sociological science

Overwork Without Premium: The Persistent Class Gradient of Long Hours in China, 2006–2023

Chen Ouyang

Huazhong University of Science and Technology

Abstract: In the United States, overwork migrated up the class structure, and its hourly wage association turned from penalty to premium in aggregate estimates. The "996" controversy suggests China is replaying this elitization. I test both with 11 waves of the Chinese General Social Survey (2006–2023; 36,282 nonfarm workers), using wave-specific, subperiod, and full-period estimates. Neither is supported as a broad, durable pattern. Overwork stays concentrated among manual, service, and self-employed workers; a post-2015 rebound was not disproportionately professional—manual workers rose at least as much—and was not detectably sustained in 2023. Overwork does not pay: overworkers log two-thirds more hours than comparable workers yet earn no more annually, and the hourly penalty—deepest for blue-collar employees—narrowed partially after 2010 and remained negative in every wave. State-sector employment is associated with lower overwork throughout. Elitized overwork appears institution-dependent; the sample instead shows a non-elite overwork configuration.

Keywords: working time; overwork; social class; wage inequality; labor process; China

Reproducibility Package: All analysis code, the cross-wave harmonization pipeline, archived numeric outputs, and documentation needed to reproduce every empirical result in this article are deposited at Zenodo: https://doi.org/10.5281/zenodo.21709718. The CGSS microdata cannot be redistributed under the CNSDA data-use agreement; the package documents, wave by wave, how registered researchers can obtain each file free of charge from the Chinese National Survey Data Archive (cnsda.org).

Citation: Ouyang, Chen. 2026. "Overwork Without Premium: The Persistent Class Gradient of Long Hours in China, 2006–2023" Sociological Science 13: 1079-1106.

Received: July 12, 2026

Accepted: August 8, 2026

Published: August 31, 2026

Editor(s): Ari Adut, Wei-hsin Yu

DOI: 10.15195/v13.a41

FEW labor practices of the past decade have drawn more international attention than China's "996" schedule—9 a.m. to 9 p.m., six days a week—which spread through the country's internet industry and, in 2019, became one of the most visible white-collar labor controversies in recent memory (Zheng and Qiu 2023). The controversy fixed a new image of the Chinese overworker in the global imagination: young, credentialed, professional, and exhausted at a tech-campus desk. The image has a statistical backdrop: official estimates show that the share of China's urban employed population exceeding 48 hours per week has risen steadily since 2016 (Zeng et al. 2025). To many observers, China appeared to be entering the age of the overworked elite.

That reading draws its plausibility from the best-documented transformation in the sociology of working time. In the United States, overwork changed hands and changed price: long hours, once the burden of industrial labor (Schor 1991), migrated up the occupational hierarchy until professionals and managers became the segment most likely to work very long weeks (Jacobs and Gerson 2004; Kuhn and Lozano 2008), and Cha and Weeden (2014) show that between 1979 and 2009

the adjusted hourly wage gap associated with overwork shifted from a penalty to an aggregate premium. These two reversals define what I call the elitization of overwork, and the 996 discourse implies that the world's largest labor market is replaying it on compressed time.

This article tests that implication directly and finds that neither dimension holds as a broad, durable pattern. I pool 11 waves of the Chinese General Social Survey (CGSS) from 2006 to 2023—36,282 nonfarm workers observed across nearly two decades spanning China's export boom, the rise of 996, and the postpandemic labor market—and ask three questions. Who overworks in China? Has overwork shifted toward the managerial-professional classes? And does overwork carry a wage premium or a wage penalty? Because the answers could differ across shorter spans hidden inside a two-decade series, the analysis tests subperiod and nonlinear specifications alongside full-period trends.

The article makes three contributions. First, it provides, to my knowledge, the first nationally harmonized long-run test of the overwork-premium thesis (Cha and Weeden 2014) in the world's largest labor market: Chinese studies have estimated earnings compensation for overwork in particular groups and periods, but none jointly traces the adjusted hourly price of overwork and its class composition across two decades. Second, it delivers, to my knowledge, the first long-run estimates of the class gradient of overwork in China: Tsai et al. (2016) located overwork among low-skilled workers in a single year (2008), Zeng et al. (2025) describe aggregate trends, and Chinese-language scholarship has documented overwork (*guodu laodong*) as a social problem (Yang, Han, and Xiao 2009) and traced weekly hours through the early Labor Contract Law years using CGSS 2006–2015 (Li et al. 2021)—but no study follows the class gradient's trajectory across the full period studied here. Third, the findings challenge the reading of elitization as a general tendency of (post)industrial capitalism and support an institutional account: the conditions that elitized American overwork were present in the post-1970s United States and are, I argue, absent in China. Research documents the widening of income inequality in reform-era China (Wu 2019; Xie and Zhou 2014) but has not established whether working time operates as a distinct axis of that inequality.

The results are clear on both dimensions. Within the pooled nonfarm analytic sample, working 48 or more hours is more common than not: pooled across waves, 56.8 percent of nonfarm workers logged 48 or more hours per week, and the median workweek sat at 48–50 hours in every wave. The class gradient runs opposite to the American pattern and never closed: 73.7 percent of manual workers overworked in 2006 against 38.1 percent of managers and professionals, and the blue-collar/white-collar ordering was intact in 2023; a shift-share decomposition attributes the modest professionalization of the overworker pool entirely to the growth of the professional class itself, and professionals remained underrepresented among overworkers relative to their workforce share. The series is not linear—overwork rebounded by an adjusted 6.1 percentage points between 2015 and 2021, the 996 era—but the rebound was not disproportionately concentrated among managers and professionals—manual workers rose at least as much—and was not detectably sustained in 2023. And overwork does not pay: overworkers supply about two-thirds more working time than observably similar employees

yet earn no more annually—the data exclude any compensating annual-earnings premium above 3 percent—while the hourly penalty deepened to 2010, narrowed by about 0.20 log points through 2021, and remained large, negative, and significantly deeper for blue-collar employees in every wave. State-sector employment, finally, is associated with a 17.8-percentage-point lower probability of overwork, in a class-by-sector configuration that never detectably changed.

China, in short, exhibits a non-elite overwork configuration: long hours concentrated among manual workers, service workers, and small proprietors, not redistributed upward by two decades of occupational upgrading, and unaccompanied by compensating annual rewards. The configuration is not frozen—incidence rebounded after 2015 and the penalty narrowed partially after 2010—but its fluctuations have occurred within its class pattern rather than against it. The 996 phenomenon is real, but it is an episode layered onto this pattern, not a sign of its inversion.

The remainder of the article proceeds as follows. The *Theory* section situates the Chinese case between the American literature on the overworked professional and labor process theories of production regimes, and derives three hypotheses. The *Data and Methods* section describes the data, measures, and models. The *Results* section presents the results, including dedicated subperiod tests for nonlinear change (see the *Subperiod Tests: A Rebound Without Elitization, a Narrowing Penalty Without a Premium* section). The *Discussion* section discusses what China's nonreversal reveals about the institutional conditions under which overwork becomes an elite practice.

Theory

The Overworked Professional and the Overwork Premium

For most of industrial history, long hours belonged to those with the least power to refuse them; Schor (1991) still attributed the postwar stagnation of American leisure to employers' preference for extracting more hours from incumbent workers. What the subsequent literature documented was a reversal of the social location of long hours: Jacobs and Gerson (2004) showed that the American workweek had polarized, with the very-long-hours pole increasingly populated by professionals and managers, and Kuhn and Lozano (2008) confirmed with labor-force data that long workweeks grew fastest between 1979 and 2006 among highly educated, highly paid men—the groups whose hours had once been shortest.

Three mechanisms explain the reversal. The first is cultural and status-linked: as leisure ceased to signal privilege, busyness became "the badge of honor for the new superordinate working class," as the title of Gershuny's (2005) article put it. The second is economic: Kuhn and Lozano (2008) argue that rising returns to skill and stronger marginal incentives—bonuses, promotion prospects, signaling, and the accumulation of skills and networks—made an additional hour most valuable to those already earning the most. The third is organizational: Cha and Weeden (2014) document the rising hourly return to overwork across 1979–2009—from significantly negative to significantly positive—and interpret it as consistent with organizational practices in which long-hours signal commitment or proxy for productivity in

professional and managerial labor markets. Subsequent U.S. research qualifies rather than simply extends this result: Denning et al. (2022) find that observational returns to additional hours within occupations are small and sometimes negative, whereas Yu and Kuo (2022) identify wage premiums attached to occupations that demand long hours, with marked gender heterogeneity. The contemporary U.S. evidence, in short, points to occupationally embedded temporal demands rather than a universal individual-level overwork premium—a qualification that matters for the comparison below.

The American case thus yields a two-dimensional characterization of elite overwork: compositionally, long hours concentrate at the top of the class structure; economically, they command a positive hourly return, at least in aggregate estimates and particular occupational contexts. Call the joint arrival of both conditions the elitization of overwork. Because the two dimensions are analytically separable, any test must estimate them independently. The open question is whether elitization is a general accompaniment of (post)industrial development or a contingent product of particular institutions—and China, combining the world's largest workforce with exceptionally rapid occupational upgrading, offers the strongest available test.

Why China Might—and Might Not—Follow

There are good reasons to expect China to replay the American sequence. In China's internet firms, extreme schedules are sustained by job insecurity combined with career identification, normative control, and a workplace culture that recasts overwork as ambition (Zheng and Qiu 2023)—mechanisms comparable to Burawoy's (1979) account of workplace consent; career narratives can also make long hours signify aspiration, while legal and official-media commentary criticizes excessive 996 schedules (Liu and Chen 2025). Nor is diffusion obviously blocked: educational expansion has produced a growing managerial-professional workforce competing for scarce elite positions, and the career-tournament dynamic documented above for the internet firms could in principle extend to other high-skill sectors—conditions resembling those under which American professionals learned to convert hours into careers. If professional labor markets nationwide institutionalize these mechanisms, the composition and the price of Chinese overwork should drift toward the American configuration.

