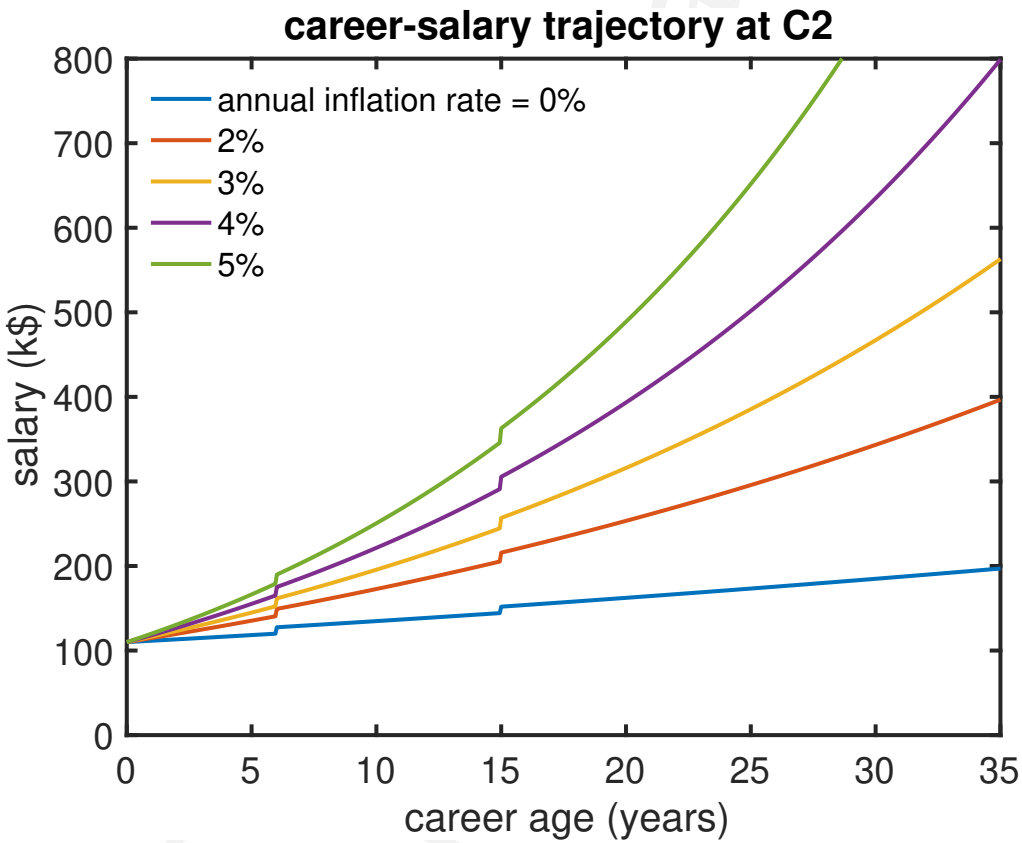

Figure 3: Salary trajectories at various career-averaged annual inflation rates 0–5%. To achieve the end-of-career objective, the C2 merit levels in 2025 are found to be: $c_2 = [0.52, 3.65, 5.29, 6.98, 8.72]$ k$.

What should the C4 merit in 2025/26 be to reach the 35-year career target at C4 (no promotion to FP)?

