

Safety organization reform and worker consequences in Denmark

Bolero

Abstract

Registered research design and conditional interpretation policy; no outcomes observed.

Keywords: Pre-registration, research design

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Pre-registration: no experimental outcomes have been observed.

Safety organization reform and worker consequences in Denmark

1. Study identity and registration history

This is a prospective analysis plan for existing Danish administrative records, not prospective recruitment. Blueprint 1 is dated 8 September 2026 locally; retrieval continued on 9 September UTC. The adaptive study asks whether the 2010 work-environment organization (AMO) package had different consequences for workers initially at enterprises with 20–34 rather than 10–19 November payroll persons. It is a conditional quasi-experimental comparison of national-package effects across fixed groups, not an exact legal-eligibility or receipt effect.

The authorized restart replaced the former observational stroke-recovery question. Current Atoms 000004–000006 and Molecule 000002 preserve the meanings assigned by the upstream policy baseline. Blueprint adds baseline distributions, paired earnings-composition sensitivity, same-person injury/employment description and institutional interpretation detail within those units. [Design-amendment.md](#) records the scientific changes and knowledge history; upstream review does not cover

these additions. Investigators, funding, registry accession and deposit date were not supplied. No public deposit is claimed.

2. Data existence, access and prior knowledge

Only public schema, documentation, published research and historical scientific outputs were inspected. No confidential study records, computed study outcomes or realized precision were accessed in this stage. Of the 47 permitted tables, the selected design uses IDAN, IDAS, BEF, IND, LPR_ADM, LPR_DIAG and optional DOD-SAASG, all in [the boundary](#). Documentation does not establish complete delivered years, identifier namespaces, counts or support.

IDAS documents a contemporaneous workplace-to-CVR field from 2007; the corresponding IDAN field begins in 2008. Actual usable 2004–2011 outcome coverage remains unknown. Historical death-date completeness is unresolved. Statutory weekly counts, all excluded supervisors, agreements, committee membership, training receipt and inspection visits cannot be reconstructed from the documented selected fields. Published numbers remain attributed background. Source versions/access are summarized in [search-log.md](#); operational and earlier-source history stays outside this World.

3. Background, theory and importance

Organizational requirements may strengthen worker voice and coordination, impose administrative demands, or separate safety work from operational decisions. The 2010 reform changed the old default committee threshold of twenty to a two-level threshold of thirty-five, with one-level organization at ten to thirty-four. Daily and strategic duties continued, alongside changes in discussion, training and flexibility. Both comparison groups encountered the package.

The old committee was not necessarily a distinct set of representatives: BEK 575/2001 §12(4) assigned committee tasks to the members of one or two safety groups together with the employer. This matters especially for the single-workplace target. Fewer formal levels cannot be equated with elimination of representation. Seim, Møller and Jensen describe the reform’s intended flexibility/integration mechanisms and date the modification process to 2008; their programme-theory paper is not a representative first-stage estimate. Contemporary government reporting also describes an enterprise inspection-screening programme during 2005–2011. Its potentially unequal incidence is an unmeasured counterfactual threat.

Pedersen and colleagues already studied Danish employer size, hospital injuries and a different earlier institutional change in construction. This study’s potential contribution is the 2010 package comparison, fixed manufacturing workforce, legal-identifier payroll reconstruction and linked safety/work-resource evidence. Lower injury could reflect safer work, reduced work exposure, recording change or unrelated shocks. Employment, wages and joint recorded states distinguish some descriptions compatible with these accounts; they do not identify mediation.

4. Research questions, hypotheses and claim scope

Atom 000004 asks whether the payroll comparison can be constituted and how its institutional meaning is limited. Atom 000005 addresses annual recorded inpatient injury. Atom 000006 addresses November work attachment and capped wage resources for the same original workers. The three confirmatory two-sided nulls are zero differential 2011-minus-2006 changes in injury probability, H/B employment probability and capped annual wage income. Direction is not assumed: institutional mechanisms and altered exposure can produce competing predictions.

Secondary questions concern timing, missingness, count-proxy sensitivity, end-point specificity, baseline earnings composition and destinations. Sex contrasts are exploratory. Injury/employment co-occurrence is descriptive, without a causal test. No favorable estimate, diagnostic or failed primary route authorizes a replacement observational study.

5. Setting, population, eligibility and sampling

The unit is a worker; grouping and uncertainty use original CVR. Construct the complete 2007 November employer roster first: join IDAN jobs to contemporaneous IDAS by YEAR and LBNR, reconcile CVR, and count distinct H/B/N persons within CVR. Multiple jobs in one enterprise count once; jobs in two enterprises contribute to both rosters. Count all roster persons before applying age, residence or study restrictions. Never substitute workplace ANTNOV or a cohort-only count.

Eligible enterprises have exactly one nonfictitious workplace, FILIAL=1, 2007 DB03 manufacturing division 15–37 and N07 from 10 to 34. Workers need one unique primary H job there, age 25–54 on 31 December 2007, December BEF snapshots in 2004–2007 and valid nonnegative 2006 LOENMV_13. Both recorded sexes and unknown sex remain. Neither health, future jobs, employer survival nor later residence determines inclusion. Conflicting unique keys are not resolved with an outcome-selected tie-break.

Set $G=1$ for N07 20–34 and $G=0$ for 10–19. Define common-support cells $s=\text{two-digit DB03} \times \text{sex (1,2,U)} \times \text{age (25–34,35–44,45–54)}$, requiring at least one original CVR in each group. Report unsupported workers/firms. The target uses the pooled original-worker cell distribution. Sample size is data-determined; schema provides neither power nor cohort counts. Follow-up is 2004–2011 with all original workers retained in outcome denominators.

6. Exposure, assignment and comparison

The external variation is the national law change, not endogenous growth or illness. LOV 508/2010 primarily commenced on 1 October 2010; BEK 1181 commenced on 17 October. Reference outcomes are 2006, before the mechanically selected 2007 job snapshot. Primary follow-up is 2011, after implementation and before the later 2012 size-related fine schedule. Strict diagnostic changes are 2005–2004 and 2006–2005. The 2008–2010 window combines crisis, reform development, potential anticipation and concurrent policies; it is not a clean placebo.

Legal leaders/supervisors, office-type weekly-hours conditions, special off-site/seasonal rules and negotiated organization prevent equating N07 with statutory headcount. Annual hours and STILL31 do not repair that difference. An ANTNOV-based exact statutory RDD is contradicted by unit/count evidence. Actual legal count and differential implementation remain unresolved. A differential national-package effect across fixed payroll groups is defensible conditional on substantial assumptions. These are distinct conclusions.

Identification requires no relevant anticipation in 2006; equal 2006–2011 counterfactual changes within s without the AMO reform; comparable ascertainment for the target endpoint; and a defined national-policy regime including spillovers. The no-reform counterfactual retains other policies and the pre-existing inspection programme. Differential recession recovery, taxes, inspection timing, employer shocks and selection-induced mean reversion can violate parallel changes. Diagnostics cannot prove these assumptions. Receipt measurement is not universally necessary for policy ITT, but this design specifically lacks exact eligibility and estimates only the stated payroll-group package contrast. No first-stage division, IV/LATE or untreated-group ATT is registered.

7. Outcomes, measurements and operationalization

Injury is any recorded Danish inpatient admission in a calendar year with C_PATTYPE=0, principal C_DIAGTYPE=A, and normalized ICD-10 S00–T79 including descendants. Normalize SKS by removing the designated leading D and punctuation as specified in Atom 000005. Link diagnosis and admission identifiers in their documented namespace, use admission date, and count each person once per year. T80–T98, nonprincipal and outpatient-only injuries do not qualify. Neither acute admission nor survival to discharge is required. This is not an occupational-accident measure. In a complete linkable Danish universe, no qualifying record is zero for this recorded-Danish-admission endpoint, including after migration; foreign injury remains unmeasured. Principal fracture families S02,S12,S22,S32,S42,S52,S62,S72,S82,S92 and injury-or-death are supplementary; the latter needs complete validated death dates.

Employment is a November primary or secondary H/B job witness. A positive witness establishes one. Without it, a December residence record or validated death before 1 November can establish zero under the narrow registered endpoint. N-only jobs can still be paid work. No witness or contradictory death/job records yields unknown. Wages are $\min(\text{LOENMV_13}, 600000)$ nominal DKK for valid nonnegative values, without inflation adjustment or hourly interpretation. Missing/negative wages are bounded, including death years.

The 2008 employment ascertainment change and 2011 wage-component change are known and unquantified for this cohort. Valid economic intervals always carry the corresponding fragile interpretation and flags. A corrected extract does not supply harmonization. Literal recorded contrasts and conditional total-bias sensitivity remain useful. These economic restrictions do not automatically downgrade injury. Full dictionaries, joins and priority rules are incorporated through [data-contract.md](#).

The optional joint module in Atom 000006 describes annual injury (0/1/U) and November employment (0/1/U) in the same workers in 2006 and 2011. Nine observed-state shares sum to one separately by year/G. For each of four binary states, the lower contribution requires both values known and matching; the upper requires every known value to be compatible. No independence/product-of-marginals assumption is used. These are cellwise logical bounds, not simultaneously attainable independent intervals or sampling intervals. Whole-source absence makes a year unavailable; it is not an invented all-U population. Distinct annual and November clocks prohibit event ordering, co-onset, employment-conditioned injury risk or mediation claims.

8. Evidence sequence and planned displays

Reader question	Registered source/display	Contribution and limit
What institution changed?	Atom 4; Figure 1 timeline/default tiers	Distinguishes law from analysis dates; no measured receipt
Who supplies the comparison?	Atom 4; Table 1, Figure 2 payroll/wage distributions	Separates enterprises, workers and baseline earnings; not a manipulation test
What happened to injury, and when?	Atom 5; Figure 3 absolute risk bounds and differential path; Table 2	Provides scale before effect; separates missingness from sampling
What happened to work resources?	Atom 6; Figure 4 aligned employment/wage paths; Table 2	Preserves both margins and target; names recording changes
Are injury and job states in the same people?	Atom 6; Figure 5 joint bounds; Table S14	Same-person description without survivor selection; no mechanism identification
What challenges the account?	Atoms 4–6; Figure S1; SI Tables S1–S14	Reports support, sensitivity and changed targets; cannot certify assumptions

[Blueprint.md](#) supplies exact stable display IDs, paragraph allocation and all transitions. Main text develops the inference sequence; SI explains full science; this protocol/native registrations retain decision branches. Engineering interfaces stay in docs/execution.

9. Estimands and statistical models

Let $P = 1$ denote the historical AMO package and $P = 0$ continuation of the prior AMO regime. The 2011 differential package estimand is

$$\tau = \sum_s \pi_s \{E[Y(1) - Y(0) \mid G = 1, s] - E[Y(1) - Y(0) \mid G = 0, s]\},$$

where π_s is the pooled original-worker cell share. Equal policy effects in both groups give $\tau = 0$ even when both are large. For n_{Gs} group-cell workers, define $a_i = (2G_i - 1)\pi_s/n_{Gs}$; group weights sum to +1 and -1. Estimate $\sum_i a_i(Y_{i,2011} - Y_{i,2006})$. Dynamics replace 2011 with the specified year. No post-policy controls enter.

Unknown endpoints use sign-specific minimizing/maximizing completions: injury/employment [0,1], wages [0,600000], including uncertainty in either reference or follow-up. Bounds retain original workers and weights. New earnings-composition sensitivity fixes B from capped 2006 wages: [0,100000), [100000,250000), [250000,400000), [400000,600000]. These are analyst bins, not tax brackets. R contains original workers with common support in $r=(s,B)$. Compare restricted_base using re-estimated s weights on R and earnings_standardized using r weights on exactly R. This separates lost support from added standardization. Both 2011–2006 comparisons are reported for every endpoint, without a difference test, bin revision or primary replacement.

Payroll distributions separately describe distinct firms and unweighted workers at N07=10,...,34. Wage-bin and joint-state shares use original group-standardized weights. These finite-target descriptions receive no p-values/sampling intervals. Executable pseudocode and transformations are in the Atoms and [analysis-specification.md](#).

10. Uncertainty, multiplicity and design sensitivity

For each observed contrast or bound completion z , let m_{Gs} be its group-cell mean. With F original enterprises,

$$u_f = \sum_{i \in f} a_i(z_i - m_{Gs}), \quad \widehat{\text{Var}} = \frac{F}{F-1} \sum_f u_f^2.$$

Use $F - 2$ Student-t degrees of freedom, clustering at original CVR. This requires many effectively independent enterprises; it is not randomization inference. Safeguards require at least thirty CVRs per group, finite positive variance, at least two informative strata or an explicitly labeled one-stratum target, and maximum enterprise share of total absolute contrast weight $\leq .10$. Failure preserves calculable bounds but withholds directional/equivalence inference. Zero events with zero empirical variance do not establish precision.

The three primaries retain Bonferroni family $\alpha=.05$ and confidence $1-.05/3$ each. With $c = t_{F-2}(1 - .05/6)$, bounded contrasts use $[\text{lo} - c\text{SE}_{\text{lo}}, \text{hi} + c\text{SE}_{\text{hi}}]$, an asymptotic sampling/missingness envelope, not guaranteed finite-sample coverage. Only point-identified contrasts with valid variance receive raw and $\min(3p, 1)$ adjusted p-values. Unavailable tests do not release α . Dynamics/supplementary comparisons use 95% pointwise intervals. Six strict pretrend tests use a separate .05/6 family, retaining undefined members.

Small-effect bands are $\pm.002$ injury probability, $\pm.02$ employment probability and ± 10000 nominal DKK. These pre-data interpretation scales are not validated clinical/welfare thresholds. Small requires the entire adjusted interval within the band and can still be signed positive/negative. Otherwise strict signs give higher/lower; overlapping-zero intervals give imprecise. Apply fragility separately. Power is unknown. The registered approximate 80% detectable difference, $(t_{.9916667,df} + t_{.80,df})SE$, is reported only for valid point estimates as a precision diagnostic, not achieved power or a design-switch criterion.

11. Missingness, exclusions and competing events

Baseline exclusions precede outcomes and are enumerated. Unsupported cells define the stated initial target; follow-up incompleteness does not redefine it. Missing person outcomes receive bounds with fixed denominators. Evidenced systemic hospital/source incompleteness is a data gap, not fabricated zeros. Unexecuted/interrupted checks remain unresolved/no_result. Disclosure suppression is separate from missing scientific evidence.

Employer moves do not change G, weights or clusters. Missing CVR observations do not prove closure; net payroll decline is not a legal layoff event. Death is not a censoring exclusion. Valid death information supports optional accounting/composite and destination classification; incomplete death data do not erase independently computable outcomes. Admission after a validated death is an integrity conflict, handled at person or systemic level as registered. The 2011 destination priority is original CVR, other known CVR, unknown identity, validated pre-November death, no H/B with residence, unobserved. The table keeps categories explicit when death information is unavailable.

12. Diagnostics, sensitivity and rival explanations

Atom 4's exact checks include orphan-job, missing-CVR or FILIAL-exclusion shares $>.01$, minus-three proxy instability $>.20$, and consequential unresolved namespace/exception questions. Hypothetical N07 minus one/two/three, H/B-only, top-manager-excluded and interior 12–17 versus 23–30 comparisons show changed targets, not recovered legal counts. Reconstruct support/weights within every scenario. Original-employer observation through 2011 describes persistence, size, identity changes and multiple sites without restricting follow-up to surviving firms.

Strict pretrend rejection, unavailable required pretrend adjudication, shared exposure fragility and endpoint integrity concerns restrict interpretation; none selects estimation. Fixed bias sensitivity expands $C(B)=[C_lo-B, C_hi+B]$. Injury $B=0,.001,.002,.005$; employment $B=0,.01,.02,.05$; wages $B=0,5000,10000,20000$. Economics uses one total allowance for counterfactual and measurement bias, not separate budgets. This is not calibrated HonestDiD. The zero-exclusion breakdown is $\max(0, C_lo, -C_hi)$. A directional/small conclusion failing respective modest $B=.001/.01/5000$ receives fragility. No B is asserted true.