Labor process theory, rooted in Marxist political economy, supplies the counterprediction and serves as a central analytical framework for this article. Extending Braverman's (1974) account of managerial control over the pace and duration of labor to working time, I treat hours as an intensity margin that expands most where workers' skill-based bargaining power is weakest; on this extension, overwork should sink toward the bottom of the class structure, not rise toward its top. Burawoy (1985) generalizes the point: working time is set not by occupational status but by the institutional organization of production. Applying his production-regime framework to hours, I expect them to moderate where labor standards are effectively implemented and workers possess exit options, and to lengthen where workers have limited exit options and implementation is uneven. The labor process

tradition's central claim, restated for working time, is that who overworks is a question about regimes, not about occupations (Thompson and Smith 2009).

Prior ethnographic research locates the most intensive workplace arrangements in lower-wage segments of manufacturing. C. K. Lee (1998) and Pun (2005) document export factories in which migrant women's workdays extended substantially beyond statutory limits, sustained by intensive workplace control and the dormitory system's around-the-clock availability of labor. C. K. Lee (2007) argues that China's extensive postreform labor-law framework has been implemented unevenly across localities, producing variation between statutory protections and workplace conditions. This locality-level variation could help sustain the concentration of overwork among manual and migrant workers observed here. Lüthje, Luo, and Zhang (2013) systematize the picture: Chinese production regimes vary by sector and ownership, from regulated state-sector arrangements with bureaucratized working time to low-wage, high-intensity arrangements in private manufacturing where extreme hours are integrated into the labor process. Two background conditions can intensify these arrangements: high labor substitutability in some low-wage sectors, which can make additional hours less costly to obtain than to compensate, and uneven implementation, which can reduce the practical force of statutory limits. The typology yields a compositional prediction opposite to elitization: overwork concentrated among manual workers, service workers, and self-employed workers and small employers, whose hours are strongly shaped by product-market competition without a wage contract to mediate it.

Two features of China's stratification order should stabilize this configuration. The first is labor market segmentation between the state and market sectors, a durable axis of reform-era inequality (Bian 2002; Wu 2019): returns to education varied across institutional sectors during market transition (Wu and Xie 2003), and comparative and recent Chinese evidence indicates longer hours outside the public and state sectors (Tsai et al. 2016; Zeng et al. 2025), so I expect the state sector to function as a partial institutional shelter from overwork whose boundaries are set by sector rather than class. The second is class structure itself. In Wright's (1985, 1997) scheme, employers and the self-employed occupy property-defined locations whose working time responds to business constraints, while employees' hours depend on the authority and skill assets that shape their bargaining position over working time. The scheme doubles as the measurement framework here: crossing property and employment relations with occupational skill boundaries—in the same spirit as the Erikson–Goldthorpe–Portocarero (EGP) class scheme (Erikson and Goldthorpe 1992)—yields class categories whose predicted hours differ sharply between the two accounts.

Finally, the two accounts differ on the price of overwork. The screening mechanism that generates a premium presupposes employers competing for scarce professional labor and using hours as an index of unobserved quality. Where long hours are instead obtained from workers with limited bargaining power in settings with high labor substitutability—sometimes without full overtime compensation—hours rise while earnings do not follow proportionally. A persistent overwork penalty, deepest in the classes with the least workplace power, is the wage signature of a non-elite rather than elite overwork configuration.

Hypotheses

The two traditions yield competing hypotheses on each dimension, plus an institutional prediction specific to China.

H1 (composition). Under the elitization account, the class gradient of overwork should converge toward—or begin to invert into—the American pattern: managerial-professional overwork rising relative to manual workers' across 2006–2023 (H1a). Under the production-regime account, the gradient Tsai et al. (2016) documented for 2008 should persist or widen (H1b). Two quantities bear on this and the *A Persistent Class Gradient, with No American-Style Reversal* section reports both: the class-specific overwork rate, $P(\text{overwork} \mid \text{class})$, whose trend the class-by-year interactions estimate, and the class composition of overworkers, $P(\text{class} \mid \text{overwork})$, which can shift upward through occupational upgrading alone. H1a requires significant positive interactions for the nonmanual employee classes, large enough to substantively narrow the 2006 gaps; null, negative, or far-from-gap-closing interactions support H1b, with a decomposition establishing whether any upward drift in overworker composition reflects rising professional overwork or merely a growing professional class.

H2 (price). Under the elitization account, the hourly wage gap associated with overwork should move from negative toward positive over the period, recapitulating the American trajectory (H2a). Under the production-regime account, overwork should carry a persistent hourly penalty, flat in trend and steeper among manual and service workers than among white-collar employees (H2b).

H3 (regime). If working time is structured by production institutions rather than occupational status, state-sector employees should exhibit lower overwork than otherwise comparable market-sector employees; class gradients should be flatter inside the state sector, where bureaucratic regulation of hours is expected to apply across ranks; and this sectoral configuration should be stable across periods. Evidence of state/non-state differences in long-hours exposure motivates the first expectation (Tsai et al. 2016; Zeng et al. 2025); the configuration's stability is tested here.

The *A Persistent Class Gradient, with No American- Style Reversal* through *The State-Sector Differential, Large and Persistent* sections test these hypotheses in turn; The *Subperiod Tests: A Rebound Without Elitization, a Narrowing Penalty Without a Premium* section adds subperiod tests for nonlinear change on both dimensions.

Data and Methods

Data

I use 11 waves of the CGSS (National Survey Research Center 2006–2023): 2006, 2008, 2010, 2011, 2012, 2013, 2015, 2017, 2018, 2021, and 2023. The CGSS is a repeated cross-sectional survey of the adult population of mainland China, launched in 2003 as a joint project of Renmin University of China and the Hong Kong University of Science and Technology and fielded in its later phases by the National Survey Research Center at Renmin University of China. Each in-person wave or component draws a multistage stratified probability sample, under designs that changed across

the project's phases; interviews were face to face until the mixed-mode 2023 wave discussed below, and Bian and Li (2012) document the sampling designs and data quality of the early waves. The Chinese observations analyzed by Tsai et al. (2016) were fielded as part of the East Asian Social Survey module carried by CGSS 2008, so their 2008 baseline refers to the same survey infrastructure analyzed here. The series spans the period from China's World Trade Organization (WTO)-era export boom through the 996 controversy and the postpandemic labor market, making it well suited to tracking overwork across Chinese social classes over nearly two decades. The CGSS microdata are available to registered researchers free of charge from the Chinese National Survey Data Archive (cnsda.org); the reproducibility package described below the abstract contains the full harmonization and analysis pipeline.

Two design discontinuities require attention. First, the first-phase waves (2006 and 2008) were fielded under earlier sampling designs—the 2008 wave under its own—and the CGSS renewed its sampling frame in 2010; I therefore report estimates for the full 2006–2023 period and verify that the composition results hold when the analysis is restricted to the internally consistent 2010–2023 segment, and that the price results are unchanged in the 2012–2023 subperiod (see the *Robustness* section). Second, the 2023 wave used a mixed-mode design in which a telephone subsample (n = 5,743, 50.7 percent of the wave) was not administered the work module at all. The 2023 analytic sample therefore comes entirely from the in-person subsample and is small (n = 1,226, roughly 30 percent of a typical wave); I use the household-interview weight for this wave and interpret 2023 point estimates with corresponding caution. Because the telephone subsample contains no valid hours reports, a direct mode comparison of the hours distribution is not possible.

Analytic Sample

The analytic sample consists of respondents aged 18–64 who were employed, held a nonagricultural occupation, and reported valid weekly hours. Pooled across the 11 waves, 112,568 raw cases yield 91,242 respondents aged 18–64, of whom 54,944 were employed. Excluding agricultural workers (8,787 cases in International Standard Classification of Occupations [ISCO] major group 6 or subgroup 92) and respondents without a codable occupation (9,450 cases) leaves 36,707 nonfarm workers, and 36,282 with valid hours—the pooled analytic sample. Wave-by-wave counts appear in Table A1 in the online supplement.

Two harmonization details of this filter warrant note. From 2010 onward, employment is defined as having worked at least one hour for pay in the previous week; the 2006 and 2008 questionnaires instead identify respondents currently holding a job, an equivalent definition for the population studied here. And because several waves (2012, 2015 onward) coded occupations only for nonagricultural jobs, the nonfarm filter operates uniformly as "employed, with a valid ISCO code outside farming categories." A side effect is that nonfarm workers who refused the occupation question are excluded. Employed respondents excluded through this missing-occupation channel (9,450 cases) are substantially older (48.1 vs. 39.4 years on average), far more rural (26 vs. 83 percent urban), and far less educated (5.7 vs. 30.5 percent with tertiary schooling) than the analytic sample—profiles consistent with the channel absorbing mainly uncoded agricultural and rural workers rather

than nonfarm workers missing at random; Table A2 in the online supplement reports the full comparison.

Measuring Overwork

I define overwork as a usual workweek of 48 or more hours, a threshold anchored in China's own statutory architecture: the State Council sets standard hours at 40 per week (State Council of the People's Republic of China 1995) and the Labor Law caps overtime at 36 hours per month (Labor Law of the People's Republic of China 1994, Art. 41), so 48 hours approximate the weekly equivalent of the legal standard plus the monthly overtime ceiling (about 48.3 hours per week), though it corresponds to no single statutory limit. The line sits at the boundary international statistical practice uses to demarcate long hours, with one difference of convention: the International Labour Organization (ILO) indicator of excessive working time counts weeks of more than 48 hours (S. Lee, McCann, and Messenger 2007; Zeng et al. 2025)—49 or more in integer reports—and a 49-hour sensitivity check, which also strips the pronounced heaping at exactly 48 hours, leaves the class-gradient conclusions unchanged (Table A4 in the online supplement). As a sensitivity threshold I also report results for 55 or more hours, the exposure level that the World Health Organization and ILO joint estimates associate with elevated cardiovascular mortality (Pega et al. 2021) and one that isolates the extreme tail of the distribution.

Hours are measured as usual weekly working hours, reported by respondents who worked at least one hour for pay in the reference week; working in the reference week is the filter, usual hours the quantity. Item wording is stable from 2010 through 2023, though the item location changes (a53a in 2010–2015; a53aa in 2017–2018 and 2021; and a531 in 2023). In 2006, the measure is a composite: the urban questionnaire asks weekly hours directly, and for rural respondents I use weekly hours in nonagricultural work; a source flag tracks the two components. I treat as missing all coded nonresponses and values outside the interval (0, 112]; true reports above 112 hours are rare (roughly 15–40 cases per wave). The 2017–2023 questionnaires also carry a parallel hours item asked only of respondents who held a job without working in the reference week; I use it in a sensitivity check that adds these temporarily absent workers to the sample (see the *Robustness* section).

