

Appendix: Aggregate or Structural? Diagnosing the Rise in Unemployment

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For our formula, we start with the observation that, in a population where workers belong to different groups g (for example, primary, second and tertiary workers), the aggregate unemployment outflow rate at time t f_t can be expressed as a weighted average of group-specific outflow rates f_t^g , where the weights are the shares of unemployment accounted for by each group, s_t^g

$$f_t = \sum_g f_t^g s_t^g$$

It further follows that the change in the outflow rate between time t and time t_0 can be expressed as

$$f_t - f_{t_0} = \sum_g (f_t^g - f_{t_0}^g) \bar{s}_t^g + \sum_g (s_t^g - s_{t_0}^g) \bar{f}_t^g$$

where $\bar{s}_t^g$ and $\bar{f}_t^g$ are the group-specific average share and flow rates in these two periods. The first term captures changes driven by within-group movements in the unemployment outflow rate (the change in flow rates, or CFR), and the second captures compositional shifts across groups (the change in shares, or CS).

We use July 2023 as the benchmark month t_0 and consider five groups:

- Primary workers in low-AI-exposure occupations
- Primary workers in high-AI-exposure occupations
- Secondary workers in low-AI-exposure occupations
- Secondary workers in high-AI-exposure occupations
- Tertiary workers

For each t between July 2023 and March 2026, we compute the unemployment outflow rate and unemployment share for each of the five groups and depict their contributions to the decline in aggregate unemployment outflow rate.