Retain fracture/composite, caps 400000/800000, uncapped observed-record wages, destinations and female-minus-male contrasts with separate within-sex weights and

original-CVR covariance. The new composition pair is reported for all supported endpoints. Divergence challenges compositional robustness without identifying a confounder; agreement cannot clear known recording breaks or unobserved inspection/tax/crisis differences. Optional joint/composition unavailability leaves primary judgments intact. No computable row is omitted because of sign.

13. Adaptive schedule and result-dependent decisions

Molecule 000002 contains ALL three Atoms. Atom 000004 activates on TRUE. Each of Atoms 000005 and 000006 activates on `(state(atom-000004) == "proxy_supported") OR (state(atom-000004) == "proxy_fragile")`. No outcome-dependent edge connects them. The joint module can reuse the frozen injury phenotype helper without a completed/favorable Atom 5 judgment. Computational reuse is distinct from activation. All native atom_result values remain prereg.

Atom 4's ordered regions are policy_blocked, data_gap, proxy_fragile, proxy_supported, otherwise. Atom 5's are data_gap, bounds_only, fragile, small, lower, higher, imprecise, otherwise. Atom 6 validates component keys, then returns data_gap if both unavailable, fragile if any valid interval bears the mandatory restriction, partial otherwise with at least one bounds-only component, and otherwise for invalid/unresolved adjudication. Operating failure remains no_result. Exact predicates and wording belong to native registrations.

Economic numerical regions, interval signs and component restrictions remain separate from the local state. Optional module dispositions do not override primary keys. Inactive/unavailable members remain reported. Explicit direct-dispatch can bypass the outer scheduler only; it cannot bypass substantive prerequisites or convert missing evidence into a scientific verdict.

14. Interpretation under alternative results

A supported lower injury contrast permits a conditional differential-package interpretation with actual limitations. Higher injuries are compatible with adverse differential response but do not isolate committee effectiveness. Small constrains the differential recorded-injury effect at the chosen scale, not the national effect. Imprecision leaves material directions unresolved. Fragility preserves numbers while identifying the restriction.

Economic gain/loss/mixed/joint_small describe numerical component regions, not causal local states or welfare. Preserve each sign: small employment can be negative alongside higher wages. Lower injury with work loss is compatible with reduced exposure without establishing a pathway; preserved recorded work cannot exclude changes in hours/tasks/off-work hazards. Joint-state evidence adds same-person description only. Wide bounds or unknown states imply incomplete description, not null findings.

Contradicted assignment, pivotal unresolved facts and a conditional package design are reported separately. If no credible policy interpretation survives, the central causal objective is not achieved; no old clinical cohort is substituted. Full component-sensitive alternatives are in [results-map.md](#), subordinate to Molecule rules. Main text prints matching supported prose at execution rather than an if/else catalogue.

15. Reproducibility, code and deviations

Native registrations, incorporated protocols, interfaces and display allocation constitute final science. The numbered experiment and visualization sources implement the defined pipelines and aggregate displays. Synthetic tests exercise: whole-employer counting, duplicate/namespace failures, signed bounds, original-worker follow-up/clustering, fixed multiplicity, economic flags, exact bin edges, identical R across composition specifications, and all nine joint-state cases. Synthetic success establishes engineering behavior only; test data stay outside delivery.

The manuscript contains the combined main text and SI, with labeled hypothetical previews, while the separate report contains this protocol/SAP and complete native registrations. Mocks never fill actual results or serve as runtime fallback. Scientific changes after this freeze require a dated rationale and outcome-knowledge disclosure. Engineering cannot invent harmonization, a comparison or mechanism. See [execution/README.md](#) and [paper-handoff.md](#).

The optional injury-or-death sensitivity has one unresolved definition: the 2006 death reference clock is not explicit in the final scientific handoff. Its result stays unresolved pending a disclosed scientific clarification; the code does not invent cumulative or within-year reference deaths. This does not alter independent primary outcomes or death accounting.

16. Ethics, access and dissemination

No confidential access or ethics approval is claimed. Future access/disclosure follow the actual Danish research environment; approval IDs, investigators and funding remain unspecified. Public materials contain current protocols, permitted code and aggregate displays, with no identifiers, confidential rows, exemplar PDFs or synthetic datasets. Reporting retains cohort flow, missingness, identification, uncertainty and deviations appropriate to a nonrandomized register-policy study. Registration/compilation is not ethics approval or independent scientific validation.

References

Checked sources and locators are in [literature.md](#) and [identification.md](#): BEK 575/2001 §12(4), L126/2009–10, LOV 508/2010, BEK 1181/2010, Denmark’s February 2010 Social Charter report pp.36–37, Seim/Møller/Jensen (2013; 2012 conference paper), official IDA/wage histories, Pedersen et al. (2011,2012), Kreiner et al. (2016), Roth (2022), Rambachan–Roth (2023). The final AER 2026 parental-death paper and dated public-pensions working paper inform organization only; their estimates are never study evidence.

Registered protocol appendices

The preceding protocol and statistical analysis plan are the reader-facing explanation. The exact Atom protocols, local result rules, and Molecule registration below retain the executable scientific authority.

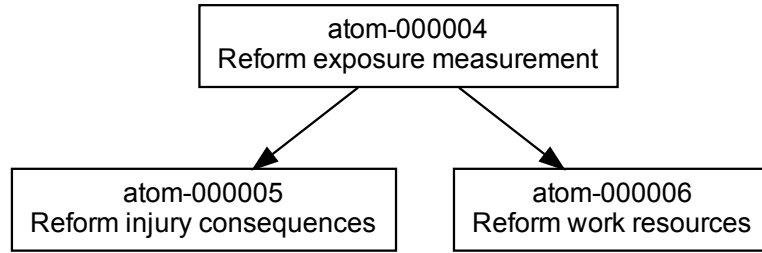


Fig. 1 Registered Atom dependencies

Graph overview

Dependency edges summarize the graph, not unconditional activation. Exact logical conditions and all local outcomes follow below; the separate graph atlas shows each Atom’s branches.

Literature, theory and contribution

This review uses the local Danish index, authenticated OpenAlex, PubMed Central full text and primary institutional documents. Access levels and exact query records are in search-log.md ; detailed request ledgers remain internal. It is a focused design search, not a systematic review or proof of absence. No outcome from another paper is evidence about this proposed sample.

Safety organization can provide information, worker voice and coordination, while imposing organizational and training costs. Flattening a formal hierarchy can either improve integration of daily and strategic work or weaken independent scrutiny; continuing duties can offset a nominal organizational change. The theoretical sign is therefore ambiguous. Worker consequences may appear as recorded injury, job attachment or wage resources. A reduction in injuries can also accompany less work exposure or changes in where workers live and receive care. These mechanisms motivate jointly observing consequences without conditioning injury estimates on post-policy employment.

The closest directly read register precedent is [Pedersen, Hannerz, Christensen and Tüchsen2011, JOMT6:11](#), doi:10.1186/1745-6673-6-11, a **study protocol**, not a completed effect estimate. Its full main text connects enterprise size and hospital-treated construction-worker injuries, discusses a2002 institutional change, and uses local units and dynamic worker populations. It establishes that the broad size–injury question is already in the literature. We do not inherit its significance-gated continuation, local-unit/legal-unit equivalence, broad injury coding or unrestricted assertion of no

reporting bias. Here the policy contrast is registered regardless of a favorable size gradient, the workforce is fixed before reform, and the endpoint is a precisely bounded set of recorded principal inpatient diagnoses.

The completed predecessor is now directly available: [Pedersen, Hannerz and Christensen \(2012\), Safety Science Monitor 16\(1\), article 2](#), “The effect of enterprise size on the risk of hospital treated injuries among all male manual construction workers in Denmark, 2000–2006.” The upstream policy baseline records retrieval and reading of all 11 physical pages; this is inherited full-text evidence, not a claimed new Blueprint reread. Pages 3–5 specify a dynamic male manual-construction population, prior-year local workplace size, annual first recorded principal S00–T98 hospital contact, and a significance-gated comparison of the July 2002 safety-organization change. Pages 6–8 report that completed comparison and discuss selection and inability to distinguish occupational from leisure injury. Nonrejection there is not equivalence and cannot forecast a 2010 reform effect.

Comparison dimension	Completed 2012 predecessor	Present registration
Institution	2002 withdrawal of the default safety-organization requirement for 5–9 employees	2010 national package; different default committee tiers motivate 2007 payroll groups 20–34 versus 10–19
Assignment measure	Local workplace units, despite enterprise terminology	Contemporaneous CVR payroll-person proxy, still not exact statutory headcount
Population	Dynamic male manual construction workers with annual updates	Fixed 2007 original workforce in single-workplace manufacturing, both sexes and unknown sex
Health construct	Annual first principal S00–T98 hospital-treated contact	Any principal inpatient S00–T79 admission in a year, binary per original worker
Evidence sequence	Policy comparison gated by a significant size relationship	Both injury and economic experiments follow only the exposure judgment, regardless of outcome signs
Complementary evidence	Occupational injury comparisons	Original-worker H/B and capped wage contrasts, with explicit recording-break restrictions; no mediation claim

The change of reform and population may support a useful extension; none of these differences alone proves novelty or better identification. This is not the first Danish institutional size–injury study. The internal history preserves both failed and successful earlier retrievals.

“The Effectiveness of Health and Safety Committees: Results of a Survey of Public-Sector Workplaces,”2000, OpenAlex W2040090142, provides abstract-level context on participation/training and committee effectiveness in a different institutional setting. “Successful Safety Committees,”1999 was metadata-screened. “New developments in occupational health and safety management in Danish companies,”2014, W2601197421, provides abstract-level implementation context; no claim of an identified injury effect follows. These sources motivate competing mechanisms, not Danish statutory assignment or a prior effect size.

The 2013 Oxford Research/Kubix/RUC and 2019 COWI/TeamArbejdsliv evaluations remain relevant leads with the previously recorded access limits. A separate source retrieved in the upstream policy baseline is: Hasle et al., *Virkemidler i arbejdsmiljøindsatsen, CAVI final report*, 75 physical pages. Read physical pages 1, 6, 15 and 21, covering the title, English overview, study selection and AMO rationale. Its 2012–2015 company case studies describe reform interacting with management integration, formalization and professionalization. This supports heterogeneous implementation as a live explanation; it is not a representative 2011 first stage for the proposed payroll groups, and no compliance rate is imported. CAVI is not another version of the inaccessible 2013 report.

Kreiner, Leth-Petersen and Skov (2016), “Tax Reforms and Intertemporal Shifting of Wage Income: Evidence from Danish Monthly Payroll Records,” *AEJ: Economic Policy* 8(3):233–257, was read in the upstream baseline in its 25-page final article, physical pages 1–2, 5–6 and 19–20. It directly documents tax-induced movement of wage payments across 2009/2010 and employer cooperation. Thus a dip/rebound in the registered annual wage path cannot uniquely locate an AMO response. Monthly tax-adjustment data and that paper’s estimator are not available by implication. The paper does not establish a nonzero 2011 bias, persistence, or differential response in the current baseline size groups. Its role is a concrete concurrent-policy threat, separate from DST’s 2011 component reclassification.

For inference, Roth2022, “Pretest with Caution”, publisher abstract/metadata, motivates avoiding specification selection after a pretrend test. The study always reports its activated contrasts. Rambachan and Roth2023, “A More Credible Approach to Parallel Trends” motivates exposing the dependence of conclusions on counterfactual-trend restrictions. Full publisher text was not recovered in this session; its exact method is **not** claimed as implemented. The registered fixed additive-bias envelope is algebraically specified in the protocol and must be labeled as that simpler exercise.

The potential contribution is a transparent, institutionally motivated comparison of the2010 organizational package across fixed pre-reform legal-identifier payroll groups, linking recorded injury and economic consequences while making legal-count and counterfactual-trend gaps visible. That contribution depends on credible

implementation and the stated assumptions. Novelty is provisional, not “first”; administrative coverage and realized precision are unknown. A rich linkage advantage cannot compensate for confounded policy timing.

Seim, Møller and Jensen (2013), “The Development of Danish Working Environment Regulation of the Health and Safety Organisation – Organisational Understanding and Programme Theory”, was published online 1 January 2013 from the Labour, Employment and Work Conference 2012. The actual publisher PDF was retrieved, with physical pp.1–4 and the closing discussion consulted here. Physical p.3 dates the law-modification process to 2008 and describes broader working-environment terminology, flexibility, annual discussion and competence development. The paper analyzes programme theory and planned evaluation, not a representative estimate of 2011 compliance or injury effects. Its simplified historical description does not supersede Danish legal text on exact thresholds. This reading reinforces the transition designation and the need to distinguish formal levels, members and organizational practice.

The old membership rule in BEK 575/2001 §12(4) and the contemporary Danish government Social Charter report, February 2010, pp.36–37 add two specific limitations: a small committee need not consist of new representatives, and a pre-existing inspection-screening programme spanned 2005–2011. Neither source supplies individual receipt or inspection timing. These limitations are now native interpretation restrictions and appear in the main scientific argument.

Shared data contract: 2010 AMO reform

This document is normatively incorporated by each Atom protocol. Only IDAN, IDAS, BEF, IND, LPR_ADM, LPR_DIAG and DODSAASG are planned, within the unchanged 47-table boundary. The boundary asserts user-reported availability, not validated delivery. No records or computed study outcomes were read. YEAR below is an adapter from a documented annual partition, not an invented source column. Actual mounts and encrypted identifier namespaces remain runtime inputs.

Exact sources and versions

IDAN, 2004–2007

Fields used: PNR, LBNR, TYPE, STILL, ARBGNR, ARBSTK

Row, time and documentation: Employment relationship/year. TYPE H is primary November employment, B secondary, N other November employment; E/3 are non-November and A/S/M are employer/self-employed/spouse categories. STILL 31 denotes top managers from 1996; it does not identify all statutory supervisors. ARBGNR/ARBSTK are historical diagnostic keys, never substituted for a verified legal CVR.

IDAN, 2008–2011

Fields used: PNR, LBNR, CVRNR, TYPE_2008, SOC_STATUS_KODE, DISCO_KODE, DISCO_MATCHPRIO_KODE, ANSDAGE_2008, LOENTIMER

Row, time and documentation: Job/year. H/B/N meanings require the corrected post-eIndkomst dictionary. N can include tertiary/nonresident jobs. Annual

days/hours do not reveal weekly schedules, simultaneous employment or the statutory seasonal rule. Occupation uses DISCO_08_V1_2010 only as a documented diagnostic, not a historical payroll census.

IDAS, 2007

Fields used: LBNR, CVRNR, FILIAL, ANTNOV, ANTAAR, AARSVRK, BRANCHE03, KOM

Row, time and documentation: Workplace/year. CVRNR is documented from 2007 here, unlike IDAN's 2008 start. BRANCHE03 uses DB03; manufacturing divisions 15–37. FILIAL is number of workplaces, top-coded at 9, and counts employer-number/site-code records. It is a consistency check, not proof of legal-enterprise coverage.

IDAS, 2008–2011

Fields used: LBNR, CVRNR, ANTNOV, ANTAAR, AARSVRK, FILIAL, ARB_HOVED_BRA_DB07

Row, time and documentation: Workplace/year. DB07 divisions 10–33 are descriptive post-baseline classification, never a criterion to retain employers. No forward identity/change flag selects the cohort.

IND, 2004–2011

Fields used: PNR, LOENMV_13

Row, time and documentation: Person/calendar-year. Recorded nominal wage income includes some sickness pay, severance and fringe benefits; it is not hourly wages, hours or constant total compensation. Version suffix _13 is not a year. Retain the literal recorded aggregate. Its documented 2011 component change crosses the primary comparison; the binding decision table below restricts interpretation. Stopping before 2012/2013 does not avoid the 2011 break.