Class Scheme

I classify respondents into six classes by crossing employment relations with ISCO major occupational groups, following the logic of both the neo-Marxist scheme, which distinguishes classes by property and authority (Wright 1997), and the EGP scheme, which distinguishes them by employment relations (Erikson and Goldthorpe 1992). The classes are as follows: (1) employers; (2) the self-employed without employees; and, among employees; (3) managers and professionals (ISCO major groups 1–2); (4) semiprofessional and clerical workers (groups 3–4); (5) service and sales workers (group 5); and (6) manual workers (groups 7–9). Agricultural occupations (group 6 and subgroup 92) are excluded by the nonfarm filter. Respondents reporting zero employees are reclassified from employer to self-employed.

Occupations are coded in ISCO-88 through 2015 and ISCO-08 from 2017. The two classifications retain broadly similar one-digit structures, but they are not fully interchangeable: the official crosswalk includes partial matches and some movements across major groups (International Labour Office 2012). I therefore treat the 2017 change as a potential classification splice rather than an exact recoding, and the *Robustness* section reports robustness checks that merge or restrict the affected classes across the changeover.

The 2006 wave includes both ISCO-88 codes and an official precoded EGP classification, which I use as an external validation of the six-class scheme. Ganzeboom and Treiman (1996) describe the standard international conversion from ISCO-88 to EGP categories. Ninety-one percent of managers and professionals fall in EGP classes I–II, 99.6 percent of manual workers in VI–VIIa, and 75 and 73 percent of employers and the self-employed, respectively, in IVa–b. The remaining discrepancies are consistent with known definitional differences between the schemes (e.g., EGP assigns ISCO technicians to class II).

Hourly Wages and the Division-Bias Problem

To estimate the price of overwork, I construct hourly wages for employees as annual occupational earnings divided by weekly hours times 50. This construction differs from Cha and Weeden's (2014) in ways that should be stated exactly. Working with the Merged Outgoing Rotation Groups of the Current Population Survey, they observe the hourly wage directly for hourly workers and construct it as usual weekly earnings divided by usual weekly hours for the rest, and they sort workers into three usual-hour categories—fewer than 35 (part-time), 35–49 (full-time, the reference), and 50 or more (overwork)—retaining part-time workers in the estimation sample. The CGSS carries no weekly-earnings or hourly-rate items, so I divide annual occupational earnings by current usual hours times a fixed 50 weeks (see the *Measuring Overwork* section) and define overwork at the 48-hour threshold. I also retain all employees rather than impose a full-time floor. These differences cut in knowable directions: low-hours workers' mechanically higher constructed hourly wages can only deepen the estimated hourly gap—one more reason to lean on the strategy below—while on the annual-earnings side their lower annual pay biases the overwork coefficient toward a premium, making the null result of the *An Overwork Penalty, Not an Overwork Premium* section conservative. A sensitivity specification closer to their threshold and reference category—employees usually working 35 or more hours, with overwork defined at 50 hours—confirms both conclusions (see the *Robustness* section).

Any hourly wage built by dividing earnings by hours inherits division bias, and this version inherits it in aggravated form: hours enter both the overwork threshold and the wage denominator, so overreported hours mechanically classify a worker as an overworker and deflate that worker's measured hourly wage. I therefore treat the hourly-wage models as one leg of a three-legged strategy. The primary evidence comes from the income side: because ln(hourly wage) is identically ln(annual earnings) minus ln(hours $\times$ 50), I estimate the same model with log annual earnings and log weekly hours as separate outcomes—and annual earnings are not

constructed from hours at all (see *An Overwork Penalty, Not an Overwork Premium* section). Second, a grouped estimator averages away idiosyncratic individual-level reporting error: I collapse the data into 254 occupation-by-year cells (two-digit ISCO, $\geq$20 workers each) and regress cell-mean log hourly wages on cell overwork rates with occupation and year fixed effects, clustering on occupation. Third, a "donut" specification drops the 44–52-hour band, where misclassification around the threshold concentrates (see the *Robustness* section).

Earnings are annual occupational income in all waves except 2006, where they are monthly wages annualized by 12; because of this seam, trend tests on the premium use 2008 as the baseline wave. I winsorize positive earnings at the 1st and 99th percentiles within each wave and take logs. The wage analysis is restricted to employees, because earnings of employers and the self-employed mix labor and capital income: of 26,926 employees in the analytic sample, 25,412 report earnings, 851 zero reports are dropped, 24,561 report positive earnings, and listwise deletion of covariates yields an estimation sample of 23,843.

Models

Three models implement the analysis. M1 estimates the class gradient and its trend with a linear probability model (LPM):

$$\text{overwork}_i = \alpha + \beta\,\text{class}_i + \lambda\,\text{year} + \gamma\,(\text{class}_i \times \text{year}) + X_i\delta + \text{province FE} + \varepsilon_i,$$

where year is coded as years since 2006, so class main effects give the 2006 gradient and the interactions give its annual change. Covariates X include education (four categories), age and its square, gender, *hukou* status (nonagricultural = 1), and urban residence. I report weighted LPM estimates for interpretability in percentage points and re-estimate the model as a weighted logit as a functional-form check; conclusions are identical. M2 estimates the overwork premium in the spirit of Cha and Weeden (2014), regressing log hourly wages on wave dummies, overwork-by-wave interactions, class, and the same covariates and province fixed effects, within a Mincer-type framework (Mincer 1974); wave-specific interaction coefficients trace the premium's trajectory, and Wald tests evaluate the change from the 2008 baseline (see the *Hourly Wages and the Division-Bias Problem* section). The decomposition version of M2 replaces the outcome with log annual earnings and log weekly hours. As an additional extension, I also estimate M2 separately for white-collar (classes 3–4) and blue-collar (classes 5–6) employees to assess whether the wage association is concentrated in either segment of the class structure. M3 tests the production-regime hypothesis with a class $\times$ state-sector $\times$ period triple interaction among employees (n = 25,771), where the state sector comprises party and government organs, public institutions, the military, and state-owned or state-controlled enterprises, and periods are 2006–2012, 2013–2018, and 2021–2023. All three models include province fixed effects.

Because a single linear trend can conceal a decline followed by a rebound, three further designs test for nonlinear change (see the *Subperiod Tests: A Rebound Without Elitization, a Narrowing Penalty Without a Premium* section). First, covariate-adjusted two-wave contrasts estimate the change in overwork incidence between

2015—the observed trough—and 2021, and between 2015 and 2023, overall and within classes, with a parallel set of unrestricted wave-interaction contrasts on the wage side. Second, piecewise-linear (segmented) models estimate separate slopes before and after a knot, placed at 2015 for incidence and at 2010 for the wage models, where the wave-specific estimates locate the turning points; because these knots are chosen from observed turning points rather than prespecified, I treat the subperiod estimates as descriptive, data-guided checks rather than confirmatory tests. Third, quadratic class-by-time interactions test whether any class's trajectory curves away from the others'. All subperiod models retain the covariates, weights, province fixed effects, and clustering of the baseline specifications.

Weights, Standard Errors, and Missing Data

All descriptive estimates and models use survey weights normalized within wave; confidence intervals (CIs) for weighted rates use effective sample sizes. Seventeen 2015 cases with missing weights receive a weight of one. Standard errors are clustered on province throughout, on the same 31 harmonized mainland provincial-level administrative units that define the fixed effects. One correction deserves note: the 2006–2008 files store provinces under a different coding system than later waves, and naive pooling initially produced 78 spurious clusters; I harmonized all waves to 31 named provinces and re-estimated every model, and all coefficients, standard errors, and p values reported below come from the corrected, province-fixed-effects specifications. Because 31 clusters is a modest number, I also re-derive the key inferences with a wild cluster bootstrap (Cameron, Gelbach, and Miller 2008; Rademacher weights, 999 replications, residuals restricted under the null): the bootstrap p values—0.185 for managers and professionals $\times$ year, 0.078 for semiprofessional/clerical $\times$ year, 0.194 for service and sales $\times$ year, and 0.001 for the pooled M2 overwork coefficient, the smallest value attainable at 999 replications—track the analytical cluster-robust p values throughout; the same bootstrap applied to M3 returns 0.001 for the state-sector differential, 0.007 for its interaction with the managerial-professional class, and 0.669 for the joint test that the class-by-sector configuration changed across periods. Missing data are handled by listwise deletion: the M1 estimation sample is 34,709 (36,282 minus 1,573 cases missing class or covariates). Trend analyses follow standard practice for repeated cross-sections (Firebaugh 1997).

Results

Overwork Declined, Then Rebounded; the Weighted Median Remains at the Line

Table 1 describes the analytic sample. Pooled across 2006–2023, 56.8 percent of Chinese nonfarm workers worked 48 or more hours per week, and 41.8 percent worked 55 or more; mean weekly hours were 51.3. Within the pooled nonfarm analytic sample, working 48 or more hours was more common than not.

Figure 1 shows the trend, and it is not linear. The weighted overwork rate fell from 64.7 percent in 2006 to 51.7 percent in 2015, plateaued at 53–54 percent in

Table 1: Descriptive statistics, CGSS Nonfarm Workers Aged 18–64.

	Pooled 2006–2023	2006	2023
Overwork (48+ hours/week), %	56.8	64.7	53.1
Overwork (55+ hours/week), %	41.8	48.7	40.3
Weekly hours, mean	51.3	53.0	49.8
Class, %			
Employers	3.0	4.1	1.8
Self-employed	22.2	23.9	21.3
Managers and professionals	14.7	13.5	21.1
Semiprofessional and clerical	18.0	12.5	18.7
Service and sales	12.1	11.1	14.0
Manual workers	29.9	34.9	23.1
Female, %	40.1	40.3	50.5
Age, mean	38.6	36.6	40.6
Education, %			
Primary or less	13.4	19.2	10.8
Junior high	30.7	38.9	27.0
Senior high / vocational	25.1	27.8	21.8
College or above	30.7	14.1	40.4
Nonagricultural hukou, %	49.7	47.1	34.9
Urban residence, %	80.7	55.7	78.7
State sector, %	27.4	31.3	26.2
N (unweighted)	36,282	4,194	1,226

Notes: Entries are weighted percentages or means; survey weights are normalized within wave. N is the unweighted number of respondents in the analytic sample. The 2023 column rests on the in-person subsample alone (see *Data* section). Hukou is classified by pre-reform origin. Source: CGSS, eleven waves, 2006–2023.