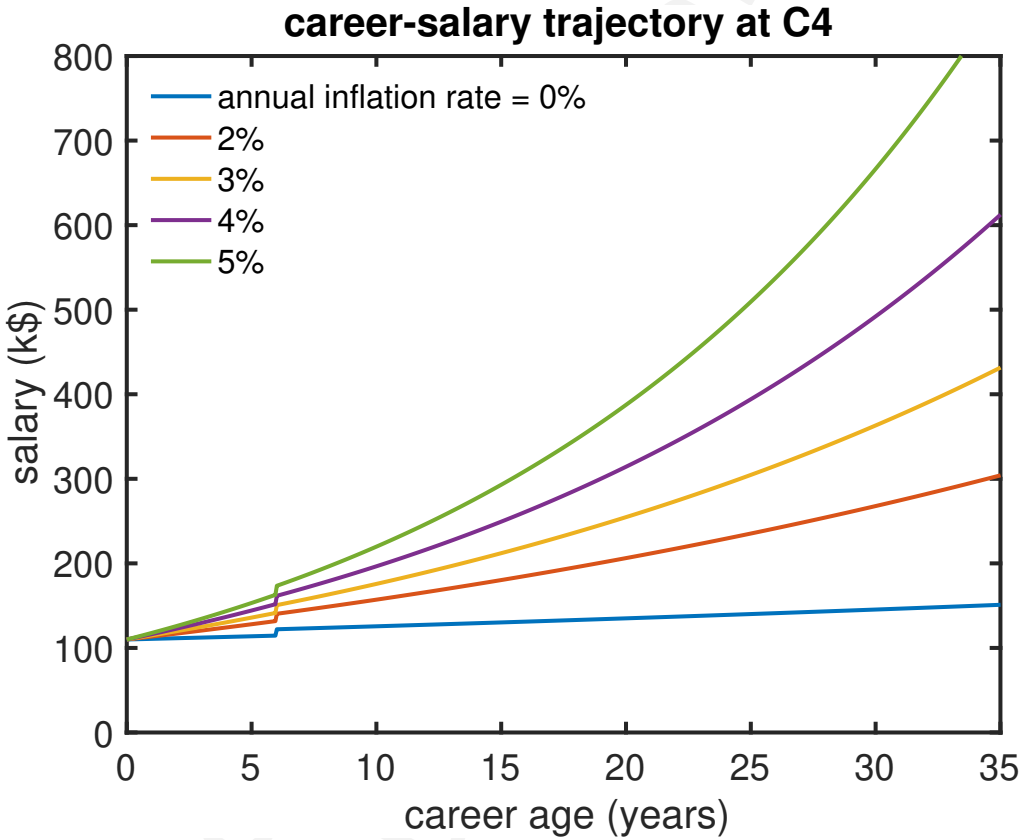

Figure 4: Salary trajectories at various career-averaged annual inflation rates 0–5%. To achieve the end-of-career objective, the C4 merit levels in 2025 are found to be: $c_4 = [-0.36, 2.30, 3.66, 5.05, 6.45]$ k\$. (median salary for AP in 2025, 151 k)

Career trajectories in 2025 dollars

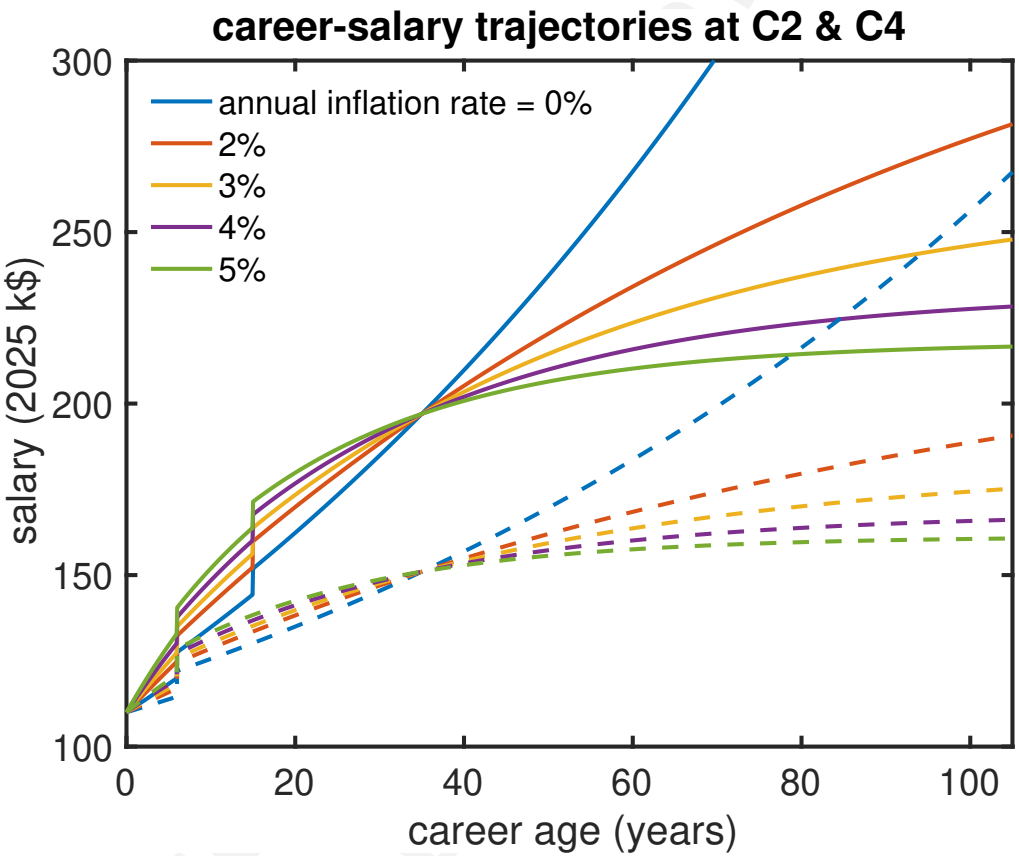

Figure 5: Salary trajectories (in 2025 dollars) at C2 (solid) and at C4 (dashed) merit levels.