BEF, 2004–2011

Fields used: PNR, REPERENCETID, FOED_DAG, KOEN, SEN-ESTE_INDVANDRING

Row, time and documentation: Person/reference-date snapshot. Use literal 31 December snapshots, not an arbitrary last row. KOEN 1/2 = recorded male/female subject to delivered dictionary; unknown retained in its own category. Snapshots cannot date emigration.

LPR_ADM, 2004–2011

Fields used: PNR, RECNUM, D_INDDTO, D_UDDTO, C_PATTYPE

Row, time and documentation: Administrative contact. C_PATTYPE 0 is inpatient in LPR2. The primary endpoint uses admission date, including admissions ending in death. No requirement of acute admission status is invented.

LPR_DIAG, 2004–2011

Fields used: RECNUM, C_DIAG, C_DIAGTYPE

Row, time and documentation: Diagnosis/contact, many diagnoses per RECNUM. C_DIAGTYPE A is principal. Versioned Danish SKS diagnosis codes are normalized to ICD-10 by removing one leading D and punctuation.

DODSAASG

Fields used: PNR, D_DODSDATO

Row, time and documentation: Optional death-date accounting. Catalog header 2002–2022 and field-year display 2022 do not establish historical completeness. Absence means no registered death only with documentation of a complete cumulative death file through 2011.

Curated exact field pages consulted: `resources/schema/` then `data-registry-bolero/fsv/` followed by `labour-income-and-wealth/` and `{IDAN,IDAS,IND,AKM}.md`, `population-and-elections/BEF.md`, the `health/` entries `LPR_ADM.md`, `LPR_DIAG.md`, `LPR_ULK.md`, `DODSAASG.md`. AKM and LPR_ULK were investigated but are not required or automatic fallbacks. Public catalog observation totals are not study counts.

Primary Danish definitions: [TYPE](#), [TYPE_2008](#), [STILL](#), [ANTNOV](#), [FILIAL](#), [LOENTIMER](#), [LOENMV_13](#), and [LPR2 documentation](#), physical p.6. Consulted 8 September 2026 America/Chicago / 9 September UTC. Current web dictionaries require historical-vintage validation; they do not certify a delivered file.

Join assertions and ordered construction

1. Obtain a documented complete 2007 IDAS workplace universe and IDAN employment universe, plus required annual/person/health extracts. A person cohort-filtered job extract cannot reconstruct enterprise size. Do not filter to resident study workers until counting is complete. Require corrected IDA vintage after the documented 2018 rerun; do not combine old and revised job definitions opportunistically.
2. Remove exact duplicate exports only. Assert IDAS unique (YEAR,LBNR); BEF unique (PNR,REFERENCETID); IND unique (PNR,YEAR); LPR_ADM unique RECNUM in the supplied namespace. If RECNUM is year-scoped, use that documented scope on both diagnosis/contact sides. Conflicting duplicate keys produce evidenced data_gap; unexplained schema ambiguity or inability to run checks produces no_result, not a negative scientific state. Repeated job relationships are not duplicate people.
3. For 2007 join IDAN to IDAS by (YEAR,LBNR), many-to-one. A missing/fictitious LBNR, missing CVR, or orphan is counted in the flow. Use contemporaneous IDAS.CVRNR; never obtain 2007 CVR from a future survivor crosswalk. In 2008–2011 compare IDAN.CVRNR with the contemporaneous IDAS map; disagreement affects identity diagnostics, not retrospective exposure reassignment. Leading zeros and encryption namespaces must be preserved.
4. Construct each 2007 legal-identifier roster from all IDAN records with TYPE in H/B/N, distinct (CVRNR,PNR), including secondary/nonresident/young/older employees. Do not sum workplace ANTNOV. Define N07 as this November payroll-person count. Separately calculate N_HB07, N_no31 (remove persons whose primary November job in this CVR has STILL=31), distinct annual employee persons from H/B/N/E/3, and sum workplace AARSVRK. These are different measures, not interchangeable legal counts. A person's two jobs in one CVR contribute one person; jobs at two CVRs contribute to each employer.
5. Eligible baseline enterprises have exactly one nonfictitious LBNR in the complete 2007 IDAS CVR roster, FILIAL=1, DB03 manufacturing division 15–37,

and $10 \leq N07 \leq 34$. FILIAL disagreement is excluded and counted, not silently resolved. This is single-workplace manufacturing, not a proved absence of off-site/seasonal work. Enterprise eligibility for the analysis never depends on 2008–2011 survival, size, sector or workforce continuity.

6. Select persons whose unique primary November H job in 2007 belongs to an eligible enterprise; conflicting H jobs are not resolved using higher income. Require age 25–54 inclusive on 31 December 2007 from FOED_DAG; BEF December snapshots 2004,2005,2006,2007; valid nonnegative finite LOENMV_13 in 2006. No positive earnings threshold is imposed. No health, sex, post-reform work or survival selection is used. Include both recorded sexes and unknown. Requiring earlier residence/earnings limits the target to baseline workers with documented prehistory; it is not proof of continuous residence.
7. Set $G=1$ for 20–34, $G=0$ for 10–19 using N07, permanently. This is a predicted institutional-exposure group, not observed statutory eligibility. Retain legal exemptions and unmeasured counting differences as limitations. N07 cannot be relabeled exact at runtime.
8. Define strata $s = \text{DB03 two-digit division} \times \text{sex (1,2,unknown)} \times \text{baseline age (25–34,35–44,45–54)}$. Retain strata containing at least one distinct baseline enterprise in each G ; record all excluded persons/enterprises. Freeze pooled target weights $\pi_s = N_s / \sum_s N_s$. Within group/stratum each person has contrast weight $a_i = (2G_i - 1)\pi_s / n_G$. Sum positive weights = 1 and negative weights = -1. No post-outcome trimming or selection of a favorable subgroup is allowed. Unknown industry excludes baseline enterprise; unknown sex remains a stratum.
9. Freeze a cohort file and weights inside the governed environment. All later years follow every retained worker, including job changers, firm disappearances, deaths and missing records. The reference is 2006, before the 2007 workforce-selection snapshot. Year 2007 employment is mechanically selected and is displayed as a selection anchor, never as an identifying pretrend. The strict pretrend comparisons are 2005–2004 and 2006–2005. 2008–2010 are transition/possible-anticipation years, not clean placebo years. Primary post-policy outcome is calendar 2011; the act entered principally 1 October and the order 17 October 2010.

Outcome observability

Injury is any *recorded Danish inpatient admission* with principal ICD-10 S00–T79 in that year, all descendants; exclude T80–T98 medical-care complications/sequelae and all nonprincipal/outpatient-only contacts. This is an occurrence measure, not a first-ever injury, an occupational-injury rate, or an adjudicated accident. Recurrent admissions in a year count once. No discharge-alive criterion. The complete person-linkable national extract can establish zero recorded admissions when there is no qualifying contact, including after emigration; that is not zero injury abroad. If completeness/linkage cannot be established, the endpoint is unavailable, not zero. Admission after a known earlier death is an integrity flag; no correction by deleting deaths. Endpoints intentionally stop before the LPR2 2014 emergency coding change and 2019 transition.

Employment is an H/B primary-or-secondary November salaried record. H/B witnesses establish one. A December BEF record with no H/B establishes zero on this *narrow registered endpoint*. N-only is zero with December residence and otherwise unknown; N is still paid work. Without H/B and without that residence witness, outcome is unknown. A verified death strictly before 1 November establishes zero if there is no contradictory H/B; death within November does not date the job. Report original CVR, other known CVR, unknown job identity, no H/B, death-before-November and unobserved as mutually exclusive accounting states. A known same-CVR witness takes precedence over another job with missing CVR. This is attachment at a date, never uninterrupted retention or direct job-to-job mobility.

Wages are $\min(\text{LOENMV_13}, 600000)$ nominal DKK for valid nonnegative finite observations. The fixed cap limits domination and permits honest bounds for missing values; it defines the estimand, not an empirical winsorization threshold. Valid zero remains zero, negative values are unavailable for this nonnegative wage target and are reported as anomalies, and missing does not become zero. Keep actual death-year income. No row can mean zero only if delivered documentation establishes zero suppression for the whole target universe; otherwise bound it by $[0, 600000]$. Do not set income to zero merely because a worker died. Cap sensitivities 400000 and 800000 DKK and uncapped observed-record means are supplementary, with their distinct targets labeled.

DODSAASG supports optional all-cause death accounting and an injury-or-death sensitivity when its historical completeness is validated. Missing death coverage does not block the primary recorded-injury endpoint or witnessed economic outcomes; suppress only the death-dependent components. No medical causation, cause-of-death subtype or mortality-effect hypothesis is registered.

A cohort inpatient contact lacking a usable principal diagnosis leaves that person-year unknown unless another qualifying admission establishes injury=1. Multiple principal codes retain all evidence: any qualifying injury gives 1; otherwise an unresolved principal code prevents a zero. Unexplained diagnosis orphans cannot establish absence of an event; resolve their universe/namespace, report a verified missing required contact as a data gap, and keep unresolved completeness operationally pending.

Binding economic measurement decisions (retained baseline)

The registered endpoints remain literal H/B status and capped LOENMV_13. No harmonized economic series is selected in this version. In particular, the 2018 IDA correction repairs errors but does not recreate the earlier ascertainment rule. A favorable pretrend, high baseline wages, small estimated break, or survival of the illustrative bias grid cannot clear a documented measurement restriction. Neither employer nor person is dropped because of low follow-up earnings, a changed job code, a noncompetition payment, or survival/employment after reform.

November employment, 2006 versus 2011

Documented break and affected construct: Before 2008, classification used an annual earnings requirement around DKK 10,000. With eIndkomst, the end-November

requirement was sharply reduced to earnings equivalent to four hours at the guaranteed wage. H/B membership can change with ascertainment even without a change in underlying work.

Evidence needed to compute the literal endpoint: Source-year dictionary for IDAN.TYPE (2006) and TYPE_2008 (2011); corrected extract lineage, complete person/job universe and the registered residence/death witnesses.

Binding disposition and claim ceiling: Apply H/B literally, with no added earnings threshold. If computable, set measurement_status=known_break_unquantified and flag employment_2008_ascertainment. With valid uncertainty, component_key=fragile irrespective of C(0)'s sign or pretrends; retain base_key and interval_sign. Without valid uncertainty use bounds_only while retaining the flag. Claim recorded H/B changes, not established changes in a constant work-attachment construct or an AMO employment effect.

Capped wages, 2006 versus 2011

Documented break and affected construct: Employer noncompetition compensation was excluded from LOENMV_13 in 2002–2010; the 2011 change is explicitly dated in ERHVERVSINDK_13's history. LOENMV_13 also documents a 2011 inclusion relating to persons without a person number; its incidence in this PNR-linked target is not assumed.

Evidence needed to compute the literal endpoint: Person-year IND.PNR/LOENMV_13, historical component description and delivered units/vintage; source omission/zero rules; unique keys.

Binding disposition and claim ceiling: Apply min(LOENMV_13,600000) to valid nonnegative records; preserve bounds for missing/anomalous records. Set measurement_status=known_break_unquantified and flag wage_2011_components. With valid uncertainty component_key=fragile; without it bounds_only. Report capped recorded wage changes, not a constant-compensation or established AMO wage effect. The cap does not remove reclassification below the cap.

Either component absent or semantically incompatible

Documented break and affected construct: Missing required reference/follow-up source, unresolvable required keys, or documented units/codes incompatible with the literal registered definition.

Evidence needed to compute the literal endpoint: Evidence of absence/incompatibility, not simply a failed access attempt.

Binding disposition and claim ceiling: component_key=unavailable; report the exact reason, retain its one-third test allocation, and compute the other component on the original cohort if possible. Inability to obtain/run the check is operational no_result, not unavailability or insignificance.

The historical employment comparison is documented in the official [TIMELON population discussion](#), checked with TYPE/TYPE_2008 and ANTNOV histories. No TIMELON outcome or monthly BFL table is added. The wage sources are [LOENMV_13](#) and [ERHVERVSINDK_13](#), detailed historical descriptions. ERHVERVSINDK_13 is corroborating documentation, not another endpoint. These are known definition changes with unknown cohort incidence, not proof of a nonzero differential bias.

Alternate measurement was investigated: annual LOENTIMER does not reproduce the pre-2008 RAS classification; setting the same arbitrary DKK threshold on both sides changes the endpoint and cannot recover omitted historical employment. IDAN narrow/broad wage fields begin in 2008 and cannot supply the fixed 2006 reference. IND.RESUINK_13 is a residual income aggregate, not a separately identified noncompetition-payment correction; ADAGPAG/ADAGPAGN descriptions do not provide a verified, isolatable common component for the planned years. No subtraction of those aggregates, post-treatment low-earner restriction, survivor sample, switched reference year, or outside-table bridge is authorized. A genuinely source-supported harmonization would require an explicit pre-data scientific amendment, including exact fields and algorithm, rather than a runtime certification toggle.

Evaluate measurement separately from sampling and other identification threats. Missing values receive outcome bounds; a known recording break is not converted into additional missing persons. For a computable primary economic component: first record the break flag; if cluster inference fails use `bounds_only`, else compute `base_key` and `interval_sign` and set fragile. Other fragility flags accumulate. A failed required pretrend also flags fragility; nonrejection never removes the measurement flag. Economic-sensitivity, observability, dynamics and sex outputs carry the same measurement qualifications wherever their compared years cross the relevant break. For employment the break is crossed if `reference < 2008 <= follow-up` (or reversed); for wages if `reference < 2011 <= follow-up` (or reversed). The 2004–2006 strict pretrends do not cross either break.

The 2007 cohort and N07 payroll grouping are fixed under their own contemporaneous definitions. Later payroll persistence across the 2008 break is descriptive and carries employment `_2008_ascertainment`; this alone does not turn the independently meaningful 2007 roster into a baseline data gap or make Atom 000005 fragile. Shared roster/key failures can still constrain both outcomes. Neither economic missingness nor its outcome-specific recording drift automatically suppresses an independently supported injury comparison. The economic evidence can leave a work-exposure explanation open, but cannot certify that explanation absent.

Blueprint additions using the same documented fields

No table is added to the study boundary or required primary extraction. Atom 000004 derives baseline earnings bins, support and distributions from its existing N07, IND.LOENMV_13 and fixed cohort. The baseline bins and the two robustness weight systems are defined in `analysis-specification.md`. They use the valid 2006 wage required for every original worker, not post-reform wages or tax records.

Atom 000006 additionally uses `LPR_ADM` and `LPR_DIAG`, already used by Atom 000005, for an optional same-person joint description. This is not a new hospital phenotype: reuse the exact injury algorithm, namespaces, dates, completeness and unknown rules registered by Atom 000005 and this contract. The shared construction can execute locally; it does not need a favorable, precise or even completed Atom 000005 estimate. If injury source construction is unavailable, report only this joint

module unavailable while independently computing economic components. A completed aggregate injury effect alone cannot supply person-level joint membership. No raw identifier leaves the governed environment.

Institutional contrast and causal scope

Historical reconstruction

The relevant assignment unit is an enterprise/legal unit, not an arbitrary November workplace. The [primary appeal KEN 9887 of 27 May 2009](#) distinguishes a legal CVR enterprise from its underlying workplaces and corporate group. It corroborates the contemporaneous bill's legal-unit logic. The older 2006 decision remains an indexed lead in the inherited search history; it is not the date/version of this 2009 PDF. None of these sources certifies a delivered CVR crosswalk or complete statutory employee count.

The contemporaneous explanatory memorandum to [L126, 2009/10](#), especially physical pp.10–12 and 26, reconstructs the then-existing system: safety groups at ten employees, a safety committee at twenty, and organizational alternatives through qualifying agreements. This independently corroborates the old rule in [BEK575/2001](#), §12. The latter was available as indexed statutory text; its guessed PDF endpoint failed. The bill's discussion of existing law is stronger historical evidence than today's regulator guide. The bill identifies an April 2009 tripartite report; it does not prove that anticipation began only then.