2017–2018, rose to 62.2 percent in the 2021 pandemic-period wave, and returned to 53.1 percent in 2023. The 2021 observation deserves caution—the wave was fielded under pandemic conditions with a smaller sample (n = 2,267)—but the rebound is not an artifact of that wave alone: the *Subperiod Tests: A Rebound Without Elitization, a Narrowing Penalty Without a Premium* section shows that the 2015–2021 rise survives covariate adjustment while the 2015–2023 change does not. At the 55-hour threshold, the pattern is the same at a lower level: 48.7 percent in 2006 and 40.3 percent in 2023.

The quantile trajectories in Figure 2 reveal why the decline stalled. The median workweek sat at 48–50 hours in every one of the 11 waves: after nearly two decades, the weighted median respondent in the nonfarm analytic sample remains at or just above the overwork line. Improvement was concentrated at the bottom of the distribution, where the 10th percentile fell from 40 hours in 2006 and 2008 to 30–35 thereafter. The top barely moved: the 90th percentile never fell below 70 weekly hours throughout the period.

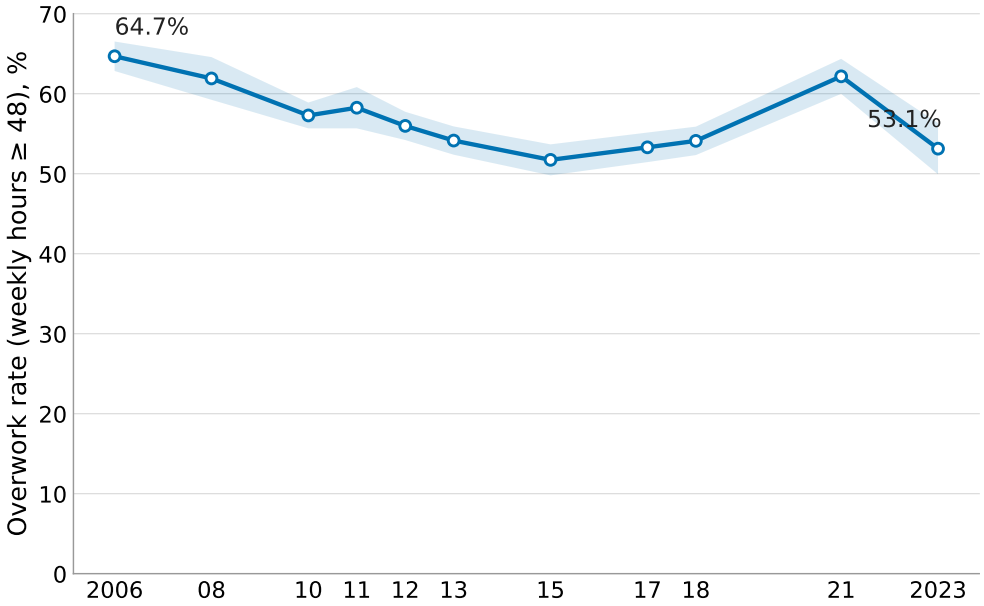

Figure 1: Weighted share of nonfarm workers working 48 or more hours per week. Source: CGSS 2006–2023; survey weights normalized within wave. The shaded band shows 95 percent confidence intervals based on effective sample sizes.

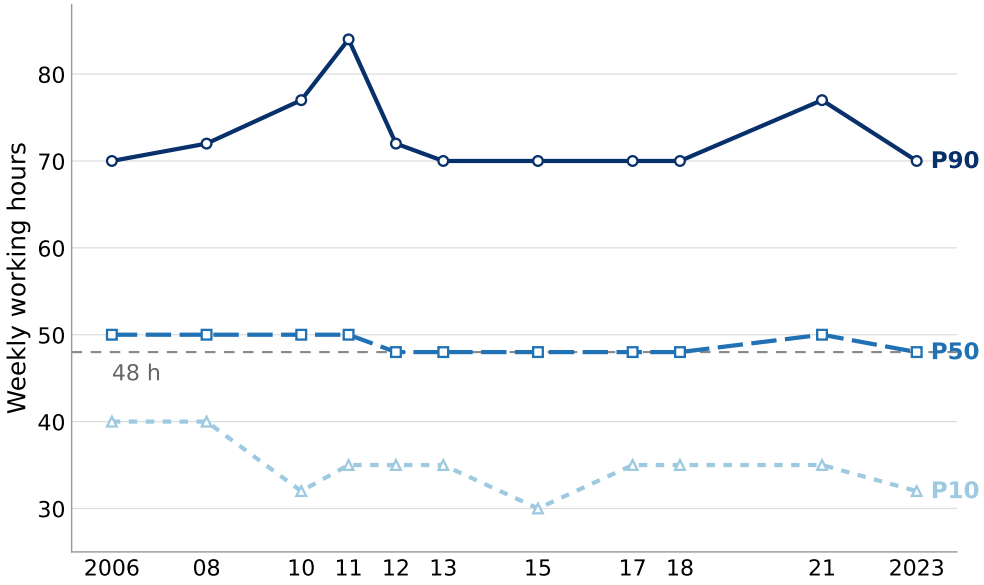

Figure 2: The 10th, 50th, and 90th percentiles of weekly working hours among nonfarm workers. Source: CGSS 2006–2023, weighted. The dashed line marks the 48-hour overwork threshold.

A Persistent Class Gradient, with No American-Style Reversal

Figure 3 plots overwork rates by class. The gradient is steep and inverted relative to the American pattern. In 2006, 73.7 percent of manual workers, 75.2 percent of

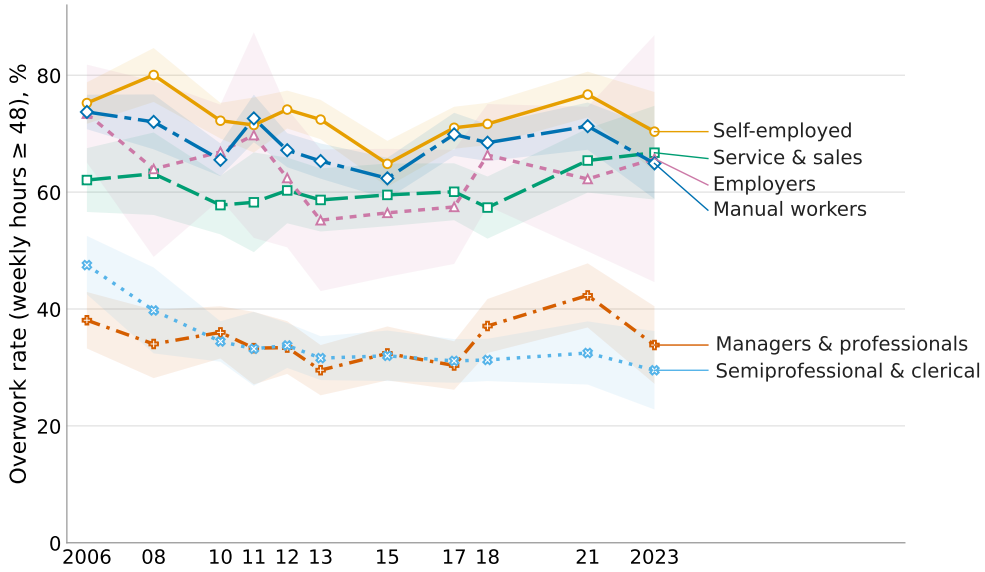

Figure 3: Weighted overwork rates (48+ hours per week) by class. Source: CGSS 2006–2023; survey weights normalized within wave. Shaded bands show 95 percent confidence intervals; line styles vary to keep adjacent classes distinguishable in print.

the self-employed, and 73.4 percent of employers overworked, against 62.1 percent of service and sales workers, 47.5 percent of semiprofessional and clerical workers, and 38.1 percent of managers and professionals. In 2023 the blue-collar/white-collar ordering was intact: service and sales workers (66.7 percent) and manual workers (64.9 percent) remained at the top among employees, managers and professionals (33.8 percent) and semiprofessional and clerical workers (29.5 percent) at the bottom. Across all 11 waves, manual workers' rates never fell below 62 percent, while managers' and professionals' ranged between 29.5 and 42.3 percent. Overwork in China belongs to those the American literature would least expect: not the professional but the production worker, the shop assistant, and the small entrepreneur.

Table 2 reports the M1 estimates. In the 2006 baseline, managers and professionals were 17.9 percentage points less likely to overwork than manual workers ($p < 0.001$) and semiprofessional and clerical workers 14.2 points less likely ($p < 0.001$); the self-employed were 5.2 points more likely ($p = 0.018$). The class-by-year interactions test whether this gradient converged toward the American pattern, and it did not: over 17 years spanning the rise of 996, no nonmanual employee class significantly closed its gap with manual workers (managers and professionals +0.39 points per year, $p = 0.166$; semiprofessional and clerical -0.32, $p = 0.070$; service and sales +0.33, $p = 0.161$), and the weighted logit replication agrees. Confidence bounds support an asymmetric reading. For semiprofessional and clerical employees, the 95 percent interval on the linear trend admits at most 0.44 points of cumulative convergence over 17 years—3 percent of their 14.2-point gap—so substantive convergence is excluded. For managers and professionals, the interval admits up to 16 points, so convergence is not excluded, only unobserved at conventional significance; three specification variants show nominally significant

Table 2: Linear Probability Model (M1) Estimates of the Class Gradient of Overwork (48+ Hours) and Its Trend, CGSS 2006–2023.