Gini index for the 2025 assistant professor (aP) cohort

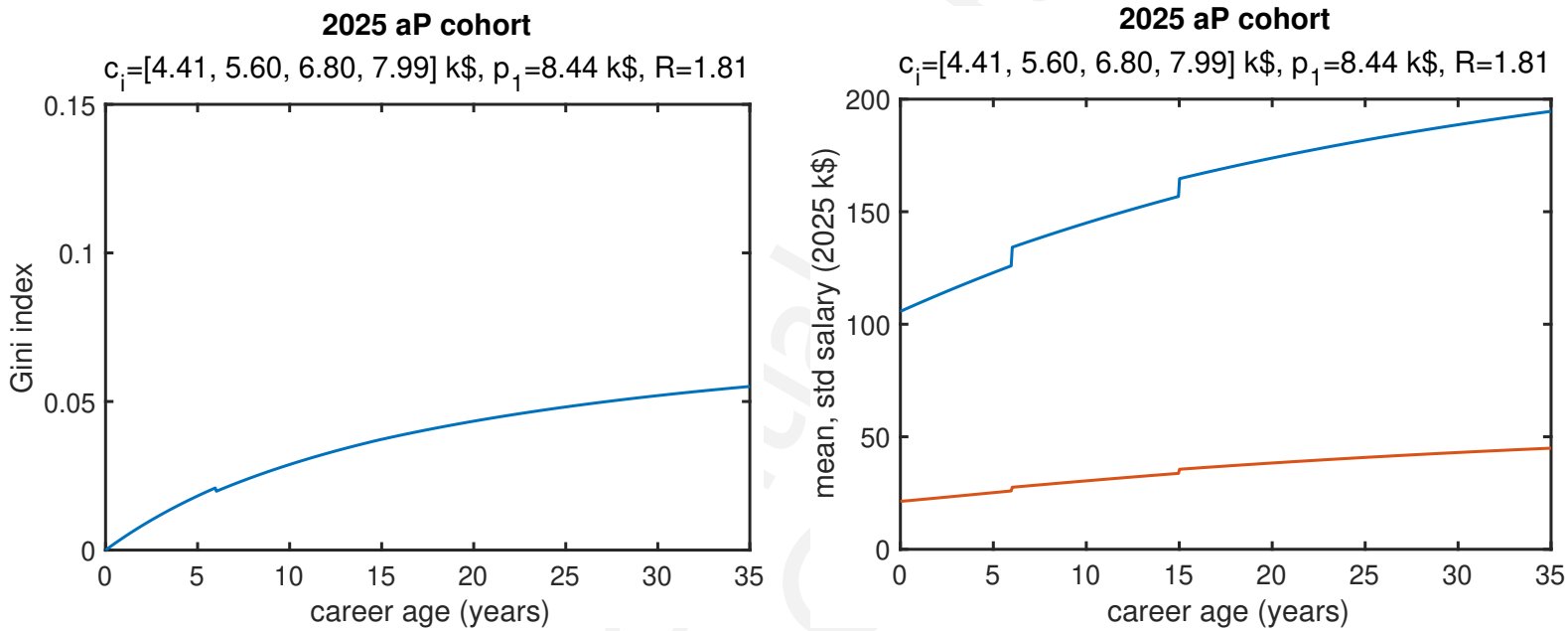

Figure 6: Gini index (left), and average and standard deviation (right) for a population of assistant professors (aP) starting at the 25th percentile in 2025. No anomaly and retention benefits, stipends, no crossing of merit boundaries C1-C4 during a career, no promotion to full professor (FP) at C4, otherwise promoted to associate (AP) and full (FP) in years 6 and 15, respectively.

In 2025, the Gini index for McGill academic salaries was estimated ≈ 0.125, the second highest among the U16 (Figures 3.7, 3.8, Report of the MAUT ad hoc Committee to Examine the Status of Salaries and Benefits at McGill, 2025).