[LOV508, 19May2010](#) principally took effect on 1 October 2010. The implementing [BEK1181, 15October2010](#), effective 17 October, specified one organizational level for 10–34 employees and two for 35+. The one-level body retained both daily and strategic functions (§§10–12). Changes also included annual discussion, training and organizational flexibility. Existing representatives and training arrangements had transition provisions (§44). Removing a default separate committee tier is therefore not the same as abolishing worker representation or immediately abolishing every existing committee.

Counting rules further limit a cutoff design. The order's §8 excludes enterprise leaders and statutory supervisors; office, administrative and shop employees count only at ten or more hours a week. Temporary off-site work and seasonal employment have distinct provisions (§§7–8). Qualifying framework/company agreements can change organizational form (§§20–21), including arrangements across enterprises, without eliminating substantive duties. Exemptions are possible. Single-workplace manufacturing is chosen to avoid making construction-site assignment central, but that restriction does not prove the absence of office workers, supervisors, seasonal activity or agreements.

The documented CVR field begins in 2007 in IDAS, one year earlier than in IDAN. This permits an investigated baseline route: contemporaneously map all 2007 jobs by LBNR to the complete IDAS legal-identifier roster, deduplicate persons within CVR, and then restrict the enterprise population. It is a new measurement opportunity relative to mechanically starting from IDAN.CVRNR in 2008. It remains conditional on delivered files and identifier integrity. ANTNOV is a workplace count with a

documented 2008 job-definition break, not a statutory running variable. Annual paid hours/days cannot reconstruct weekly exclusions or simultaneous employment, and STILL31 detects only a subset of excluded supervisory personnel.

Three different scientific findings

Contradicted assignment claims. November workplace ANTNOV is not the statutory enterprise count. The 2010 reform did not simply eliminate all safety organization in 20–34 firms; strategic duties persisted, alternatives existed, and incumbent arrangements had transition rules. A sharp RDD at ANTNOV20 or an automatic committee-receipt IV is unsupported by these facts. This is a contradiction of those particular operationalizations, not proof that no reform comparison is possible.

Pivotal unresolved facts. Historical legal headcount for each enterprise, agreement/exemption incidence, actual representation/training, and the differential implementation experienced by the 2007 payroll groups are not observed. Actual CVR coverage, sample support, cluster counts, event variation and comparable record ascertainment also remain unverified. A failed public PDF request is an access limit, not institutional evidence against a design. Parallel counterfactual changes are untestable; pretrends can challenge but not establish them.

Conditional defensible target. The registered comparison estimates a difference in effects of the national 2010 package across fixed pre-reform payroll groups, under differential parallel counterfactual changes and the other stated assumptions. This targets a policy change with size-dependent organizational incidence rather than an effect of growing a firm. Both groups were affected, so the contrast cannot recover either group’s absolute effect. It does not need every component’s receipt to be measured, but it cannot isolate the twenty-person organizational margin. This is a prospective quasi-experimental proposal with substantial identifying assumptions; its administrative activation is not a finding that those assumptions hold.

Fixing group membership in 2007 avoids defining treatment from growth after the reform. Following all original workers avoids conditioning on subsequent employer survival. Neither eliminates differential crisis recovery, sorting before 2007, selection-induced mean reversion or coincident policies. The Ministry of Taxation’s [Danish Tax Reform 2010, November 2009 paper](#), physical pp.2–6, documents concurrent income-tax and financing changes. Their potentially different incidence across size groups is a causal threat, not something automatically removed by using gross wages or industry strata. The final Kreiner, Leth-Petersen and Skov (2016) article documents employer-assisted wage-payment shifting from 2009 into 2010. This makes tax response a specific alternative when reading transition-year wages; it does not establish persistence or differential bias in 2011. Separately, DST documents 2008 employment ascertainment and 2011 wage-component changes. The binding data-contract table retains literal economic endpoints and fixes their measurement-limited claim disposition. The model does not claim to identify a separate tax effect.

The first complete post-policy year 2011 is selected before outcomes. Follow-up stops before a 2012 size-related fine schedule. [Rigsadvokat guidance](#), indexed historical section, places new size groups 0–9, 10–34, 35–99, 100+ at 1 January 2012. Ending in 2011 avoids that later window; it does not establish that 2011 lacked all other shocks.

Pay-transparency rules at35 and employee corporate representation are additional institutional reasons not to use35+ as a clean untreated group. Exact incidence of all nearby obligations remains unresolved, so firms growing beyond35 are retained but their movement is disclosed; no claim of a perfectly isolated policy window is made.

Implication for claims

The central study remains mandatory quasi-experimental. When measurement is constructible, it reports the preregistered reform comparison and its sensitivity, without pretending that a conditional parallel-trends assumption is empirical proof. If the institutional route or comparison fails, it reports the exact boundary and does not rebrand a large-versus-small association as a successful causal study. Blueprint 1 strengthens the registered baseline within the same objective; no prior review is claimed for its additions.

The completed 2012 Pedersen et al. injury article supplies a prior institutional comparison, not just a protocol. The current contribution is the different 2010 package/population and fixed original-workforce evidence sequence, with appropriately restricted economic interpretation. CAVI's AMO case-study evidence from 2012–2015 places the reform alongside other organizational trends. It challenges a mechanical law-to-immediate-receipt story without proving that the present 2011 contrast has no institutional content. See literature.md for exact source versions and read pages; no first-stage magnitude is asserted.

Known economic recording drift is not evidence against the historical AMO rule itself. It limits those endpoints independently of the shared 2007 payroll definition and independently of the recorded-injury target. The bias grid now states an assumed total of counterfactual and measurement bias; passing it does not estimate or validate that total. Without a source-supported harmonization amendment, economic contrasts remain recorded-outcome evidence and cannot supply an established employment or compensation policy effect.

Blueprint source refinements

The directly retrieved historical [BEK575/2001](#), §12(4), specifies that where one or two safety groups existed, the committee comprised their members and the enterprise leader or representative. This matters particularly for our single-workplace scope: a separate legal tier need not have meant a distinct set of worker representatives. We can motivate a change in organizational default; we cannot equate it with removing worker voice or calculate a representation first stage. The rule does not contradict the national-package differential target, but weakens any mechanical tier-to-receipt account.

The Danish government's [29th European Social Charter report, February 2010](#), physical pp.36–37, describes the historical safety rules and a 2005–2011 programme intended to screen enterprises for inspection. Its schedule overlaps our comparison. Differential inspection timing or follow-up by baseline size is not measured in the seven planned tables and could violate counterfactual parallel changes. It is not automatically a component of the 2010 treatment: the no-2010-reform counterfactual

retains the earlier screening programme. The source is a contemporaneous institutional account, not validation that planned screenings occurred at every firm. A baseline earnings-composition check addresses a different observable rival; it cannot remove this enforcement threat.

These historical refinements were introduced before data access at Blueprint, not approved by the upstream baseline review. They appear in main-text design and Discussion, with complete scope in the protocol. No new institutional route or receipt measure is invented.

Knowledge, authority and reporting

This is Blueprint 1, an authorized pre-data amendment to a prospective study of existing Danish registers. Only public schema, legislation, research publications and historical design material were read by this role. No study rows, outcome summaries, event rates, overlap or standard errors were accessed. Prior project plans were inspected; that statement does not certify unknown access by every person outside this run. No public registration deposit, ethics approval number, funding disclosure or investigator identity has been supplied. Those administrative facts remain unresolved.

The unchanged 47-table boundary is [data-boundary.yaml](#). Current analysis uses IDAN, IDAS, IND, BEF, LPR_ADM, LPR_DIAG and optional DODSAASG. Documentary fields are not validated delivery. No QGPU execution, contacts, commit, push, release or historical-run alteration is authorized or performed.

Native Atom registrations own exact protocols, activation and local results; Molecule membership owns the complete three-Atom roster and its registration owns composable interpretation. Shared data/analysis documents are explicitly incorporated. Graphs, story guides, figures and manifests are derived views. All empirical results remain pending; no publication result or synthetic preview is evidence in this study.

The graph is adaptive and closed before outcome access. Assignment is evaluated first; proxy_supported or proxy_fragile activates both outcome Atoms. Other source states keep them inactive or pending with the exact cause. Primary estimates are not selected on outcome signs, significant pretrends or first-stage tests. Three fixed confirmatory allocations remain even if an endpoint is unavailable. Supplementary comparisons run whenever their own registered inputs exist; their failures never erase independently computable primary outcomes.

A proven missing/incompatible source can yield an evidenced data gap. Inability to obtain or run a check is operational no_result, not a null or a proved absence. Report every Atom, optional component, interval, limitation and deviation. Suppression preserves the governed scientific result while withholding public cells; it never supplies a number. Unknown is not false. A failed causal route cannot be relabeled an observational success.

Scientific handoff is frozen at this Blueprint. Transcriber implements code, diagrams, displays, complete determined prose and typesetting; it may make meaning-preserving engineering repairs, never alter scientific comparison/roster/branches. A later scientific change requires a dated versioned extension naming the trigger, prior

evidence seen, affected registration and inferential status. New choices made after outcome access are exploratory unless an explicit registered rule already licensed them. Preserve old versions internally.

Deliver only disclosure-safe current science and labeled preview materials. Keep confidential records, direct identifiers, copied exemplar PDFs, synthetic datasets, historical drafts, debate verdicts and build/check logs outside the World. Hypothetical previews must be reproducible and visible at intended paper positions but cannot fill RESULT slots or serve as runtime fallbacks.

Execution supplement

Executable reference index

The three numbered entry points implement Blueprint 1 through shared `pipeline.py`. Native registrations and their incorporated data contract, analysis specification and aggregate interfaces remain authoritative. All empirical results are pending. These sources operate on explicit frames or governed input directories and do not query registers themselves.

- **Atom 000004:** `code/01-exposure-template.py` implements assignment, fixed cohort and weights, all exposure/support/context products.
- **Atom 000005:** `code/02-injury-template.py` implements injury summaries and all defined supporting comparisons.
- **Atom 000006:** `code/03-economic-template.py` implements both economic margins, destinations, sex comparisons and joint-state accounting.

Callable equivalents (explicit source frames and metadata):

```
pipeline.run_assignment(frames, metadata)
pipeline.run_injury(assignment, frames, metadata)
pipeline.run_economics(assignment, frames, metadata)
```

`shared-template.py` supplies retained region/bound kernels. `pipeline.py` supplies joins, cohort formation, fixed and scenario weights, phenotype construction, original-CVR variance, all aggregate writers and activation handling. Implementation sources form one shared code group, not additional experiments. [interfaces.md](#) specifies every aggregate column and row key; [runtime-inputs.md](#) explains source adapters and unresolved requirements.

Commands and deployment

From this directory, with Python plus pandas, NumPy and SciPy installed:

```
python code/01-exposure-template.py --input /governed/input --output
↳ /governed/assignment
python code/02-injury-template.py --input /governed/injury-input --output
↳ /governed/injury
```

```
python code/03-economic-template.py --input /governed/economic-input --output
↳ /governed/economic
python -B -m unittest discover -s tests -v
```

Input directories contain only supplied authorized source CSVs, metadata.json and, for endpoint commands, the frozen `governed-cohort.json` handle copied from the assignment run. CSV identifiers are loaded as strings, preserving leading zeroes. The handle contains person/employer identifiers and must remain in the governed environment; it is never a public output or part of this World. The callable API accepts DataFrames directly and avoids intermediate source exports.

Default endpoint dispatch respects Atom 000004's activation result. Explicit `--dispatch direct` bypasses only that outer scheduler predicate; a frozen cohort, source evidence, missingness rules and uncertainty checks remain required. Missing predecessor evidence produces `not_activated` by default and `NoResult` under direct dispatch. Neither mode writes a result into native nodes. The governed runtime owns state adjudication and disclosure.

Copy these sources into a writable D3 `code/analyses/` directory, retaining sibling helpers. Supply explicit input/output locations; do not write into the registered World. Machine products belong in D3 `data/`, operational notes in D3 `docs/`. `export(..., disclosure=callable)` accepts the actual environment's disclosure transform. Without it, outputs are explicitly in-environment aggregates, not disclosure-cleared public tables. No arbitrary small-cell threshold is invented. Suppression must blank numbers and preserve status/reason without altering the in-environment scientific judgment.

Tests and presentation

The reusable tests build synthetic records in memory. They cover whole-employer counts before worker selection, original-worker denominators, leading-zero identifiers, duplicate conflicts, common support, bin edges and identical composition support; signed completion bounds against enumeration; cluster variance safeguards; fixed multiplicity; known economic-break restrictions; activation/direct dispatch; optional-source absence; and all nine observed joint states versus binary logical completions. Actual commands and coverage are summarized in [paper-handoff.md](#). No test establishes legal eligibility, source delivery, identifying assumptions or empirical precision.

Visualization code is a separate numbered sequence under `docs/paper/figures/`. Stable figure1/5/2/3/6/4 map to reader Figures 1/2/3/4/5/S1. `render(tables, output, width_mm=130.7, style_dir=None)` consumes only the named aggregate DataFrames. Keep sibling helpers on the import path. The host supplies `plot_style.py`; non-null `style_dir` must contain the declared Helvetica Neue fonts. Local synthetic checks use DejaVu Sans and do not claim runtime-font availability.

The reproducible preview command is:

```
python ../paper/preview/generate-template.py --checks
↳ /temporary/outside-world/previews
```

Only that driver generates illustrative inputs. Every preview is stamped **ILLUSTRATIVE MOCK DATA — NOT RESULTS**. Pending RESULT slots and original editable table cells remain in paper.md and preview/tables.yaml. Replace the preview input layer with reviewed empirical tables/figures or the honest missing-result disposition before calling the paper an empirical report. Never remove a label while retaining mock content.

Exact remaining scientific and runtime requirements

The optional injury-or-death comparison names a 2011 composite but does not explicitly specify its 2006 death reference clock. The implementation returns an unresolved optional-composite reason even when death coverage is validated; it does not choose cumulative versus within-year death or invent another comparison. Injury, fracture, economics, death accounting and other independently defined outputs remain available under their own rules.

Actual source dictionaries, corrected IDA vintage, full employer universe, encrypted key namespaces, admission-year partition mapping, diagnosis-code validity, death history and disclosure policy are supplied runtime evidence. A missing/incompatible source demonstrated by evidence is distinct from an unresolved or inaccessible source. No source-silent harmonization of economic endpoints is implemented. No additional experiment or new scientific threshold is introduced by an adapter.

Registered aggregate interfaces

These are output contracts, not observed files. Each CSV is UTF-8 with a header, stable row keys and no PNR, RECNUM, CVR or workplace identifier. Every row includes **status** (**available**, **unavailable**, **suppressed**, **not_applicable**) and **reason**; every unavailable numeric field is blank, never zero. Runtime local result state lives in the native Atom, not a CSV status. Output suppression preserves underlying in-environment inference and flags the public result slot as suppressed; it never changes an interval into zero. No synthetic output is a fallback.

result.json contains **local_key**, **component_keys**, **flags**, **unresolved**, **inputs_fingerprint**, **protocol_version**, **output_inventory** and source-backed disposition. It is emitted only from actual execution. Operational **no_result** is a separate runtime terminal. **assignment-status.json** is the analogous measurement judgment with evaluated/unresolved checks. All row enumerations below are fixed; uncomputable rows remain present with reasons.