	(1)
Panel A: Class main effects (2006 baseline; ref.: manual workers)	
Employers	3.4
	(4.1)
Self-employed	5.2*
	(2.2)
Managers and professionals	−17.9†
	(3.0)
Semiprofessional and clerical	−14.2†
	(2.4)
Service and sales	−3.0
	(3.0)
Panel B: Trend (annual change, years since 2006)	
Year (manual workers)	−0.07
	(0.14)
Employers × year	−0.05
	(0.39)
Self-employed × year	0.11
	(0.21)
Managers and professionals × year	0.39
	(0.28)
Semiprofessional and clerical × year	−0.32
	(0.18)
Service and sales × year	0.33
	(0.23)
Controls	Yes
Province fixed effects	Yes
N	34,709

Notes: Weighted linear probability model of overwork (48+ hours). Coefficients and standard errors are expressed in percentage points. Class main effects give the 2006 gradient relative to manual workers; class-by-year interactions give the annual change in each gap. Controls: education (four categories), age and age squared, gender, hukou status, and urban residence. Standard errors in parentheses are clustered on 31 provinces.
*$p < 0.05$; †$p < 0.01$ (two-tailed).

convergence signals (see the *Robustness* section), none surviving multiplicity correction or approaching gap closure. By the criterion of the *Hypotheses* section, H1a is rejected for semiprofessional and clerical employees and unsupported—though not excluded—for managers and professionals; H1b's persistence prediction holds. The configuration Tsai et al. (2016) documented for 2008 was still standing, at nearly full height, in 2023.

The interactions describe class-specific rates; they do not answer the companion question of who the overworkers are. Because the professional-managerial class nearly doubled its share of nonfarm employment (13.5–21.1 percent, Table 1) while manual workers' share fell from 34.9 to 23.1 percent, the overworker pool could

professionalize even with class-specific rates frozen. It did, modestly: managers and professionals rose from 8.0 to 13.4 percent of all overworkers (Table A3 in the online supplement). A shift-share decomposition settles the source: holding within-class rates at their 2006 values and letting only the class distribution change reproduces the entire managerial-professional gain (+5.4 of +5.4 points), while letting only rates move contributes −0.0. The upward drift is occupational upgrading, arithmetically, not a rising propensity of professionals to work long hours. Normalized by class size, the picture reverses elitization: managers and professionals supplied 0.59 times their workforce share of overworkers in 2006 and 0.64 in 2023—still markedly underrepresented—while manual workers moved from 1.14 to 1.22 and service and sales workers from 0.96 to 1.25. Two decades of the fastest occupational upgrading on record left overworkers more disproportionately concentrated among non-elite classes, not less.

An Overwork Penalty, Not an Overwork Premium

Table 3 and Figure 4 report the M2 estimates. In the United States, Cha and Weeden (2014) show the hourly-wage gap associated with long hours rose across three decades and turned from negative to positive. China shows a penalty without interruption: in all 11 waves the overwork coefficient on log hourly wages is negative and significant at $p < 0.001$, ranging from −0.41 to −0.60 (Fig. 4A); the pooled estimate is −0.506. Overworkers earn 33–45 percent less per hour than observably similar workers in the same class, province, and year.

Because the hourly wage divides earnings by the same hours that define overwork, part of that hourly gap could be a division artifact (see the *Hourly Wages and the Division-Bias Problem* section). The decomposition in Table 3 supplies the hardest evidence in the article, because it never divides by hours. The pooled overwork coefficient on log annual earnings is −0.0001 ($p = 0.991$), and it is a bounded null: its 95 percent CI, [−0.023 to 0.023], excludes an annual-earnings premium (or penalty) of 3 percent or larger. The pooled coefficient on log weekly hours is +0.506 ($p < 0.001$), and the identity closes: $-0.506 \approx -0.0001 - 0.506$. Read substantively, overworkers put in about two-thirds more usual weekly hours—$\exp(0.506) - 1 \approx 66$ percent—than comparable workers, and their annual earnings are indistinguishable from those workers'. Because annual earnings are not constructed from hours, this bounded zero cannot be manufactured by division bias. Wave-by-wave, the annual-earnings coefficients hover around zero, ranging from −0.09 to +0.11 with inconsistent signs (Fig. 4B); among the consistently measured 2008–2023 waves, 2021 is the only positive and significant estimate (+0.108, $p = 0.002$), an exception examined in the *Subperiod Tests: A Rebound Without Elitization, a Narrowing Penalty Without a Premium* section; the positive 2006 coefficient (+0.070, $p = 0.006$) predates the annualized monthly-wage seam of the *Hourly Wages and the Division-Bias Problem* section, which is why trend tests start at 2008.

Against the 2008 baseline, the endpoint test shows no net repricing (change 2008–2023: −0.019, $p = 0.819$). But the endpoint comparison conceals movement inside the series—the penalty deepened to −0.60 in 2010 and narrowed to −0.41 by 2021—which the *Subperiod Tests: A Rebound Without Elitization, a Narrowing Penalty*

Table 3: The Overwork Penalty and Its Decomposition (M2), CGSS Employees, 2006–2023.

Panel A: Overwork Coefficient on ln Hourly Wage, by Wave

Wave	Estimate	n	Wave	Estimate	n
2006	$-0.432^{\dagger}$	2,855	2015	$-0.585^{\dagger}$	2,275
	(0.033)			(0.055)	
2008	$-0.468^{\dagger}$	1,717	2017	$-0.548^{\dagger}$	2,761
	(0.041)			(0.035)	
2010	$-0.603^{\dagger}$	2,007	2018	$-0.475^{\dagger}$	2,678
	(0.043)			(0.043)	
2011	$-0.589^{\dagger}$	1,301	2021	$-0.405^{\dagger}$	1,458
	(0.057)			(0.052)	
2012	$-0.554^{\dagger}$	2,980	2023	$-0.487^{\dagger}$	910
	(0.031)			(0.078)	
2013	$-0.425^{\dagger}$	2,901			
	(0.055)				

Panel B: Pooled Decomposition of the Hourly Penalty

Outcome	Estimate	Δ(2023–2008)	p
ln hourly wage	$-0.506^{\dagger}$	−0.019	0.82
	(0.024)		
ln annual earnings	0.000	0.084	0.18
	(0.012)		
ln weekly hours	$0.506^{\dagger}$	0.103	0.02
	(0.017)		

Notes: Weighted ordinary least squares (OLS) coefficients on the overwork indicator (48+ hours) among employees, controlling for class, education, age and age squared, gender, hukou status, urban residence, wave dummies, and province fixed effects; standard errors clustered on province. Panel B reports pooled coefficients for the three outcomes linked by the identity ln(hourly wage) = ln(annual earnings) - ln(hours × 50); Δ(2023–2008) is the Wald-test change from the 2008 baseline. The 95 percent confidence interval (CI) on the pooled ln annual earnings coefficient is [-0.023 to 0.023]. Pooled n = 23,843. Standard errors are in parentheses.
$^{*}p < 0.05$; $^{\dagger}p < 0.01$ (two-tailed).

Without a Premium section estimates directly. The 2021 and 2023 estimates rest on smaller samples (n = 1,458 and 910), so I emphasize patterns over single-wave point estimates.

Two further designs corroborate the penalty. The grouped estimator of the *Hourly Wages and the Division-Bias Problem* section yields −0.81 ($p < 0.001$) weighted and −1.01 unweighted across 254 occupation-by-year cells—occupation-years with more overwork pay systematically less per hour, which idiosyncratic reporting error cannot produce—and the donut specification dropping the 44–52-hour band returns −0.65 (see the *Robustness* section).

The penalty also carries its own class gradient. Estimated separately, the blue-collar penalty (−0.48 to −0.78 across waves) runs deeper than the white-collar penalty (−0.29 to −0.53) in 10 of 11 waves; a pooled interaction test estimates the blue-collar penalty as 0.102 log points deeper ($p < 0.001$). H2a finds no support.

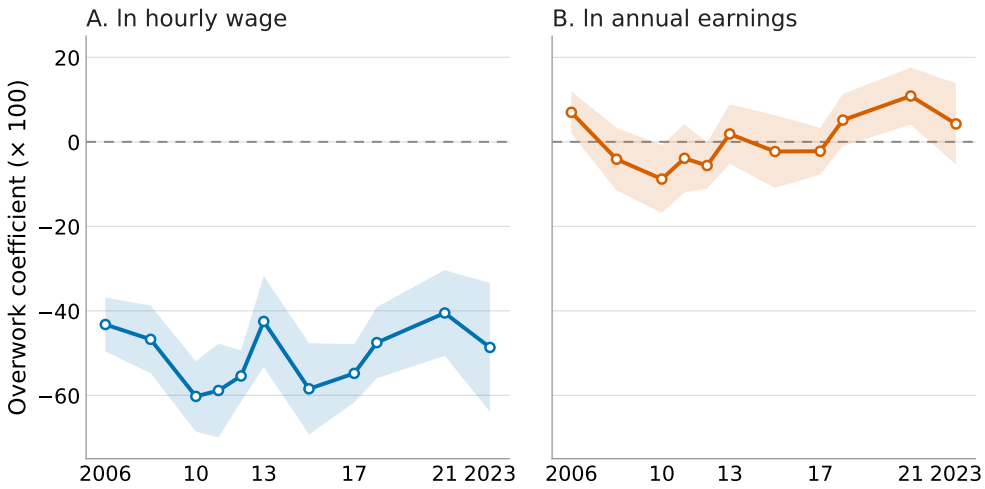

Figure 4: Wave-specific overwork coefficients from M2 among employees, with 95 percent confidence bands: ln hourly wage (Panel A) and ln annual earnings (Panel B). Source: CGSS 2006–2023, weighted; models control for class, education, age and its square, gender, hukou status, urban residence, wave dummies, and province fixed effects, with province-clustered standard errors.

H2b holds in its central predictions—a persistent penalty, significantly deeper for blue-collar employees—though not in the literal expectation of a flat trend: as the *Subperiod Tests: A Rebound Without Elitization, a Narrowing Penalty Without a Premium* section shows, the penalty narrowed partially after 2010 while remaining large and negative throughout. Where American overwork became a well-paid signal of professional commitment, the Chinese pattern is consistent with limited worker discretion over long hours and little evidence of compensating annual earnings, especially among classes with less workplace bargaining power.

