Do Unionized Firms Have Better Management Practices?

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Abstract

Using restricted data from the World Management Survey (WMS), we examine the relationship between labor unions and management practices across private manufacturing firms in Latin America, North America, and Europe. While prior research shows that management quality is strongly correlated with firm performance, the role of unions in shaping managerial practices remains unclear. We find that unionized firms are significantly better managed overall. However, this aggregate relationship masks substantial heterogeneity across different management domains. Firms with higher union rate score lower on *People Management* practices, reflecting constraints on hiring, promotion, and dismissal, but score markedly higher on *Operations*, *Monitoring*, and *Target-setting* practices. These patterns suggest that unions are associated with the adoption of more structured performance systems while limiting managerial discretion in personnel management.

Keywords: Labor unions; Management practices; Firm performance; Workplace organization; Industrial relations; World Management Survey

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1 Introduction

In the era of the postwar social contract, as industrial relations stabilized in many advanced economies, labor unions served as powerful agents for improving wages, job security, and job quality for both union and non-union workers. Unions also played a pivotal role in securing legislated labor protections including overtime rules, family and medicare leave, and workplace safety and health as well as in enforcing those rights on the job Kochan and Kimball (2019). However, this institutional landscape has changed significantly, especially in private sector. Union density in private sector has declined steadily across OECD countries as represented in Figure(1. This long-run decline raises a fundamental question about the contemporary role of unions within the firms : Are unions losing their crucial role in shaping productivity and organizational performance?

A convincing explanation for this steady decline in union membership highlights the tension between unionization and firm profitability. If unions raises labor costs through wage premiums, the resulting reduction in profits may intensify managerial opposition and employer suppression activities including implicit promises of benefits for refusing unionization and unfair labor practices (Freeman (1985) , Fiorito and Maranto (1987). In addition, workers may demand unions less when union-provided services are considered as less valuable or when pay and job security , a key components of job satisfaction, are already sufficiently high (Farber and Krueger (1992). While union density remains high is small number of countries such as Sweden, Denmark, and Island, the global trend is unequivocally downward. Understanding whether this decline imply a reduced role of unions in productivity growth requires investigating wages and employment outcomes, as well as the internal organization of production and managerial practices within the firms.

Prior studies show that management practices are strongly correlated with firms performance and productivity (Bloom and Van Reenen (2007) ; Bloom et al. (2014) ; Alexopoulos

and Tombe (2012)). They highlight substantial cross-firm and cross-country variation in management quality and its strong association with productivity outcomes. However, the role of labor unions in shaping the adoption and composition of these management practices remains underexplored. This gap in the literature is crucial as unions may affect productivity through multiple channels.

On the one hand, unions may raise productivity through price-theoretic channels, as higher labor costs induce firms to adopt more capital intensive technologies. Unions can also improve productivity through collective voice by reducing turnover, improving personnel policies, facilitating communications between workers and management (Freeman and Medoff (1984) ; Freeman (1985)), and increasing workers' perceived job security and trust in management (Newman et al. (2018)). On the other hand, unions may limit productivity growth by wage compression, distorted hiring which lead to profit reduction (Clark (1984)). Taken together, these evidence speak to the productivity conseqwuences of unions depend critically on how unions interact with managerial choices inside the firms.

This union-management interaction is central to industrial relations research. The economic effects of unionization vary with workplace climate, labor-management policies, and the quality of labor-management relationships (Katz et al. (1983);Hirsch (2017)). In unionized establishments, workplace practices are negotiated or constrained through formal and informal bargaining. Harmonization between workers and managers therefore, is a crucial element for determining whether management innovations induce productivity gains. To illustrate, unionized firms adopting participatory human resource practices along with incentive-based compensation exhibit higher productivity growth than non-unionized firms (Black and Lynch (2001)) but adversarial labor relations may induce managerial suppression tactics that reduce long-run firm performance (Hunt and White (1985);Thomason and Pozzebon (1998)).

Despite these competing mechanisms, empirical evidence on the relationship between unionization and management practices remains limited. In this paper, we study how unions shape the adoption and composition of management practices using restricted panel data from the World Management Survey (WMS). Analyzing more than 10,000 private manufacturing firms across Latin America, North America, and Europe, we find that unionized firms are , on average, better managed overall. However, this aggregate relationship masks important heterogeneity across management practice domains. Unionized firms score lower on *People Management* which includes constrains on managerial discretion in hiring , promotion , and dismissal, but score higher on the domain of *Operations Management*, *Monitoring Management*, and *Target Setting Managment*. This finding highlights that unions can promote structured performance system while limiting flexibility in personnel management , helping reconcile mixed evidence on unions and productivity by emphasizing shifts in the type of management practice adopted rather than uniform changes in overall management quality.