Atom 000004

- **flow.csv**: **step**, **unit**, **n**, **excluded_n**, **status**, **reason**. Ordered steps: **roster_jobs** (all deduplicated2007 H/B/N jobs); **mapped_jobs** (nonfictitious IDAS map and CVR); **manufacturing_firms** (DB03 sector, all sizes); **size_firms** (N07 10–34); **single_site_firms** (one LBNR and FILIAL1); **primary_workers**

(uniqueH in those firms); `age_workers` (25–54); `prehistory_workers` (BEF2004–07 and valid2006 wages); `supported_workers` (common strata); `supported_firms` (CVRs contributing supported workers). `Excluded_n` is relative to preceding same-unit eligibility step where defined, otherwise not applicable. Publish distinct counts, not sums of overlapping strata. Show separate exclusion reason counts for orphan, missingCVR, FILIAL disagreement, conflictingH, missingbirth, missing-BEF, missing/negativebaselinewage and no commonstratum as exact extra row keys `reason_orphan`, `reason_missingcvr`, `reason_filial`, `reason_conflictingh`, `reason_missingbirth`, `reason_missingbef`, `reason_baselinelwage`, `reason_nosupport`; these can overlap and are not subtracted twice.

- `baseline.csv`: `metric`, `group`, `value`, `unit`, `status`, `reason`; groups `g0`, `g1`, `pooled`. Metrics `workers`, `firms`, `strata`, `mean_age`, `female_share`, `unknown_sex_share`, `mean_n07`, `mean_wage06`, `max_firm_weight`. Workers/firms are distinct unweighted counts; strata distinct per target, age/sex/wage use within-group pi standardization; `mean_n07` uses original-worker weights (label worker-weighted); `max_firm_weight` is largest firm $\sum |a_i|$ divided by total $\sum |a_i| = 2$, reported pooled and group shares with denominator sum within that group for group rows. Wage mean uses cap600000. No disclosure of employer identities.
- `exposure-scenarios.csv`: `scenario`, `retained_workers`, `retained_fraction`, `switched_fraction`, `firms_g0`, `firms_g1`, `strata`, `status`, `reason`. Rows `minus1`, `minus2`, `minus3`, `hb_only`, `no_primary_topmanager`, `interior`, `main`. Retained fraction denominator original cohort; switched fraction counts original workers retained with newG different divided by original cohort. `Minus3 instability` = $1 - \text{retained_fraction} + \text{switched_fraction}$. `Main` is all retained, zero switches by definition only once actually constructed.
- `persistence.csv`: `year`, `baseline_group`, `category`, `workers`, `share`, `status`, `reason`; years 2008–2011; categories `unobserved_cvr`, `below10`, `10_19`, `20_34`, `35plus`. Denominator original workers, category of their original CVR, not current job. Add `multiple_workplaces` as a separately labeled nonpartition diagnostic row and `identity_disagreement` with numerator/denominator in reason metadata; neither enters the five-category sum. Shares standardized by frozen pi. Unknown originalCVR means unobserved, not closure.
- `institutions.csv`: `event`, `date`, `label`, `source`, `kind`, `status`, `reason`. Historical rows `tripartite_2009` (2009-04, month precision), `act_2010` (2010-05-19), `act_effective` (2010-10-01), `order_effective` (2010-10-17), `first_followup` (2011), `later_fines` (2012-01-01); `kind` distinguishes legal evidence from analyst followup marker. Blueprint adds source-backed `reform_development` (2008, year precision; Seim et al. p.3), `screening_start` (2005) and `screening_end` (2011), both referring to the pre-existing programme in the February 2010 government report pp.36–37. Add `reference` (2006) and `payroll_anchor` (2007), both analyst markers. These eleven rows are the frozen institution/timing inventory; `kind`=legal_evidence, institutional_context or analyst_marker as appropriate. The development year is not an exact announcement start. No policy receipt value is produced. The 2005–2011 screening segment must be labeled pre-existing context, not AMO treatment.

The in-environment cohort handle provides PNR, baselineCVR,N07,G,stratum,pi_s,n_Gs,a_i,KOEN,age and scenario memberships; it must never enter the public bundle. Identity and temporal namespace are part of its interface, not guessed filenames.

Atoms 000005 and 000006

Common summary schema: `endpoint, year, reference, unit, n_workers, firms_g0, firms_g1, estimate, lo, hi, se_lo, se_hi, ci_lo, ci_hi, confidence, p_raw, p_bonf, precision80, missing_g0, missing_g1, base_key, interval_sign, component_key, measurement_status, flags, status, reason`. `estimate` is populated only when `lo=hi` and point identified; otherwise blank. `lo/hi` are contrast identification bounds, `ci_lo/ci_hi` adjusted sampling/missingness envelope. Primary confidence= $1-.05/3$. Missing shares refer to any unknown reference or followup endpoint with fixed group denominator. `precision80` only for point estimates with validSE. `injury-summary.csv` has endpoint `injury`; `economic-summary.csv` has `employment, wage`, all year2011/reference2006.

Dynamics files `injury-dynamics.csv` and `economic-dynamics.csv` use `endpoint, year, lo, hi, ci_lo, ci_hi, confidence, role, status, reason`. Eight years2004–2011 per endpoint. Reference2006 is zero by construction with role `reference`, no confidence claim. Role2007=`selection_anchor`;2008–10=`transition`;2004–05=`diagnostic`;2011=`primary_pointwise`. Confidence=.95 for plotted dynamics; the primary summary’s wider familywise interval is separately overlaid at2011. Undefined intervals plot a gap or explicit unavailable mark, not zero.

Pretrend files `injury-pretrends.csv/economic-pretrends.csv`: `endpoint, comparison, lo, hi, ci_lo, ci_hi, p_raw, p_bonf6, flag, status, reason`, two comparisons 2005_2004, 2006_2005. Confidence $1-.05/6$; `p` fields only pointidentified/validSE. Statisticalflag means envelope excludes0; not rejection of the entire causal model.

Bias files `injury-bias.csv/economic-bias.csv`: `endpoint, B, ci_lo, ci_hi, breakdown, status, reason`, four rows each at the exact grids in analysis-specification. `B=0` is the adjusted primary envelope. Breakdown is $\max(0, C_{lo}, -C_{hi})$, in endpoint units. This is a fixed conditional bias envelope, not calibrated HonestDiD.

Sensitivity files `injury-sensitivity.csv/economic-sensitivity.csv`: common summary schema plus `scenario, target_note`; seven exposure rows per endpoint: `main, minus1, minus2, minus3, hb_only, no_primary_topmanager, interior`. Atom5 adds `fracture` and `injury_or_death`; Atom6 wage adds `cap400k, cap800k, uncapped_observed`. All use95% intervals, no Bonf p-values or confirmatory keys; `main` repeated here is explicitly a pointwise sensitivity reference and not the primary adjusted result. For uncapped observed, report changed observed-record target and missing shares. Alternative-cap bounds use their own cap.

Observability files `injury-observability.csv/economic-observability.csv`: `endpoint, year, group, mean_lo, mean_hi, unknown_fraction, known_n, anomaly_n, status, reason` for all eight years×two groups; fixed weighted group means/bounds and weighted unknown fractions. Baseline known counts remain unweighted. Extra `unknownsex` is part of group target, not a thirdG.

`death-accounting.csv`: `metric, group, value, unit, status, reason, metrics` `dead_by2011, admission_after_death` for `g0/g1`; optional validated DOD. The first is proportion of original cohort, second counted integrity contradictions. No mortality-effect test.

`destinations.csv`: `category, group, share, n, status, reason` for six categories `original, other, unknown_identity, no_hb, death, unobserved` $\times$ `g0/g1`, priority and denominator in Atom6. Without validated death input the `death` category is unavailable, and `unobserved/no_hb` retain their actual definitions; the operational accounting partition still sums1 over classified categories, with death unknown not imputed.

`sex-contrasts.csv`: `endpoint, contrast, lo, hi, ci_lo, ci_hi, n_female, n_male, status, reason, endpoints` `employment, wage`; `contrast=female_minus_male;95%` cluster intervals. Population standardization differs by sex and is described in target metadata. These are exploratory contrasts, not proof of gender discrimination or causal mechanisms.

All files remain absent in the pre-data Blueprint: the registrations, expanded manuscript shells and plotting sources specify them. A runtime evidence index resolves Atom/output-relative names for the figure functions and slot filler. Plotters receive only these aggregates and raise an informative error when required interfaces are missing; they neither query raw data nor manufacture estimates.

Interpretation and measurement descriptors

The summary `interval_sign` is `positive/negative/includes_zero/undefined` by the exact rule in analysis-specification. `measurement_status` is `known_break_unquantified` for computable primary economic rows, `not_crossing_known_economic_break` for injury (this does not certify hospital ascertainment), or `unavailable` for a missing component. Without valid numerical inference, `base_key` is `unavailable` for an evidenced missing component, `bounds_only` for a calculable contrast without valid uncertainty, or `undefined` for unresolved adjudication. `flags` is a deterministic semicolon-separated list of every applicable flag; never substitute one flag for another. Required economic flags are `employment_2008_ascertainment` or `wage_2011_components` as appropriate. These fields bind Table 2b; all values remain pending.

In addition to the common fields above, `result.json` for Atom 000006 contains `base_joint_profile, interval_signs, component_flags` and `measurement_status`; the latter three are keyed `employment/wage`, as is `component_keys`. The common `flags` is the sorted union of component flags, and `unresolved` retains component-qualified unresolved checks. `local_key` is the sole local-state field. This is result metadata owned by the Atom, not a second graph. Without a valid interval a component's sign is `undefined`. Recorded `base_joint_profile` never overrides the realized `local_key`. All affected dynamic, sensitivity, destination and sex rows must carry the recording limitation in existing `reason` (and `status` if `unavailable`); numeric rows remain present. The figure renderer labels the known breaks from registered constants, not from outcome-based detection.

Units are probability for injury/employment numeric tables and nominal DKK for capped wages; conversions are display-only. Figure 3 (stable figure2) and the injury panel of Figure S1 multiply injury probability differences by 1000 and label them workers with a recorded qualifying injury admission per 1000 original workers per year. Repeated admissions never add persons. Figure 4 (stable figure3) and the employment panel of Figure S1 multiply by 100; wage panels multiply by .001. Table 2 retains unconverted values with units in each row. No count-of-admissions output is registered.

Blueprint 1 additions and optional-module semantics

All new CSV rows retain status/reason and no direct identifiers. Numbers are absent until governed execution. Atom 000004 owns the original cohort plus optional earnings-composition handles; the frozen handle gains **wage06_bin**, **in_composition_support**, and distinct **a_restricted**, **a_earnings** weights for members of R. Nonmembers have absent robustness weights, not zero-weight replacement in the primary target. An output's availability never selects the science.

- Atom 000004 **payroll-distribution.csv**: **n07**, **firms**, **workers**, **firm_share**, **worker_share**, **status**, **reason**; exactly 25 rows, **n07**=10..34. Whole-target firm and unweighted worker shares each sum one before suppression. There is no extrapolation beyond the selected range.
- Atom 000004 **baseline-wage-distribution.csv**: **bin**, **group**, **n**, **share**, **status**, **reason**; $b1, b2, b3, b4 \times g0, g1$. Bin edges/denominators are registered in analysis-specification; **share** uses original group-standardized weights, **n** is unweighted. Counts and shares must not be interchanged.
- Atom 000004 **composition-support.csv**: **specification**, **group**, **workers**, **firms**, **retained_fraction**, **strata**, **max_firm_weight**, **status**, **reason**; **restricted_base**, **earnings_standardized** $\times g0, g1, \text{pooled}$. **retained_fraction** is unweighted n_R/n_{original} for corresponding group or pooled; pooled concentration uses total absolute weight two, group concentration uses group weight one. Counts on R match across specifications; **strata** names original s or fine r respectively. No support yields unavailable rows; no fabricated zeros. This is an optional support result, not the primary cohort gate.
- Each of Atoms 000005/000006 **composition-sensitivity.csv**: common summary columns plus **specification**, **retained_fraction_g0**, **retained_fraction_g1**, **target_note**; two specifications per endpoint, primary years 2011/reference2006, confidence=.95 where valid. **p_raw**, **p_bonf**, **precision80**, **base_key**, **interval_sign** are not_applicable for these descriptive robustness rows (numeric p/precision cells blank); no supplementary equivalence partition. **component_key** is available_comparison, bounds_only or unavailable; these are row descriptors, not local Atom states. **flags** retains all source/parent limitations. The contrast/bounds/intervals retain native probability or DKK units. A non-estimated row preserves its reason. Table S13 binds these rows.
- Atom 000006 **joint-states.csv**: **year**, **group**, **injury_state**, **employment_state**, **n**, **share**, **total_n**, **known_both_n**, **any_unknown_share**, **status**, **reason**;

2006,2011 $\times$ g0,g1 $\times$ injury_state 0,1,U $\times$ employment_state 0,1,U. 36 rows. **share** and **any_unknown_share** use fixed original group weights; counts are unweighted. All nine shares sum1 before suppression. Source absence leaves the affected year's rows unavailable, not an invented all-U population.

- Atom 000006 **joint-bounds.csv**: **year**, **group**, **injury**, **employment**, **share_lo**, **share_hi**, **total_n**, **known_both_n**, **status**, **reason**; 2006,2011 $\times$ g0,g1 $\times$ injury0,1 $\times$ employment0,1. 16 rows. Cellwise logical bounds are in proportions; they are not jointly attainable independent intervals or sampling confidence intervals. Stable figure6 (reader Figure 5) displays only these bounds, with observed joint unknown share from joint-states.csv. Full observed-state shares belong to SI Table S14. No point at a bound midpoint is permitted.

Atom 000006 **result.json.supplementary_status.joint** records available/partial/unavailable/unresolved, each year disposition and source reason. Partial means one of the two years constructed. Atoms 000005/000006 record supplementary_status.composition with per-endpoint/per-specification row disposition and source reason. Overall available means all registered rows have calculable contrast bounds (valid sampling uncertainty is separately indicated); partial means at least one but not all rows is calculable; unavailable means all are evidenced uncomputable; unresolved means none can yet be scientifically adjudicated. Atom 000004 records the analogous support status in assignment-status.json. These descriptors are optional-module status, not primary local states. These do not override **local_key**, **component_keys**, **measurement flags** or **native activation**. An interrupted overall run stays **no_result** if it never produces a reliable registered primary judgment; partial optional outputs must not manufacture a primary result.

Stable figure2 (reader Figure 3) gains injury-observability.csv as an additional input with **endpoint**, **year**, **group**, **mean_lo**, **mean_hi**, **unknown_fraction**, **status**, **reason**. It uses all eight years and both groups; these level bounds are visually distinguished from the lower panel's sampling intervals. New figure5 consumes payroll-distribution.csv and baseline-wage-distribution.csv; figure6 consumes joint-bounds.csv and joint-states.csv. Plotters do not derive membership or join records.

Explicit input adapters

The callable API receives **frames**, a dictionary keyed only by IDAN, IDAS, BEF, IND, LPR_ADM, LPR_DIAG and optional DODSAASG. Their field meanings are those in the incorporated data contract. YEAR is a documented source-partition adapter. Annual person/job frames retain their actual year; BEF additionally retains its literal reference date. No source is loaded at module import.

metadata is engineering evidence supplied by the governed caller, not another scientific registration. Each **TABLE:year** record has **status** equal to complete, absent or unresolved and an **evidence** locator explaining the actual delivered universe. Complete permits construction; evidenced absent permits a data-gap disposition; unresolved raises NoResult for an essential source. An attestation without an actual frame does not create an all-zero extract. Complete hospital extracts are necessary

to infer no Danish recorded admission. Person-specific unknowns are handled only within a supported source universe.

Baseline metadata records `baseline_namespace`, `corrected_ida_vintage`, `complete_employer_universe` and `baseline_dictionaries` use the same source-evidence convention. `institution` records the authenticated historical ledger as supported, contradicted or unresolved, with its evidence locator. `fictitious_lbnr` is the delivered dictionary’s list, including an explicitly documented empty list when applicable. `baseline_definition_issue` and `material_exception` are source-evaluated judgments, not default false values. The adapter cannot label N07 statutory headcount.