The State-Sector Differential, Large and Persistent

Sector of employment is strongly associated with working time in the analytic sample. Descriptively, in 2006 the overwork rate was 44.1 percent inside the state sector versus 74.0 percent outside; in 2023 the figures were 33.3 and 60.1 percent. In the M3 triple-interaction model among employees, state-sector employment is associated with a 17.8-percentage-point lower probability of overwork for the reference category—manual workers in 2006–2012—net of covariates ($p < 0.001$), a differential as large as the entire managerial-professional class gap. The association is weakest precisely for the most advantaged: the state-sector differential is 10.1 points smaller for managers and professionals than for manual workers ($p = 0.004$), so class gradients are flatter inside the state sector than outside it. Most importantly for the production-regime hypothesis, the class-by-sector pattern shows no evidence of change across the 2006–2012, 2013–2018, and 2021–2023 periods: the joint test of the triple interaction is far from significance ($\chi^2(6) = 5.20$, $p = 0.519$; wild cluster bootstrap $p = 0.669$). The differential is also not a byproduct of the sectors' different industry mixes: adding industry fixed effects, available from 2010 onward, moves the state-sector coefficient from −18.2 to −18.0 percentage points (see the *Robustness*

section). One caveat belongs on the record: the final period is thinly populated in some cells—the 2021–2023 state-sector service-and-sales cell holds only 89 workers—so the stability test has limited power against a late reconfiguration of that specific corner. All three components of H3 are consistent with the evidence, with the caveat that the stability component rests on a failure to reject rather than a bounded null.

Subperiod Tests: A Rebound Without Elitization, a Narrowing Penalty Without a Premium

The preceding sections rest on comparisons against a baseline wave and on full-period linear trends, both of which can conceal a decline followed by a rise—and the descriptive series suggests exactly that: a trough in incidence around 2015 and a peak in the hourly penalty around 2010. Because the interval after the mid-2010s is also when 996 became salient, these subperiods are where the beginnings of an elitization of Chinese overwork would first appear. This section estimates the nonlinear patterns directly, using the covariate-adjusted two-wave contrasts, segmented models, and quadratic interactions of the *Models* section. Table 4 reports the estimates, and Figure 5 shows the flexible wave-specific series that motivate them.

The post-2015 rebound in incidence is real. In the covariate-adjusted contrast, the probability of overwork rose by 6.05 percentage points between 2015 and 2021 (95 percent CI [3.3–8.8], $p < 0.001$); the segmented model estimates a post-2015 slope of +0.56 points per year against a pre-2015 slope of −0.21, a slope break of +0.77 points per year ($p = 0.005$). The rebound extends, attenuated, to the extreme-hours margin (+3.64 points at 55 hours, $p = 0.007$). But it does not establish a durably higher level: the adjusted 2015–2023 change is +2.76 points and insignificant ($p = 0.241$). The rebound is concentrated in the pandemic-fielded 2021 observation; whether it marks a new working-time pattern or a pandemic-period fluctuation, the 2023 wave cannot yet say.

What the rebound is not, on any reading, is a migration of overwork up the class structure. Managers and professionals participated—their adjusted 2015–2021 increase is +6.20 points ($p = 0.055$)—but manual workers rose at least as much (+8.46 points, $p = 0.003$), and the change in the managerial-professional gap with manual workers is −3.68 points ($p = 0.391$): toward more separation, not less, though imprecisely estimated. By 2023, the adjusted managerial-professional change from 2015 was +3.52 points ($p = 0.529$), and the gap change −2.82 ($p = 0.646$). At 55 hours, the corresponding managerial-professional change is +1.91 points ($p = 0.599$) and the gap change −4.13 ($p = 0.383$). Quadratic class-by-time interactions detect no class curving away from the others (joint Wald $\chi^2(5) = 2.70$, $p = 0.746$), and segmented models of the managerial-professional gap find no significant post-2015 slope change ($p = 0.346$). The rebound, in short, was not an elite-specific shift: professionals participated, but manual workers rose at least as much, and hours were not redistributed toward the top.

The wage side shows the clearest nonlinearity in the article and partially revises *An Overwork Penalty, Not an Overwork Premium* section's endpoint reading. The hourly penalty followed a V: −0.43 in 2006, −0.60 in 2010, then narrowing to −0.41

Table 4: Subperiod Contrasts and Segmented Estimates for Nonlinear Change.

Contrast	Estimate	95% CI	p
Panel A: Overwork Incidence (Percentage Points)			
Overall, 2015–2021	+6.05† (1.42)	[3.28 to 8.83]	<0.01
Overall, 2015–2023	+2.76 (2.35)	[−1.85 to 7.37]	0.24
Managers & professionals, 2015–2021	+6.20 (3.23)	[−0.13 to 12.54]	0.06
Manual workers, 2015–2021	+8.46† (2.81)	[2.95 to 13.97]	<0.01
Change in MgrProf-manual gap, 2015–2021	−3.68 (4.29)	[−12.10 to 4.73]	0.39
Pre-2015 slope (pp per year)	−0.21 (0.16)	[−0.53 to 0.11]	0.19
Post-2015 slope (pp per year)	+0.56† (0.18)	[0.21 to 0.91]	<0.01
Post- vs pre-2015 slope change	+0.77† (0.28)	[0.23 to 1.31]	<0.01
Overall 55+ hours, 2015–2021	+3.64† (1.35)	[1.00 to 6.29]	<0.01
Panel B: Overwork Coefficient, ln Hourly Wage (Log Points)			
All employees, 2010–2018	+0.127* (0.055)	[0.019 to 0.235]	0.02
All employees, 2010–2021	+0.197† (0.060)	[0.080 to 0.314]	<0.01
All employees, 2021–2023	−0.082 (0.094)	[−0.265 to 0.102]	0.38
Post-2010 slope, per year (to 2021)	+0.010† (0.004)	[0.003 to 0.017]	<0.01
Post-2010 slope, per year (excl. 2021; 2023 retained)	+0.006 (0.005)	[−0.003 to 0.015]	0.17
White collar, 2010–2021	+0.246* (0.096)	[0.058 to 0.434]	0.01
Blue collar, 2015–2021	+0.239† (0.070)	[0.102 to 0.376]	<0.01
Annual earnings, all, 2010–2021	+0.197† (0.049)	[0.100 to 0.294]	<0.01
Weekly hours, all, 2010–2021	−0.001 (0.036)	[−0.072 to 0.070]	0.98

Notes: Panel A reports covariate-adjusted two-wave contrasts and piecewise-linear slopes for the probability of working 48+ hours (55+ where indicated). Panel B reports changes in unrestricted overwork-by-wave coefficients and segmented slopes; all segmented wage rows use the same 2010 knot, and the drop-2021 row re-estimates that specification without the 2021 wave (the 2023 wave is retained). Knots are located at observed turning points, so these are descriptive, data-guided checks. All models use normalized survey weights, province fixed effects, the manuscript covariates, and province-clustered standard errors. Positive Panel B values indicate a less negative overwork association. Cluster-robust standard errors, calculated from the reported 95 percent confidence intervals, are in parentheses below estimates.
$^{*}p < 0.05$; $^{\dagger}p < 0.01$ (two-tailed).

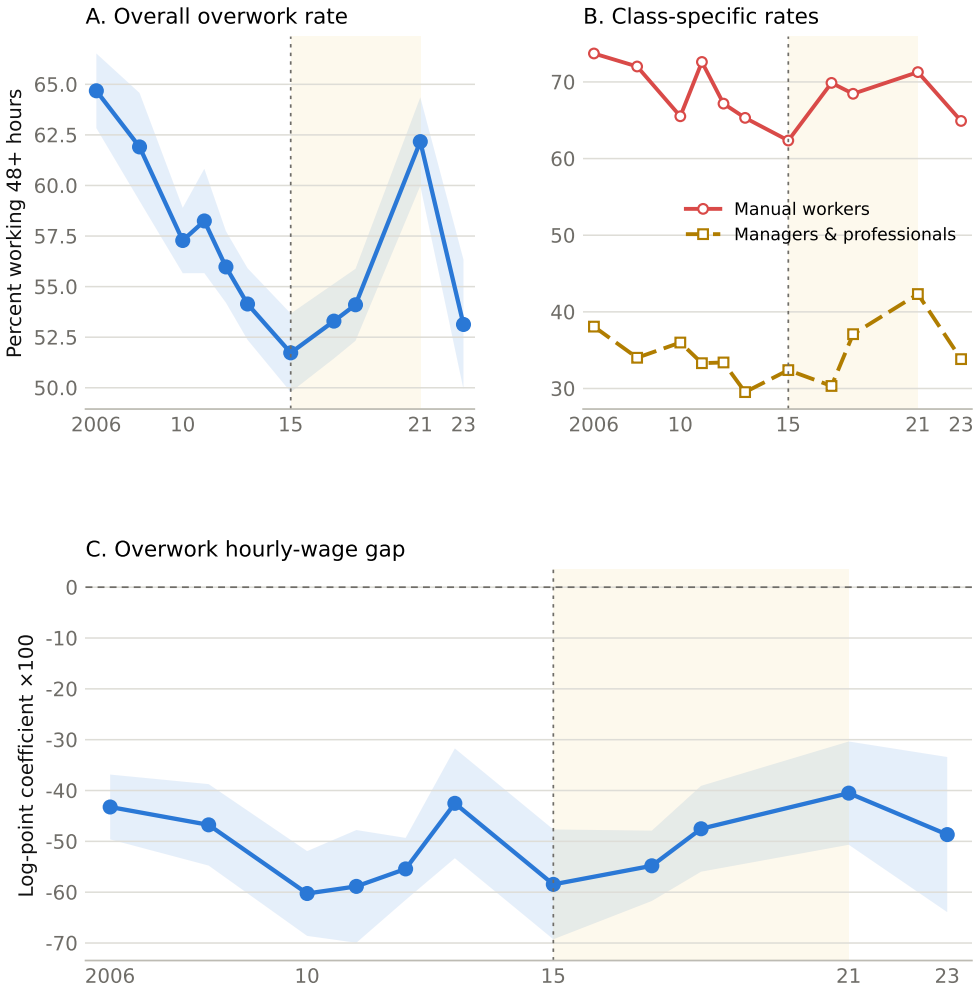

Figure 5: Flexible wave-specific estimates: overwork incidence, class-specific rates, and the adjusted hourly-wage gap, 2006-2023. Panels A and B show weighted descriptive rates, and Panel C shows adjusted overwork-by-wave coefficients from weighted log-hourly-wage models. Shading marks represent 2015–2021, and ribbons represent 95 percent confidence intervals.

by 2021 before an insignificant re-deepening to −0.49 in 2023 (2021–2023: −0.08, p = 0.383). The unrestricted contrasts confirm the narrowing is not a single-wave artifact: 2010–2021 is +0.20 log points (95 percent CI [0.08–0.31], $p < 0.001$), and 2010–2018—no pandemic-era wave—is +0.13 ($p = 0.021$); the segmented model with a knot at 2010 estimates +0.010 per year through 2021 ($p = 0.006$). The decisive sensitivity is the 2021 wave: excluding it, the post-2010 slope stays positive but insignificant (+0.006, 95 percent CI [−0.003 to 0.015], $p = 0.170$), so the strength—though not the direction—of the attenuation depends on the elevated 2021 observation.