Hospital metadata additionally contains source-backed `hospital_namespace` and `hospital_code_dictionary`, a `valid_normalized_diagnoses` inventory from the appropriate historical SKS dictionary and documented `recnum_scope` (global or year). The reference interface requires `hospital_partition_clock=admission_year`. If source files instead group contacts by extraction or discharge year, first construct an admission-year view that retains the original RECNUM namespace on both contact and diagnosis records. Resolve invalid/unlocalizable dates using the source’s bounded potential years before entering this interface; inability to do so stays NoResult. Admission after a validated earlier death remains an integrity problem. No invented code dictionary or discharge-date substitution is supplied.

`death_history` is optional, complete only when cumulative historical coverage and valid date parsing are established. Absence leaves death-dependent outputs unavailable, not zero. `destination_identity` describes contemporaneous CVR comparability for the 2011 destination accounting; it never changes the 2007 assignment. The known employment and wage breaks remain flags regardless of any metadata record. No toggle can clear them.

Identifiers in frames and confidential handles are strings. Exact export duplicates collapse; conflicting primary keys yield a demonstrated data gap. Missing numeric outcomes retain the registered bounds. Aggregate outputs contain stable keys and no direct person, contact or enterprise identifiers. The input fingerprint hashes supplied extraction/definition metadata; it is not a digest of confidential rows and does not by itself certify data identity. Supply actual extraction/version identifiers in that metadata.

No confidential records, runtime mount or source-completeness attestations are included in this World. For a new environment, the source dictionaries and source-year mapping must be resolved from that environment’s evidence, as already required by the native protocols. They are scientific-input requirements rather than new software startup gates.

Complete registered Molecule

```
id: molecule-000002
molecule_mode: prereg
molecule_shape: convergent
topic: Safety reform consequences
rating: C
draft: false
```

membership:

- atom: atom-000004
 - role: primary
 - description: Constitute and judge the policy-motivated payroll comparison and its institutional meaning.
- atom: atom-000005
 - role: primary
 - description: Estimate recorded-injury consequences for the fixed pre-reform workforce.
- atom: atom-000006
 - role: primary
 - description: Estimate coherent work/resource consequences and triangulate rival accounts.

literature: []

frontier:

- rule: Assess differential worker consequences of the 2010 AMO reform across fixed pre-reform enterprise payroll groups.
- avoid: No exact-cutoff causal claim, receipt IV, occupational validation, invented compliance or observational replacement.
- directions: []

preregistration:

- mode: adaptive
- question: Did Denmark's 2010 AMO reform differentially change recorded
 - ↪ inpatient
 - injuries, work attachment and wage resources for workers initially at enterprises with 20-34 rather than 10-19 November payroll persons?
- scope: Fixed 2007 single-workplace manufacturing CVRs and baseline primary workers aged 25-54 with specified prehistory; common industry/sex/age
 - ↪ support;
- reference2006, primary2011, descriptive/diagnostic2004-2011. National policy-package differential effect under explicit counterfactual
 - ↪ assumptions;
 - legal count unobserved.

storyline: First establish what the law changed and whether the payroll comparison can be constituted. Then ask whether recorded injuries changed, retaining healthcare ascertainment and work-exposure alternatives.

- ↪ Economic
 - attachment/resources describe consequential companion margins for the same original workers, not a mediation adjustment. Known 2008 employment and 2011 wage recording changes restrict economic attribution
 - ↪ independently
 - of injury. Small economic components retain their signs. Pretrends, fixed bias sensitivity and exposure-proxy scenarios constrain every
 - ↪ interpretation.
- Main text carries the legal-count and recession/tax threats; SI develops code definitions, observability, cluster inference and full comparison matrices. All results are pending; the paragraph alternatives in the paper derive from these composable rules. Blueprint adds original-target payroll and baseline-wage distributions, paired support/reweighting sensitivity for baseline earnings, and an optional within-person
 - ↪ injury-November-employment
- description. These ask distribution and co-occurrence questions without changing primary identification, resetting the cohort or identifying
 - ↪ mediation.
- Main text presents the puzzle, law and comparison, absolute injury levels, differential dynamics, then work/resources and joint-pattern limits;
 - ↪ detailed
- matrices and exhaustive branches have separate SI and protocol
 - ↪ destinations.

interpretation:

- kind: restriction
condition: 'TRUE'
says: Every policy interpretation is conditional on differential parallel counterfactual changes, no relevant 2006 anticipation and comparable ascertainment. The target is a difference in national reform-package effects across fixed 2007 payroll groups. Neither group is untreated. No exact-cutoff eligibility ITT, receipt LATE, committee-removal
↳ mechanism,
occupational-injury or firm-growth effect is identified. An equally effective reform in both groups can yield zero contrast. Restrictions take precedence over all compatible primary and supplementary prose.
- kind: restriction
condition: 'TRUE'
says: The old committee could consist of existing safety-group members plus management; legal tier change does not establish loss of distinct worker representatives. The 2005-2011 inspection-screening programme and the financial crisis can generate size-specific changes without the 2010 AMO package. Neither their differential incidence nor their absence is measured. These remain counterfactual assumptions, not facts established by a passed proxy check.
- kind: restriction
condition: (state(atom-000004) == "policy_blocked") OR (state(atom-000004) == "data_gap")
says: The central quasi-experimental route is blocked by the specific evidenced institution or data finding. Report it honestly; downstream inactivity is not a null result and no observational substitute meets the objective.
- kind: restriction
condition: (state(atom-000004) == "otherwise") OR (terminal(atom-000004) == "no_result")
says: The pivotal exposure judgment is unresolved or operationally
↳ incomplete.
Keep both outcome experiments pending/inactive; do not infer
↳ impossibility
or lack of an effect.
- kind: restriction
condition: (state(atom-000004) == "proxy_fragile") OR (state(atom-000005) == "fragile")
says: Report each affected outcome with its original interval and exact shared-cohort or injury-specific fragility flags. Do not headline an affected contrast as an established AMO effect. Distinguish measurement uncertainty, a challenged pretrend and sensitivity to an assumed bias bound. This restriction concerns outcomes affected by those flags; it is not evidence that every other component failed.
- kind: restriction
condition: (state(atom-000005) == "data_gap") OR (terminal(atom-000005) == "no_result")
says: No health conclusion can be supplied for the unavailable/unexecuted experiment; do not treat it as evidence supporting the other domain.
- kind: restriction
condition: (state(atom-000006) == "data_gap") OR (terminal(atom-000006) == "no_result")
says: No economic conclusion can be supplied for the
↳ unavailable/unexecuted
experiment; do not treat it as evidence supporting the other domain.
- kind: restriction
condition: state(atom-000005) == "bounds_only"
says: The injury contrast has no supported directional/equivalence
↳ inference
under the registered cluster approximation; report bounds and the failed

safeguard.

- kind: restriction
condition: state(atom-000006) == "partial"
says: Only calculable economic contrasts/bounds are reported. This state lacks valid primary economic interval inference; retain
↳ component-specific recording warnings. There is no directional, small-effect, joint
↳ corroboration or welfare claim.
- kind: restriction
condition: 'TRUE'
says: 'Economic measurement scope is fixed separately from the injury scope. Every calculable primary economic contrast crosses a known break: 2008 H/B ascertainment or 2011 wage components. With valid uncertainty it remains fragile, otherwise bounds_only, and neither a numerical
↳ profile nor a reassuring pretrend or bias grid clears that restriction. Report literal recorded economic changes and conditional sensitivity, not an established constant-definition AMO employment/compensation effect. This does not automatically restrict a separately supported injury
↳ comparison. Small means inside the prespecified band, not zero, unchanged,
↳ nonnegative or nonpositive; preserve interval_sign even for a small component.'
- kind: primary
condition: state(atom-000004) == "proxy_supported"
says: The proposed payroll comparison can be constructed within its stated administrative scope. Institutional eligibility and causal trends have not thereby been validated.
- kind: primary
condition: state(atom-000005) == "lower"
says: Under the stated counterfactual assumptions, the annual risk of a recorded qualifying inpatient injury admission fell differentially for the original 20-34 group. Work attachment and wages determine
↳ whether reduced registered work exposure remains an especially salient rival explanation; neither establishes mediation.
- kind: primary
condition: state(atom-000005) == "higher"
says: Under the stated assumptions, recorded injuries rose differentially. Possible explanations include changed risk, recording or healthcare contact, different work exposure and unrelated size-specific shocks; committee efficacy is not isolated.
- kind: primary
condition: state(atom-000005) == "small"
says: The adjusted interval lies in the registered small-effect band for the differential recorded-injury target. This limits large differential changes under the assumptions; it cannot establish that the national reform, each component or workplace safety was unaffected.
- kind: primary
condition: state(atom-000005) == "imprecise"
says: The injury comparison resolves neither direction nor the registered small-effect criterion; lack of precision is not evidence of no health consequence.
- kind: primary
condition: state(atom-000006) == "fragile"
says: The literal economic contrasts can be estimated on the fixed
↳ workforce, but their constant-definition policy interpretation remains
↳ measurement-limited.

State employment and wages separately using base_key, interval_sign and numerical interval, then report all additional flags. In a numerical economic_gain profile, at least one margin has the higher classification while the other is higher or wholly within its small-effect band;
 ↳ economic_loss
 has the analogous lower definition. A small margin can have the opposite sign. Mixed, joint_small, imprecise and partial profiles remain
 ↳ distinct;
 no profile supplies causal economic corroboration.

- kind: supplementary
 condition: (state(atom-000005) == "lower") AND (state(atom-000006) == "fragile")
 says: A lower recorded injury risk may coexist with any recorded economic profile. Describe both component signs. A negative H/B interval,
 ↳ including
 one inside the small-effect band, leaves reduced registered employment salient; an economic_loss label with lower wages and small positive employment alone does not show lower employment. Profiles with higher or small H/B do not establish unchanged exposure, because ascertainment changed and hours/tasks are unobserved. Economic drift prevents ruling out work-exposure alternatives or identifying mediation; it does not by itself erase conditional injury evidence.
- kind: supplementary
 condition: done(atom-000004) AND (done(atom-000005) OR done(atom-000006))
 says: Report supported exposure scenarios, pretrends, bias grids, outcome specificity, destination and sex comparisons regardless of favorable or adverse signs. These are registered explanatory/robustness analyses, not extra confirmatory discoveries or a strategy-selection device.
- kind: supplementary
 condition: done(atom-000004) AND (done(atom-000005) OR done(atom-000006))
 says: Report the baseline earnings-composition comparison on its stated support alongside the original contrast. Distinguish restriction from added standardization; stability does not rule out confounding, and differences can reflect target change. It cannot clear economic
 ↳ recording
 restrictions or replace the primary estimator.
- kind: supplementary
 condition: done(atom-000006)
 says: When joint source construction is available, report the same-person nine-state injury/employment classification and logical cellwise bounds for 2006 and 2011. This establishes recorded co-occurrence only.
 ↳ Calendar-year
 injury and November work do not establish event order, exposure-adjusted injury risk, causal mediation or which individuals have joint treatment effects. An unavailable joint module does not erase separate outcomes; known H/B recording drift persists.
- kind: residual
 condition: 'TRUE'
 says: List all pending, inactive, unavailable, suppressed and unresolved components. Unknown evidence stays unknown. Retain the untestable
 ↳ counterfactual
 assumptions, exact legal-count gap, historical exceptions, size
 ↳ adjustment
 and concurrent-policy concerns even if all diagnostics appear
 ↳ reassuring.
 No completed empirical result exists at birth.

Native membership and the registrations above own the experiment schedule and composable scientific interpretation. Shared incorporated protocols contain exact definitions.

Current interpretation

All three Atoms are registered from birth and pending. No empirical findings exist. The public-source institutional reconstruction motivates a conditional design; it is not realized policy-effect evidence.

atom-000004: Reform exposure measurement

The normative shared definitions are docs/protocol/data-contract.md and docs/protocol/analysis-specification.md, both incorporated in this registration at Blueprint 1 (2026-09-08 America/Chicago; 2026-09-09 UTC). docs/execution/interfaces.md defines exact output schemas and missing-status fields. Any Blueprint amendment must synchronize these sources and every affected native registration; runtime and Transcriber cannot change these scientific definitions. Only aggregate disclosure-cleared evidence may leave the governed environment. No observations have been inspected. Output paths below are runtime-relative to this Atom's evidence directory, not prefilled artifacts. Failures to obtain/run/resolve documentation are operational no_result, never statistical null or evidence of absence. A data_gap requires recorded evidence of missing/incompatible data, not mere uncertainty. Synthetic tests never create empirical result states.

Scientific question and role: Can a historically defensible payroll-proxy comparison motivated by the 2010 AMO reform be constituted, and how sensitive is its institutional meaning to counting and linkage? This is an independent consequential measurement/assignment judgment, not a collection of separate pipeline Atoms. It establishes descriptive context and the scope of the two causal comparisons; it does not certify parallel trends. Population/unit/time: all employer rosters first, then the fixed 2007 single-workplace manufacturing worker cohort defined in the data contract. Counts use all November H/B/N employees, including persons outside the eventual study cohort. Group 20–34 versus 10–19 is frozen at 2007; no outcome is opened to choose the groups. The detailed legal findings in docs/protocol/identification.md are incorporated: prior default committee threshold 20, new two-level threshold 35 with continuing duties and alternatives. No statutory count or actual committee receipt is observed. Ordered pseudocode: 1. Record delivered vintage, partition years, identifier namespaces and completeness attestations. Require IDAS 2007 and IDAN 2004–2011, BEF 2004–2011 and IND 2004–2011 definitions; missing nonbaseline endpoint years can be declared separately without invalidating cohort creation. Require 2007 IDAS/IDAN and baseline BEF/IND fields to construct the target. Do not infer coverage from catalog periods. An inaccessible mount is no_result. Documented absent baseline partition/key is data_gap. 2. Evaluate the primary-source institution ledger. If new authenticated historical evidence explicitly contradicts the old/new default organizational contrast or its applicability to the registered population, set policy_blocked with that evidence. Missing compliance/count information

by itself does not meet `policy_blocked`. An unresolved new legal conflict yields otherwise and no downstream activation, not a finding that the reform did not happen.

3. Execute every join and population assertion in data-contract steps 1–8. Conflicting IDAS/IND/BEF primary keys are `data_gap` unless exact export duplicates alone explain them. Calculate orphan H/B/N records and persons, missing CVR records, FILIAL disagreements and conflicting primary H workers before exclusions. Denominator of orphan share is all 2007 H/B/N job records after exact-export deduplication; missing-CVR share uses mapped H/B/N records. All excluded records are accounted, never reassigned from a future crosswalk. If no common-stratum cohort remains, `data_gap` (no comparison support), not no effect.

4. Freeze G, strata, cohort and weights; assert unique PNR, one baseline CVR per worker, group sums of weights $+1/-1$ within numerical tolerance $1e-10$, and stratum group support. Estimate no policy outcome here. Tabulate enterprise/person flow, payroll counts, `N_HB`, `N_no31`, annual-person/FTE measures and prehistory by group. The mapping attestation remains unvalidated until actual runtime documentation exists.

5. Generate scenario memberships `N07-1,-2,-3,N_HB,N_no31` and interior groups as specified. For each scenario report original cohort retained, group switches and support. Define unstable fraction for the minus-three scenario as original persons whose enterprise becomes ineligible or changes G divided by all original persons; this is a deliberately hypothetical sensitivity index, not misclassification prevalence.

6. Examine comparable 2008–2011 CVR roster counts and contemporaneous IDAN–IDAS identity agreement without conditioning the cohort. Report original-CVR observed/missing, count-group change below 10/10–19/20–34/35+, and workplace multiplicity by year. Missing CVR is unknown, not closure; net decline is not a legal mass layoff. Report the 2008 H/B/N ascertainment break and corrected vintage explicitly, including the `employment_2008_ascertainment` restriction on persistence. A corrected vintage does not harmonize employment ascertainment. This supplementary cross-year issue alone does not invalidate a coherent 2007 N07 roster. These are descriptive exposure-persistence checks, not receipt first stages or outcome-selection gates.

7. Assign `proxy_fragile` if any of: orphan share $>.01$; mapped missing-CVR share $>.01$; exclusion of otherwise size/sector-eligible persons for FILIAL/roster disagreement $>.01$; minus-three unstable fraction $>.20$; documented unresolved namespace or definition incompatibility affecting the constitution or interpretation of the baseline 2007 roster, beyond the known later outcome/persistence breaks; or a source establishes a material exception applying to this population without measurable incidence. Denominator for FILIAL exclusions is workers satisfying sector/size/age/prehistory before single-site consistency checks. Each threshold is a pragmatic pre-data flag, not a validated validity boundary. Zero denominator is `data_gap`. A missing optional scenario gives an unresolved flag and `proxy_fragile`, not a negative result. If none hold and required checks are evaluated, `proxy_supported`. This key means administratively constructible under these proxies only.

8. Emit all aggregate tables, check statuses and source-backed disposition; save governed frozen cohort/weight adapter with fingerprint for downstream reproducibility. Do not export PNR/CVR, small cells or worker records. Source and version fingerprints refer to approved extraction metadata, not raw records in delivery. Estimation/inference: flow and measurement comparisons

are descriptive counts/proportions/means, not causal estimates or hypothesis tests. Enterprise and worker denominators are separate; pooled standardized means use the fixed cohort weights. No statistical power claim. Every state permits reporting the legal evidence and the precise measurement limitation; proxy states activate both endpoints equally. Failure does not activate a substitute observational study. Outputs: assignment-status.json (state, evaluated_checks, unresolved_checks, evidence locators); flow.csv; baseline.csv; exposure-scenarios.csv; persistence.csv; institutions.csv; governed cohort/weights handle (never packaged). Exact columns/row enumerations are in docs/execution/interfaces.md. Figure1 and Tables1,S1–S3 bind these outputs. Boundary outputs retain the same schema with unavailable numeric cells and status reasons. Synthetic checks: one person with two jobs at same CVR counts once; two CVRs counts in both; workers not in final cohort still count; orphan and conflicting key detection; H/B/N vs E/3 inclusion; leading-zero CVR; one-site/FILIAL disagreement; N=9,10,19,20,34,35 boundaries; excluded manager scenario not legal supervisor recovery; unknown sex stratum; no support; missing future CVR never drop original person; proxy flags at exactly .01 and .20 versus just above; all states including otherwise/no_result remain distinct. Do not use generated fixtures to estimate feasibility.

The component-specific economic decision table in data-contract is binding. Later H/B ascertainment drift and 2011 wage-component drift are owned by atom-000006, not an automatic shared exposure failure. Record them as outcome limitations without changing the frozen cohort or activating a different causal strategy. The 2007 payroll proxy remains imperfect legal assignment regardless of the later endpoint dispositions.

Blueprint finalized additions: construct B_i, R and both support weight handles before outcomes, following analysis-specification section Baseline earnings composition. Export composition-support.csv, payroll-distribution.csv and baseline-wage-distribution.csv under the exact interfaces. Counts/distributions use the original supported target; the robustness subset never replaces it. Earnings-standardization support loss does not independently change the existing measurement verdict. Record optional support limitations. These are internal measurement/context analyses, not new Atoms. Legal source detail: under prior BEK575/2001 section12(4), committees could consist of existing safety-group members plus the employer; a changed tier never proves loss of distinct representatives. The 2005–2011 inspection-screening programme is a contemporaneous counterfactual threat, not observed differential enforcement.

Institution display inventory is frozen in docs/execution/interfaces.md: eleven rows, including the 2008 reform-development context, the separate 2005/2011 screening-programme endpoints, 2006 reference and 2007 payroll anchor. These are source-backed context/analyst dates, not observed receipt. The screening programme belongs in the no-AMO-reform counterfactual; it is not part of the assigned 2010 package merely because its dates overlap. Seim et al. 2013, physical p.3, supplies reform development in 2008 with year precision, not an exact first announcement.

Remaining registration fields

The preregistration.protocol field is reproduced in full immediately above; all remaining fields are reproduced below.

```

id: atom-000004
topic: Reform exposure measurement
atom_result: prereg
atom_strength: null
atom_shape: null
evidence_paths: []
concepts: []
literature: []
bonds: []
preregistration:
  version: 1
  mode: adaptive
  question: Can the 2010 AMO reform support the registered fixed payroll-group
    comparison?
  rationale: The construct of enterprise-size institutional exposure must
    be judged before interpreting worker endpoints. This preserves a
    ↪ consequential
    measurement experiment instead of equating payroll counts with law.
  assumption: Historical statutory differential incidence motivates the fixed
    payroll-group comparison. Exact legal eligibility is unresolved;
    ↪ differential
    parallel counterfactual changes, measurement stability and no baseline
    anticipation remain assumptions, never consequences of a nonsignificant
    diagnostic.
  target_strength: descriptive
  target_shape: comparison
  ratings:
    importance: 5
    novelty: 3
    feasibility: 3
    data_advantage: 4
    informativeness: 0.6
  tables:
    - IDAN
    - IDAS
    - BEF
    - IND
  activation: 'TRUE'
  verdicts:
    - key: policy_blocked
      region: Authenticated historical evidence contradicts the registered
        ↪ default
        reform contrast/applicability; precedence before data checks.
      says: This assignment route is contradicted; no outcome comparison is
        activated.
    - key: data_gap
      region: Absent/incompatible baseline sources, irreparable key conflicts,
        or zero comparison support demonstrated by the specified checks.
      says: The target cannot be constituted in this delivery; this is not
        ↪ evidence
        of no policy effect.
    - key: proxy_fragile
      region: A cohort can be frozen but one or more step7 flags holds.
      says: Report proxy instability and conditional comparisons; exact
        ↪ statutory
        assignment and strong institutional attribution remain unsupported.
    - key: proxy_supported
      region: All required checks evaluated, comparison constituted, and no
        step7 flag holds.
      says: The fixed payroll proxy comparison is administratively supported,

```

```

    without validating legal eligibility, differential implementation or
    parallel counterfactual changes.
- key: otherwise
  region: otherwise
  says: The registered judgment remains unresolved; report the precise
  ↪ remaining
    uncertainty without a substantive sign claim.

```

Registered question

Can the 2010 AMO reform support the registered fixed payroll-group comparison?

All empirical results are pending. Design ratings describe intended value, not observed evidence. The complete protocol and ordered local regions above govern this experiment. Shared sources are explicitly incorporated; no manuscript passage overrides them.

atom-000005: Reform injury consequences

The normative shared definitions are docs/protocol/data-contract.md and docs/protocol/analysis-specification.md, both incorporated in this registration at Blueprint 1 (2026-09-08 America/Chicago; 2026-09-09 UTC). docs/execution/interfaces.md defines exact output schemas and missing-status fields. Any Blueprint amendment must synchronize these sources and every affected native registration; runtime and Transcriber cannot change these scientific definitions. Only aggregate disclosure-cleared evidence may leave the governed environment. No observations have been inspected. Output paths below are runtime-relative to this Atom's evidence directory, not prefilled artifacts. Failures to obtain/run/resolve documentation are operational no_result, never statistical null or evidence of absence. A data_gap requires recorded evidence of missing/incompatible data, not mere uncertainty. Synthetic tests never create empirical result states.

Scientific question: Did the 2010 AMO reform package differentially change recorded inpatient injury admissions for workers initially in 20–34 versus 10–19 payroll-person enterprises? Causal target is the difference in national-package effects across fixed groups, under the assumptions/formula in analysis-specification; it is not an isolated committee effect. Clinical events never assign exposure. Manufacturing single-workplace baseline workers are the population, not stroke survivors. Health records do not define the cohort. Required sources: inherited cohort/weights from atom-000004, IDAN/IDAS/BEF/IND baseline inputs and LPR_ADM/LPR_DIAG 2004–2011. DODSAASG is optional. Exact fields, SKS/ICD normalization, historical C_PATTYPE=0 and C_DIAGTYPE=A, keys and periods are in data-contract. Hospital linkage is diagnosis-many to contact-one on verified RECNUM scope, then person-many to cohort-one. Exact diagnosis duplicates collapse; multiple principal rows with different codes remain as diagnoses, and any qualifying principal code gives injury, with the disagreement counted. Ordered pseudocode: 1. Activation requires state(atom-000004) in {proxy_supported,proxy_fragile}. Read its immutable cohort and common weights. Never regenerate a health-selected roster. Confirm hospital years 2004–2011 and person/RECNUM namespaces. A documented absent 2006 or

2011 hospital partition/linkage is data_gap; absence of a secondary year suppresses that dynamic/pretrend component and leaves its diagnostic unresolved. An unresolved extraction claim is no_result, not zero admissions. 2. Assert contact uniqueness and diagnosis foreign-key cardinality. Parse dates as actual dates, check admission<=discharge when both exist; missing discharge does not by itself remove an admission. Invalid/missing admission date for a cohort contact makes that person's affected annual endpoint unknown if the possible year can be bounded; unlocalizable dates make all potentially affected years unknown. Systemic unresolvable date/identifier scope yields data_gap. Document diagnosis orphan rates and namespace failure; do not count orphan diagnoses as admissions. 3. Normalize uppercase code by removing one leading D and punctuation; retain original code in governed audit. Validate code grammar against delivered SKS dictionary. Select inpatient C_PATTYPE 0, principal A, ICD10 S00 through T79 inclusive, descendants. Group by PNR and admission calendar year, Y=1 if any; Y=0 only in a documented complete linkable national extract with none. For a cohort inpatient contact with missing or unparseable principal diagnosis, classify its person-year as unknown unless another valid qualifying principal injury already establishes one. Multiple principal diagnoses are not resolved by choosing a preferred code: any qualifying principal injury establishes one; otherwise any unresolved principal code leaves the person-year unknown. A valid noninjury principal diagnosis establishes nonqualification for that contact only. A diagnosis orphan with no contact is never silently converted to absence: an attested outside-universe explanation is recorded and excluded, a verified missing required contact/linkage is a data gap, and unresolved namespace/completeness is no_result until resolved. No acute-only or first-ever label, no occupational claim, no death-survivor restriction. If a documented person linkage/date problem precludes classification, Y interval=[0,1]. Check known death/admission contradictions as specified. 4. Build group-year standardized injury means and missing fractions. Compute 2011–2006 contrast, missingness bounds, cluster interval, prespecified three-outcome Bonferroni allocation, precision index, strict pretrend checks, all dynamic years and fixed bias grid exactly as in analysis-specification. Preserve every valid contrast even when trends reject. Flag unresolved diagnostic inputs; they prohibit language of validated trends and produce fragile if a required strict pretrend is unavailable. 5. Always compute supported exposure-proxy scenarios and principal-fracture sensitivity with 95% exploratory intervals. Only if DODSAASG historical completeness and dates are established, report death by end2011 and injury-or-death indicator; no DOD file means explicitly unavailable composite, not zero mortality. No event reclassification is based on whether an estimated effect is attractive. 6. Component base key precedence: valid uncertainty C wholly inside $[-.002, .002] \Rightarrow$ small; else $C.upper < 0 \Rightarrow$ lower; else $C.lower > 0 \Rightarrow$ higher; else imprecise. Bound-completion intervals use the same rules. First adjudicate evidenced data_gap; then invalid cluster/SE approximation $\Rightarrow$ bounds_only (no directional/equivalence statement); then fragility flags in analysis-specification or missing strict pretrend $\Rightarrow$ fragile, retaining the base key/estimate. Otherwise issue base key. A small interval may be wholly positive or negative; equivalence takes precedence and the sign remains

numeric. Operational failure produces no_result outside verdicts. 7. Emit summary/dynamics/pretrends/sensitivity/specificity/observability tables and component flags; record no_result if computation stops before any reliable endpoint judgment. No local result proves the conditional identifying assumptions. Permitted lower/higher language concerns a differential recorded-admission contrast under stated policy assumptions; lower is not proof of safer workplaces, higher is not proof of harmful safety representation. small is equivalence only at the prespecified scale of the differential effect. Outputs: injury-summary.csv (one primary row); injury-dynamics.csv; injury-pretrends.csv; injury-bias.csv; injury-sensitivity.csv; injury-observability.csv; death-accounting.csv; result.json. Stable figure2 (reader Figure 3), figure4 (reader Figure S1), Tables 2/2b, S4–S7b and S10–S13 bind these. Unit probability in files; figures may multiply by1000. Keep placeholders for suppressed/unavailable outputs with explicit disposition. Synthetic checks: D S/T prefixes and descendant boundaries S00,T79 included versus T80/T98 excluded; outpatient principal injury excluded; secondary injury excluded; duplicates and recurrent admissions count once; cross-year admission assigned by admission; nonresident absence interpreted only as no Danish record; death-date contradictions; missing year not all-zero; distinct 2006/2011 missing bounds with signed weights; positive/zero cluster variance; multiplicity allocation remains three; strict equivalence boundary inclusions versus sign strictness; directional result lost under modest B becomes fragile; same raw effect preserved after every flag.

Display the person-level annual risk faithfully: a probability contrast multiplied by 1000 is a difference in workers with at least one qualifying admission per 1000 original workers, never a difference in admission counts. Economic-only recording-break flags do not change this Atom state; unresolved work-exposure triangulation is retained in the Molecule. Any shared cohort or actual injury-ascertainment problem still invokes this Atom’s own validity rules.

Blueprint finalized comparison: execute both fixed baseline earnings-composition specifications in analysis-specification on the same restricted support R, with 95% pointwise intervals, signed missingness bounds, original-CVR clusters and retained flags. Emit composition-sensitivity.csv even when rows are unavailable. No new primary test allocation, automatic state override or strategy switch is created. Scientific interpretations compare the original target, its restriction and added standardization distinctly.

Optional composition status follows the exact per-row/overall convention in docs/execution/interfaces.md: bounds count as a calculable comparison even without sampling uncertainty; partial means some but not all specified rows are calculable. It never changes primary activation, confidence allocation or local judgment.

Remaining registration fields

The preregistration.protocol field is reproduced in full immediately above; all remaining fields are reproduced below.

```
id: atom-000005
topic: Reform injury consequences
atom_result: prereg
atom_strength: null
```

```

atom_shape: null
evidence_paths: []
concepts: []
literature: []
bonds: []
preregistration:
  version: 1
  mode: adaptive
  question: How did recorded inpatient injury change differentially across
    the fixed payroll-size groups after the 2010 AMO reform?
  rationale: Severe recorded injuries test a consequential health response
    to the institutional package, while employment and record ascertainment
    offer competing explanations.
  assumption: Historical statutory differential incidence motivates the fixed
    payroll-group comparison. Exact legal eligibility is unresolved;
    ↪ differential
    parallel counterfactual changes, measurement stability and no baseline
    anticipation remain assumptions, never consequences of a nonsignificant
    diagnostic.
  target_strength: causal
  target_shape: comparison
  ratings:
    importance: 5
    novelty: 3
    feasibility: 3
    data_advantage: 4
    informativeness: 0.6
  tables:
    - IDAN
    - IDAS
    - BEF
    - IND
    - LPR_ADM
    - LPR_DIAG
    - DODSAASG
  activation: (state(atom-000004) == "proxy_supported") OR (state(atom-000004)
    == "proxy_fragile")
  verdicts:
    - key: data_gap
      region: Essential primary health inputs demonstrably absent or
        ↪ incompatible;
        no registered primary contrast available.
      says: No health-effect conclusion can be reached from this delivery.
    - key: bounds_only
      region: Primary contrast/bounds calculable but cluster/variance safeguards
        fail.
      says: Report the contrast/bounds without directional or equivalence
        ↪ inference.
    - key: fragile
      region: Valid primary uncertainty but any registered fragility flag,
        ↪ including
        missing strict pretrend.
      says: Report the unmodified contrast and specific flags; credible
        ↪ institutional
        attribution remains sensitive/unresolved.
    - key: small
      region: No earlier region; entire adjusted C(0) is within [-.002,.002].
      says: The differential effect is small at the registered scale under the
        stated assumptions, not evidence that the national policy had no effect.
    - key: lower

```

```

region: No earlier region; C(0).upper<0.
says: A lower differential recorded-injury contrast is compatible with
      the reform assumptions, without occupational or committee-removal
      ↪ attribution.
- key: higher
region: No earlier region; C(0).lower>0.
says: A higher differential recorded-injury contrast is compatible with
      the reform assumptions, without isolated mechanism attribution.
- key: imprecise
region: No earlier region; valid C(0) includes 0 and is not wholly in the
      small band.
says: The contrast does not resolve direction or registered equivalence.
- key: otherwise
region: otherwise
says: The registered judgment remains unresolved; report the precise
      ↪ remaining
      uncertainty without a substantive sign claim.