The decomposition identifies what moved: annual earnings, not hours. The annual-earnings coefficient rose +0.20 log points from 2010 to 2021 ($p < 0.001$) while the hours coefficient was unchanged (−0.001, $p = 0.981$); 2021 is the one consistently measured wave (2008–2023) in which overworkers earned significantly

more annually (+0.108, $p = 0.002$), an exception gone by 2023 (+0.042, $p = 0.387$). Nor is the improvement a white-collar monopoly: the white-collar hourly coefficient improved +0.25 from 2010 to 2021 ($p = 0.010$) but returned to −0.48 in 2023, while blue-collar employees show a significant 2015–2021 improvement of their own (+0.24, $p < 0.001$). A repricing driven by professional labor markets would look different—concentrated among white-collar employees and persistent.

Two conclusions follow, one for each dimension of elitization. On composition, the subperiod evidence strengthens the null: even in the interval most favorable to the 996 narrative, overwork did not move up the class structure in relative terms. On price, the evidence requires a genuine revision of emphasis: the penalty is not flat—it narrowed by about a fifth of a log point from its 2010 trough through 2021—but the narrowing stopped well short of zero, its persistence beyond 2021 is unproven, and its class profile (shared by blue-collar employees, gone by 2023 among white-collar ones) does not match an emerging professional premium. What the subperiods reveal is movement within the non-elite configuration, not the assembly of an elite one.

Robustness

Table A4 in the online supplement assembles 20 specifications of the gradient and price results.

The composition rows discipline what the *An Overwork Penalty, Not an Overwork Premium* section may claim. The no-closure conclusion is robust: in every specification the class ordering stands and the white-collar gaps remain large; merging the two white-collar employee classes—a check immune to the ISCO-88/08 splice—yields +0.02 points per year ($p = 0.934$). The divergence reading is fragile and I do not lean on it: the semiprofessional/clerical interaction is strongly significant only unweighted (−0.44, $p = 0.005$) and insignificant in most variants, though negative in every 48-hour specification. Three variants show nominally significant managerial-professional convergence—ISCO-88-only waves (+0.84, $p = 0.038$), the 55-hour threshold (+0.55, $p = 0.022$), and core ages 30–54 (+0.62, $p = 0.043$)—but as three hits in a family of 10, none survives multiplicity correction (smallest Holm-adjusted $p = 0.220$; smallest Benjamini–Hochberg q = 0.143). At 55 hours the strongest interaction is service and sales workers' (+0.58, $p = 0.001$), driven by their rising extreme hours (41.7–49.9 percent) against manual workers' falling ones; the professional extreme-hours rate barely moved (20.4–19.9 percent). A 49-hour threshold (excluding the 7.6-percent focal heap at 48) leaves trends unchanged and no white-collar class converging; augmenting 2017–2023 with temporarily absent workers moves the rate by at most 0.6 points; establishment-size and written-contract controls (from 2012) change neither the trends nor the penalty (−0.502 vs. −0.508); and clustering on the 151 sampled counties moves the class-by-year standard errors by less than a fifth.

The price rows admit no such nuance. The penalty survives every variant: at core working ages 30–54 the pooled hourly penalty is −0.49 with all 11 wave coefficients negative and significant; the donut specification returns −0.65 ($p < 0.001$; n = 19,161); the grouped estimator −0.81 to −1.01 ($p < 0.001$); industry fixed effects

leave the pooled penalty at −0.511 against a same-segment baseline of −0.512 and the annual-earnings coefficient null (−0.013, $p = 0.398$). Nor does the penalty depend on the departures from Cha and Weeden's measurement cataloged in the *Hourly Wages and the Division-Bias Problem* section: a specification closer to their threshold and reference category—employees at 35 or more hours, overwork at 50—returns an hourly penalty of −0.40 ($p < 0.001$) and an annual-earnings coefficient of −0.02 ($p = 0.241$) whose CI rules out any compensating premium larger than about 1.5 percent. Across seventeen years of data, under every specification estimated—including the one built to come closest to the American study's thresholds—the hourly price of overwork in China is never positive.

Discussion

Nearly two decades of CGSS data yield a consistent result on both dimensions of the elitization thesis, and the subperiod analysis shows that the result does not depend on flattening the series into a single trend. On composition, overwork never left the bottom of the class structure: the 2006 ordering stood intact in 2023, the upward drift in who the overworkers are is entirely occupational upgrading, and the one genuine mid-series movement—the post-2015 rebound—lifted manual workers at least as strongly as professionals and was not detectably sustained in 2023. On price, overworkers earned 33–45 percent less per hour in every wave; the penalty was not immobile—it deepened to 2010 and recovered about 0.20 log points through 2021—but the recovery stalled well short of zero, reversed insignificantly in 2023, leaned on the pandemic-era 2021 wave, and appeared among blue-collar as well as white-collar employees, unlike the professional repricing that defined the American transition. Seventeen years cannot rule out a reversal still to come—the American repricing itself unfolded over three decades—but they rule out elitization as an automatic companion of upgrading: a period of exceptionally rapid occupational change produced no relative redistribution of hours and, at most, a partial and unstable reduction of the penalty.

These results motivate a distinction the American literature has not needed: between elite and non-elite overwork configurations. In the elite configuration, long hours concentrate at the top and are associated with higher pay (Cha and Weeden 2014; Yu and Kuo 2022, though within-occupation returns are not uniformly positive, Denning et al. 2022). In the non-elite configuration observed here, they concentrate at the bottom and carry a penalty; extending labor process theory to working time, I interpret this as consistent with long hours functioning as a dimension of managerial control where labor is highly substitutable and bargaining power is limited (Braverman 1974; Burawoy 1985). Three institutional features offer a plausible reading of why the configuration persists—an interpretation the design cannot directly test but that organizes the evidence: high-intensity workplace arrangements in private manufacturing integrate extreme hours into the labor process (Lee 1998; Lüthje et al. 2013; Pun 2005), with related mechanisms in internet firms (Zheng and Qiu 2023); prior research suggests that uneven local implementation may reduce the practical force of statutory working-time limits (Lee 2007); and high labor substitutability can keep returns to an additional hour low. Under these

conditions the mechanisms that elitized American overwork—screening, tournament incentives, busyness as status display—remain confined to narrow professional enclaves, and the segmented state sector (Bian 2002; Wu 2019), whose lower long-hours exposure is directly documented (Tsai et al. 2016; Zeng et al. 2025), may cap how far they spread. Elitization, then, is not a stage of (post)industrial development but a configuration: it requires enforced hour limits at the bottom and competitive professional labor markets at the top, and where either is missing, overwork may remain concentrated among non-elite classes.

The one class moving against the current is instructive. Service and sales workers—66.7 percent overworked in 2023, the highest rate among employees—are the only group trending toward and past manual workers, significantly so at 55 hours (+0.58 points per year, $p = 0.001$). The period covers the rapid growth of platform-mediated retail, delivery, and ride services, sectors that combine piece rates, algorithmic scheduling, and digitally mediated incentive mechanisms in ways that may extend related high-intensity work arrangements beyond the internet firms studied by Zheng and Qiu (2023). The CGSS cannot isolate platform workers, so this reading is suggestive rather than demonstrated; platform-mediated service work is therefore an important setting for future investigation.

The subperiod analysis also identifies the limited respects in which the 996 interpretation receives support: incidence did rebound after 2015, professionals participated, three robustness variants show nominally significant managerial-professional convergence, and the penalty did narrow after 2010—movements a flat-trend summary would miss. But each concession is bounded. The rebound was not disproportionately professional—point estimates for semiprofessional and service employees were even negative—and was not detectably sustained in 2023; the convergence signals do not survive multiplicity correction and the strongest comes from waves ending in 2015, before 996 became a public controversy; the penalty's narrowing stalled far from zero, hinged on the 2021 wave, and was shared by blue-collar employees; and the professional extreme-hours rate itself barely moved. The aggregate evidence therefore qualifies a generalized reading of the 996 discourse: the pattern is better understood as a visible episode at the extreme-hours tail—and a partial, possibly temporary, repricing—within a non-elite configuration whose class pattern remained stable.

Six limitations bound these conclusions. First, the CGSS is a repeated cross-section: trends are population-level, and compositional change within classes cannot be separated from within-person change. Second, the analysis conditions on employment, which itself contracted (67 percent of respondents aged 18–64 in 2006 to 56 percent in 2021); if selection into employment differs by class, trend estimates partly reflect who remains employed. The core-working-age specification, which strips the margins where selection is strongest, leaves the penalty intact in all waves and the gradient unconverged. Third, hours are self-reported; classical measurement error would attenuate gradients rather than manufacture them, but reporting cultures may differ across classes. Fourth, the 2023 endpoint rests on a small in-person subsample (n = 1,226), and the 2021 wave was fielded under pandemic conditions; the two most recent observations are thus the least certain, which is why the subperiod conclusions of the *Subperiod Tests: A Rebound Without Elitization,*

a Narrowing Penalty Without a Premium section are stated conditionally. Fifth, the hourly wage divides annual earnings by current weekly hours, so the hourly point estimates should be read as upper bounds on the penalty's depth; the article's central wage evidence therefore stands on the annual-earnings decomposition, which involves no hours-based denominator at all; the grouped estimator and the donut specification are supporting checks that respectively average away idiosyncratic reporting error and reduce misclassification near the threshold, though both still rely on constructed hourly wages. Sixth, the wage estimates are associations, not causal prices: if workers with lower unobserved earning capacity select into long hours, overwork could show no annual-earnings offset even where marginal hours are paid. The cross-national contrast survives this: the American benchmark rests on the same repeated cross-sectional design, so the aggregate premium-there/penalty-here contrast holds unless selection differs between the two labor markets on a scale spanning the full gap, and the trend conclusions require only that selection be stable over time.