```

Registered question

How did recorded inpatient injury change differentially across the fixed payroll-size groups after the 2010 AMO reform?

All empirical results are pending. Design ratings describe intended value, not observed evidence. The complete protocol and ordered local regions above govern this experiment. Shared sources are explicitly incorporated; no manuscript passage overrides them.

atom-000006: Reform work resources

The normative shared definitions are docs/protocol/data-contract.md and docs/protocol/analysis-specification.md, both incorporated in this registration at Blueprint 1 (2026-09-08 America/Chicago; 2026-09-09 UTC). docs/execution/interfaces.md defines exact output schemas and missing-status fields. Any Blueprint amendment must synchronize these sources and every affected native registration; runtime and Transcriber cannot change these scientific definitions. Only aggregate disclosure-cleared evidence may leave the governed environment. No observations have been inspected. Output paths below are runtime-relative to this Atom's evidence directory, not prefilled artifacts. Failures to obtain/run/resolve documentation are operational no_result, never statistical null or evidence of absence. A data_gap requires recorded evidence of missing/incompatible data, not mere uncertainty. Synthetic tests never create empirical result states.

Scientific question: Did the same 2010 institutional package differentially change the work attachment and wage resources of the original workforce, and can these margins help distinguish loss of Danish recorded injuries through reduced employment from improvement in recorded health? Employment and wage outcomes form one coherent economic-consequences experiment. They are not post-treatment controls for injury or causal mediation tests. Target, cohort, G, fixed strata and weights are identical to atom-000005. No post-reform employer survival selection. Required sources: inherited cohort/weights; IDAN2004–2011 H/B job witnesses with pre/post2008 code

versions; contemporaneous IDAS CVR identity for destination; BEF December snapshots; IND LOENMV_13. DODSAASG optional. Exact fields, duplicate and key rules are in data-contract. No education/benefit receipt or AMRUN partial sample is added. Public identity/vintage documentation is not proof of actual annual records. Ordered pseudocode: 1. Activate for atom-000004 proxy_supported or proxy_fragile. Verify jobs/residence/wage extract completeness separately and record endpoint dispositions. Documented missing essential 2006 or 2011 source for one component sets that component unavailable; estimate the other on its unchanged cohort and allocation. If neither can yield registered bounds, data_gap. Failure to run gives no_result. Missing persons in an otherwise documented delivered frame receive the prescribed unknown intervals, not endpoint data_gap. 2. Employment: set E=1 from any H/B November job; otherwise E=0 if December BEF witness, or validated death strictly before Nov1 with no contradictory job; else interval[0,1]. N-only is zero only with residence witness and means no H/B, not no paid work. A death within November does not date employment. Apply pre2008 TYPE and later TYPE_2008 literally. No added minimum income threshold or post-treatment low-earner selection. Source documentation confirms that the pre-2008 annual earnings ascertainment requirement was greatly reduced under eIndkomst; set employment_2008_ascertainment on every primary employment row, regardless of recorded changes. This is an unresolved measurement contribution, not empirical evidence of a nonzero bias. Conflicting death/job dates are reported as unknown if the job witness cannot be validated, not corrected by dropping the worker. 3. Wages: parse finite numeric LOENMV_13. For $x \geq 0$, $W = \min(x, 600000)$. Keep observed zero. Missing/negative nonconforming values receive [0, 600000], with negative anomalies separate. Baseline2006 is already observed by cohort definition. A documented source omission that means zero can be recoded only according to that source contract, not empirical convenience. Death-year income remains observed or bounded, not imputed zero. The documented 2011 component change, particularly employer noncompetition compensation excluded in 2002–2010, requires wage_2011_components on every primary wage row. Neither the cap nor the corrected extraction vintage harmonizes this component. Follow the binding data-contract decision table; no wage-component subtraction or reference-year substitution is authorized. 4. Compute each component's group-year means, bounds, 2011–2006 contrast, valid cluster uncertainty, fixed Bonferroni allocation, strict pretrends, dynamics, precision and additive bias grid. Base key uses C wholly inside SESOI => small, else positive sign=>higher, negative=>lower, else imprecise. Employment SESOI=.02; capped wages=10000DKK. Fragility and cluster-validity rules apply componentwise as in analysis-specification. Known economic recording breaks are never cleared in this version: unavailable source => unavailable; calculable contrast with invalid cluster uncertainty => bounds_only plus its recording flag; valid C(0) => fragile plus its base_key and interval_sign. For valid C(0), interval_sign is positive if ci_lo>0, negative if ci_hi<0, otherwise includes_zero. Undefined intervals receive undefined. A small component retains its nonzero sign when its interval excludes zero. Unavailable strict pretrend makes the component fragile, never negative evidence of parallel trends. 5. Destination at 2011 priority: any H/B with known baselineCVR=>original; else any H/B with a known otherCVR=>other;

else H/B=>unknown_identity; else validated death beforeNov1=>death; else December BEF=>no_HB; else=>unobserved. The six shares sum to one separately by group, including missing identity/residence, with counts and fixed target denominators. This is a date-specific accounting partition, not retention, firm closure, or continuous job-to-job transition. Estimate no mediation regression. 6. Run all supported exposure scenarios, wage caps400000/800000, uncapped observed-record descriptive means and sex-contrast differences as defined in analysis-specification. Uncapped complete-case contrast uses original group-stratum weights renormalized among observed workers within each cell and explicitly changes the target; empty cells make it unavailable rather than borrowing another cell. Report observed sample sizes/missing share. Sex unknown contributes to primary estimates but not the female-minus-male diagnostic. 95% pointwise intervals only, no extra confirmatory claims. 7. Preserve the complete numerical economic profile separately from its scientific restrictions. Compute base_joint_profile from the two base keys (substitute unavailable/bounds_only as needed): both unavailable=>data_gap; any unavailable/bounds_only=>partial; both small=>joint_small; both in {higher,small} and at least one higher=>economic_gain; both in {lower,small} and at least one lower=>economic_loss; higher/lower=>mixed; otherwise=>imprecise. This profile summarizes recorded contrasts only. Gain means at least one margin has the higher classification, while the other is also higher or wholly within its small-effect band; loss has the corresponding lower definition. The small margin may have the opposite sign. No label implies both margins weakly increase/decrease, unchanged employment, a welfare change or a harmonized policy effect.

Adjudicate the realized native state using component_keys, with all break flags retained. First require each component key to be one of unavailable/bounds_only/fragile; an invalid or missing key gives otherwise and an explicit adjudication reason. For valid inputs: both unavailable=>data_gap; any fragile=>fragile; otherwise=>partial. Because every valid primary economic interval has a known unquantified break in this version, numerical gain/loss/mixed/joint_small/imprecise are preserved output profiles, not unflagged realized local states. No interval, sign, component failure, multiplicity allocation or boundary result is erased by this separation.

8. Emit all endpoints and status rows. Constant-definition policy interpretation requires the counterfactual and measurement assumptions; the known breaks leave that interpretation restricted in this version. C(B) has a causal reading only conditional on its unvalidated bound on total counterfactual plus measurement bias. Comparisons to injury are descriptive triangulation under the Molecule; if one fails, the other does not validate it. No statistical mediation, discrimination or compensation adequacy claim is registered. Outputs: economic-summary.csv (employment,wage rows); economic-dynamics.csv; economic-pretrends.csv; economic-bias.csv; economic-sensitivity.csv; destinations.csv; sex-contrasts.csv; economic-observability.csv; result.json. Stable figure3 (reader Figure 4), figure4 (reader Figure S1), figure6 (reader Figure 5), Tables 2/2b and S4–S14 bind these. Probability files use0–1; wage files nominalDKK; plots percent points/thousandDKK explicitly convert. Synthetic checks: multipleH/B jobs one endpoint; N-only/residence

and N-only/no-residence differ; sameCVR witness precedence; conflictingH witnesses preserved for endpoint but cohort conflict excluded; missingIND notzero; negative wage anomalous; cap exactat600000 and above; deathyear observed wage retained; jobafterknownprior death flags; bothoutcomes missing nofalsegain; signed bounds exactenumeration; group/stratum weights fixed on missingness; sexcontrastcluster covariance; jointstate table tests including fragile+gain, partial+small, higher+lower, small+small and imprecise+gain.

Synthetic semantic checks must include a small but strictly negative employment interval with a higher wage interval and the reversed-sign case: preserve both signs; never describe both margins as weakly favorable/adverse. Verify all numerical profile combinations, the known-break override even with reassuring pretrends/modest-bias survival, independent missing/bounds-only components, and that economic-only drift never changes atom-000005. Test unavailable/partial/fragile/otherwise/no_result separately. The binding v002 data-contract table determines scientific measurement choices; Transcriber implements them without harmonizing or clearing restrictions.

Blueprint finalized comparison: execute both fixed baseline earnings-composition specifications in analysis-specification on the same restricted support R, with 95% pointwise intervals, signed missingness bounds, original-CVR clusters and retained flags. Emit composition-sensitivity.csv even when rows are unavailable. No new primary test allocation, automatic state override or strategy switch is created. Scientific interpretations compare the original target, its restriction and added standardization distinctly.

Registered supplementary joint injury–employment description

Question: do marginal injury and work patterns concern overlapping recorded states in the same original people, or does the aggregate comparison conceal their joint distribution? This is a descriptive companion to the economic-consequences question within this Atom, not an experiment on health causing job loss. The calendar-year injury indicator and November employment witness have different clocks; an injury can precede or follow the job snapshot. Never label this co-onset, event order, occupational risk among exposed workers, mediation, a treatment-effect covariance or a transition matrix.

Use the immutable original cohort, G, pi_s and a_i. For t=2006 and 2011 only, construct injury I_it and H/B employment E_it by the exact shared algorithms. A singleton [0,0]/[1,1] is category 0/1; a person-specific [0,1] becomes U. An absent/incompatible entire source is not nine populated unknown cells: give that year a module-unavailable disposition; failures to obtain/run remain operationally unresolved. No death-survivor, joint-complete-case, stayer or injury-defined selection is allowed.

For each g,t, enumerate all nine observed states (I,E) in $\{0,1,U\} \times \{0,1,U\}$. Emit unweighted n plus share = $\text{sum}(\text{abs}(a_i) * 1[\text{state}])$ for that group; group weights sum one. Sum nine shares=1 within 1e-10 before disclosure. Zero is emitted only for a constructed empty cell. In addition, for each of the four binary target states q in {00,01,10,11}, let lower_i(q)=1 only if both I and E are known and equal q,

else0; upper_i(q)=1 if all known components agree with q, else0. Weighted sums give sharp cellwise logical missingness bounds. The four upper bounds are not simultaneously attainable and must not be normalized to sum one. There is no independence assumption between I and E and no imputation based on marginal products.

Report both the nine-cell observed classification and the four cellwise bounds for both groups/years, including total original n, known-both n, any-unknown share. The bounds are descriptive identification intervals, without sampling CIs or p-values; no new multiplicity family. Their exact accounting identities are reproducibility checks, not inferential validity tests. The 2006-versus-2011 H/B definition change remains visible on all comparisons and cannot be cleared by complete joint observation. Injury ascertainment and migration limits persist. Do not infer a reduction in work exposure from the joint pattern alone, even if no H/B and injury co-occur. Do not infer independence from apparently separate marginal changes.

Emit joint-states.csv (nine rows per g,t) and joint-bounds.csv (four rows per g,t). Optional module status and unresolved source requirements are recorded in result.json supplementary_status.joint. They do not change primary economic local_key/base_joint_profile or any other Atom's state. This module runs when source construction is possible regardless of effect direction or either endpoint's pretrend. Test all nine observable states, exact summation/marginals, unknown components, logical bounds versus all feasible binary completions, and a case where year-end injury follows the November job witness. Test missing hospital inputs while economics remains computable.

Optional composition status follows the exact per-row/overall convention in docs/execution/interfaces.md: bounds count as a calculable comparison even without sampling uncertainty; partial means some but not all specified rows are calculable. It never changes primary activation, confidence allocation or local judgment.

Remaining registration fields

The preregistration.protocol field is reproduced in full immediately above; all remaining fields are reproduced below.

```
id: atom-000006
topic: Reform work resources
atom_result: prereg
atom_strength: null
atom_shape: null
evidence_paths: []
concepts: []
literature: []
bonds: []
preregistration:
  version: 1
  mode: adaptive
  question: How did work attachment and capped wage resources change
    ↪ differentially
    for the original workforce?
  rationale: A coherent economic-consequences experiment helps assess whether
    injury patterns coexist with retained work or reduced Danish employment
    exposure; it does not identify mediation.
  assumption: Historical statutory differential incidence motivates the fixed
```

```

payroll-group comparison. Exact legal eligibility is unresolved;
  ↳ differential
parallel counterfactual changes and no baseline anticipation remain
  ↳ assumptions,
never consequences of a nonsignificant diagnostic. Known 2008 employment
and 2011 wage definition changes leave constant-definition economic
  ↳ effects
unresolved; the literal recorded contrasts retain binding measurement
restrictions and only conditional total-bias sensitivity.
target_strength: causal
target_shape: comparison
ratings:
  importance: 5
  novelty: 3
  feasibility: 3
  data_advantage: 4
  informativeness: 0.6
tables:
- IDAN
- IDAS
- BEF
- IND
- DODSAASG
- LPR_ADM
- LPR_DIAG
activation: (state(atom-000004) == "proxy_supported") OR (state(atom-000004)
== "proxy_fragile")
verdicts:
- key: data_gap
  region: Both component keys are valid and both primary economic components
  are evidenced unavailable; first substantive precedence after input
  validation.
  says: No economic comparison can be supplied; neither component is a
  ↳ statistical
  null.
- key: fragile
  region: Both component keys are valid; no earlier region; at least one
  primary economic component has valid uncertainty and therefore is
  ↳ fragile
  under the binding known-definition-break policy.
  says: Report every recorded component, its base region, signed interval
  and all flags. The 2008 employment and 2011 wage breaks leave
  ↳ constant-definition
  economic policy effects unresolved. Neither a favorable base profile
  nor another outcome clears this restriction.
- key: partial
  region: Both component keys are valid; no earlier region; at least one
  component is bounds_only or unavailable. Thus at least one contrast
  is calculable but neither supports valid primary interval inference.
  says: Retain calculable recorded contrasts/bounds and component-specific
  measurement warnings without directional or small-effect claims. Missing
  components do not count as corroboration.
- key: otherwise
  region: otherwise
  says: The economic adjudication remains unresolved or has incompatible
  inputs. Report the precise uncertainty; do not create a sign or
  ↳ unflagged
  economic-success state.

```

Registered question

How did work attachment and capped wage resources change differentially for the original workforce?

All empirical results are pending. Design ratings describe intended value, not observed evidence. The complete protocol and ordered local regions above govern this experiment. Shared sources are explicitly incorporated; no manuscript passage overrides them.