The agenda that follows is comparative and temporal. If this institutional interpretation is correct, comparable non-elite patterns may be observed where high-intensity production arrangements, uneven implementation of labor standards, and high labor substitutability coincide, and may weaken where those conditions change. Within China, the post-2015 rebound and the post-2010 narrowing of the penalty mark the margins to watch: panel data that can follow workers across sectors, and surveys that can see platform work directly, would show whether these movements are the beginning of a new working-time configuration or fluctuations within the existing one.

References

Bian, Yanjie. 2002. "Chinese Social Stratification and Social Mobility." *Annual Review of Sociology* 28:91–116. https://doi.org/10.1146/annurev.soc.28.110601.140823

Bian, Yanjie and Lulu Li. 2012. "The Chinese General Social Survey (2003–8): Sample Designs and Data Evaluation." *Chinese Sociological Review* 45(1):70–97. https://doi.org/10.2753/CSA2162-0555450104

Braverman, Harry. 1974. *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*. New York: Monthly Review Press. https://doi.org/10.14452/MR-026-03-1974-07_1

Burawoy, Michael. 1979. *Manufacturing Consent: Changes in the Labor Process under Monopoly Capitalism*. Chicago: University of Chicago Press.

Burawoy, Michael. 1985. *The Politics of Production: Factory Regimes under Capitalism and Socialism*. London: Verso.

Cameron, A. Colin, Jonah B. Gelbach, and Douglas L. Miller. 2008. "Bootstrap-Based Improvements for Inference with Clustered Errors." *Review of Economics and Statistics* 90(3):414–27. https://doi.org/10.1162/rest.90.3.414

Cha, Youngjoo and Kim A. Weeden. 2014. "Overwork and the Slow Convergence in the Gender Gap in Wages." *American Sociological Review* 79(3):457–84. https://doi.org/10.1177/0003122414528936

Denning, Jeffrey T., Brian A. Jacob, Lars J. Lefgren, and Christian vom Lehn. 2022. "The Return to Hours Worked within and across Occupations: Implications for the Gender Wage Gap." *ILR Review* 75(5):1321–47. https://doi.org/10.1177/00197939211045376

Erikson, Robert and John H. Goldthorpe. 1992. *The Constant Flux: A Study of Class Mobility in Industrial Societies*. Oxford: Clarendon Press.

Firebaugh, Glenn. 1997. *Analyzing Repeated Surveys* (Quantitative Applications in the Social Sciences 07-115). Thousand Oaks, CA: Sage. https://doi.org/10.4135/9781412983396

Ganzeboom, Harry B. G. and Donald J. Treiman. 1996. "Internationally Comparable Measures of Occupational Status for the 1988 International Standard Classification of Occupations." *Social Science Research* 25(3):201–39. https://doi.org/10.1006/ssre.1996.0010

Gershuny, Jonathan. 2005. "Busyness as the Badge of Honor for the New Superordinate Working Class." *Social Research* 72(2):287–314. https://doi.org/10.1353/sor.2005.0026

International Labour Office. 2012. *International Standard Classification of Occupations: ISCO-08. Vol. 1, Structure, Group Definitions and Correspondence Tables*. Geneva: International Labour Office.

Jacobs, Jerry A. and Kathleen Gerson. 2004. *The Time Divide: Work, Family, and Gender Inequality*. Cambridge, MA: Harvard University Press. https://doi.org/10.4159/9780674039049

Kuhn, Peter and Fernando Lozano. 2008. "The Expanding Workweek? Understanding Trends in Long Work Hours among U.S. Men, 1979–2006." *Journal of Labor Economics* 26(2):311–43. https://doi.org/10.1086/533618

Labor Law of the People's Republic of China. 1994. Adopted by the Standing Committee of the National People's Congress, July 5, 1994; effective January 1, 1995. [In Chinese]

Lee, Ching Kwan. 1998. *Gender and the South China Miracle: Two Worlds of Factory Women*. Berkeley: University of California Press. https://doi.org/10.1525/9780520920040

Lee, Ching Kwan. 2007. *Against the Law: Labor Protests in China's Rustbelt and Sunbelt*. Berkeley: University of California Press. https://doi.org/10.1525/9780520940642

Lee, Sangheon, Deirdre McCann, and Jon C. Messenger. 2007. *Working Time Around the World: Trends in Working Hours, Laws and Policies in a Global Comparative Perspective*. London and Geneva: Routledge and International Labour Office.

Li, Ding, Yaojun Zhang, Xiwei Wu, and Danlin Yu. 2021. "Policy Implementation and Market Segmentation: A Study of the Heterogeneous Long-Term Effects of the Labor Contract Law." *Open Times* (5):174–93. [In Chinese]

Liu, Ming and Yunqiao Chen. 2025. "Blessing or Curse? Recontextualizing '996' in China's Overwork Debate." *Critical Discourse Studies* 22(1):91–107. https://doi.org/10.1080/17405904.2023.2289448

Lüthje, Boy, Siqi Luo, and Hao Zhang. 2013. *Beyond the Iron Rice Bowl: Regimes of Production and Industrial Relations in China*. Frankfurt: Campus Verlag.

Mincer, Jacob. 1974. *Schooling, Experience, and Earnings*. New York: National Bureau of Economic Research.

National Survey Research Center, Renmin University of China. 2006–2023. *Chinese General Social Survey (CGSS), Waves 2006–2023* [datasets]. Beijing: Chinese National Survey Data Archive (cnsda.org).

Pega, Frank, Bálint Náfrádi, Natalie C. Momen, Yuka Ujita, Kai N. Streicher, Annette M. Prüss-Üstün, Alexis Descatha, Tim Driscoll, Frida M. Fischer, Lode Godderis, Hannah M. Kiiver, Jian Li, Linda L. Magnusson Hanson, Reiner Rugulies, Kathrine Sørensen,

and Tracey J. Woodruff. 2021. "Global, Regional, and National Burdens of Ischemic Heart Disease and Stroke Attributable to Exposure to Long Working Hours for 194 Countries, 2000–2016: A Systematic Analysis from the WHO/ILO Joint Estimates of the Work-related Burden of Disease and Injury." *Environment International* 154:106595. https://doi.org/10.1016/j.envint.2021.106595

Pun, Ngai. 2005. *Made in China: Women Factory Workers in a Global Workplace*. Durham, NC: Duke University Press. https://doi.org/10.1215/9780822386759

Schor, Juliet B. 1991. *The Overworked American: The Unexpected Decline of Leisure*. New York: Basic Books.

State Council of the People's Republic of China. 1995. Provisions of the State Council on Working Hours of Employees. State Council Decree No. 174, revised March 25, 1995; effective May 1, 1995. [In Chinese]

Thompson, Paul, and Chris Smith. 2009. "Labour Power and Labour Process: Contesting the Marginality of the Sociology of Work." *Sociology* 43(5):913–30. https://doi.org/10.1177/0038038509340728

Tsai, Ming-Chang, Michio Nitta, Sang-Wook Kim, and Weidong Wang. 2016. "Working Overtime in East Asia: Convergence or Divergence?" *Journal of Contemporary Asia* 46(4):700–22. https://doi.org/10.1080/00472336.2016.1144778

Wright, Erik Olin. 1985. *Classes*. London: Verso.

Wright, Erik Olin. 1997. *Class Counts: Comparative Studies in Class Analysis*. Cambridge: Cambridge University Press.

Wu, Xiaogang. 2019. "Inequality and Social Stratification in Postsocialist China." *Annual Review of Sociology* 45:363–82. https://doi.org/10.1146/annurev-soc-073018-022516.

Wu, Xiaogang and Yu Xie. 2003. "Does the Market Pay Off? Earnings Returns to Education in Urban China." *American Sociological Review* 68(3):425–42. https://doi.org/10.2307/1519731

Xie, Yu and Xiang Zhou. 2014. "Income Inequality in Today's China." *Proceedings of the National Academy of Sciences* 111(19):6928–33. https://doi.org/10.1073/pnas.1403158111

Yang, Heqing, Feixue Han, and Hongmei Xiao. 2009. "Beijing Diqu Yuangong Guodu Laodong Zhuangkuang de Diaocha Yanjiu [A Survey of Employee Overwork in the Beijing Area]." *Renkou yu Jingji [Population & Economics]* (2):33–41. [In Chinese]

Yu, Wei-hsin and Janet Chen-Lan Kuo. 2022. "Time Is Money? Wage Premiums and Penalties for Time-Related Occupational Demands." *American Journal of Sociology* 128(3):820–65. https://doi.org/10.1086/722963

Zeng, Xiangquan, Zhi Jiang, Yuxia Zhang, and Shutong Chen. 2025. *Short Hours of Work, Long Hours of Work, and Work Hours Mismatch in China's Labor Market: From the Perspective of High-Quality and Full Employment*. Geneva: International Labour Office. https://doi.org/10.54394/GEGW2758

Zheng, Xiaojing and Zitong Qiu. 2023. "The 996 Working Pattern in Chinese Internet Firms: How Hegemonic Despotism Promotes Long Working Hours for Employees." *China Perspectives* 134:67–78. https://doi.org/10.4000/chinaperspectives.15869

Acknowledgments: The author sincerely thanks Editor-in-Chief Ari Adut, the Deputy Editor, and the anonymous external reviewers for their careful reading and constructive suggestions. The author also thanks the Sociological Science editorial and production team for their meticulous work; the Chinese General Social Survey (CGSS) team at the National Survey Research Center, Renmin University of China, for making the data used in this study available; and Professor Hongshan Lü for his invaluable guidance throughout the research.

Funding: This research received no external funding.

Chen Ouyang: School of Marxism, Huazhong University of Science and Technology. E-mail: m202475410@hust.edu.cn.