2 Data

The main data source that we use is the restricted panel data from the World Management Survey (WMS), which applies the standardized interview-based methodology introduced in Bloom and Van Reenen (2007). The WMS evaluates management practices using a scoring system ranging from 1 ("worst practice") to 5 ("best practice") across 18 distinct management practices. A detailed description of the survey question is provided in Table 7.

Interviews are conducted with senior plant-level managers who are sufficiently involved in day-to-day operations to provide accurate information, yet senior enough to possess a comprehensive overview of organizational practices. Interviewers are MBA-trained individuals with prior business and interview experience, mostly from top U.S. or European universities

in each surveyed country.

The WMS employs a double-blind survey design to minimize measurement bias. Interviewers receive only basic firm information such as firm name, industry, and contact details prior to the interview, while managers are not informed that their responses are being numerically scored. Rather than closed-ended questions, interviewers pose open-ended prompts such as, "Can you describe how production performance is monitored in your plant?" This approach elicits concrete examples of managerial behavior, allowing interviewers to assign scores based on observed practices rather than self-reported claims.

Management practices are grouped into four core domains that are closely linked to manufacturing productivity and were selected collaborated with leading international management consultancies. The first domain, *Operations*, captures the extent to which firms have implemented modern manufacturing techniques. The second domain, *Monitoring*, captures how effectively firms track performance indicators and use this information for continuous improvement. The third domain, *Target-setting*, evaluates whether firms establish clear and coherent goals and align them with appropriate short and long term horizons. The last domain, *People Management*, assesses whether firms systematically reward and promote high-performing employees, address underperformance, and retain top talent through formal evaluation and incentive systems.

Concerns regarding the internal and external validity of WMS measures have been extensively examined. Bloom et al. (2015) addresses external validity by demonstrating that WMS management scores are strongly and consistently correlated with total factor productivity (TFP), profitability, sales growth, market-to-book ratios, and firm survival across regions. Further, internal validity is asssessed through repeated interviews with different managers within the same firms, conducted by different interviewers, which produces highly consistent

scores. A related concern is whether the WMS may emphasize productivity enhancing practices at the expense of worker well-being, but higher WMS management scores are positively associated with measures of work-life balance and family-friendly workplace policies (Bloom et al. (2014)).

The dataset covers manufacturing firms in 20 countries across North America, Latin America, and Europe from 2002 to 2014. Firms are randomly sampled and range widely in size, employing between 1 and 65,682 workers. Table 1 reports the sample composition by country and summarizes union density, measured as the percentage of unionized workers within each firm as well as average management scores.

Table 2 presents averages of management practices, union density, and firm characteristics across continents. Average management scores are highest in North America (3.282) and lowest in Latin America (2.721), with Europe falling in between (2.966). This is consistent across all four management domains: operations, monitoring, target setting, and people management. In contrast, union density is highest in Latin America (53.34 percent) and lowest in North America (19.97 percent). Across regions, managers are substantially more educated than non-managerial workers. In Latin America, approximately 71 percent of managers hold a college degree, compared with about 58 percent in North America and 56 percent in Europe, whereas only around 10–13 percent of non-managers have completed college. Multinational affiliation is considerably less prevalent in Latin America (27.8 percent) than in North America (53.2 percent) and Europe (51.2 percent). Although firm size and age exhibit substantial variation across regions, firms in North America are, on average, larger and older than those in Latin America and Europe.

Table 1: Union Density and Management Score Across Countries

	Sample	Union Density	Management Score
Argentina	566	71.413	2.702
		(28.588)	(0.636)
Brazil	1,060	55.733	2.678
		(39.725)	(0.648)
Canada	419	38.616	3.145
		(40.424)	(0.623)
Chile	607	46.477	2.752
		(35.592)	(0.584)
Colombia	170	5.224	2.578
		(19.678)	(0.544)
France	657	12.905	3.027
		(20.548)	(0.643)
Germany	574	32.354	3.206
		(26.975)	(0.594)
Great Britain	1,486	25.198	3.034
		(31.508)	(0.637)
Greece	581	33.826	2.716
		(41.831)	(0.702)
Italy	516	43.521	3.004
		(30.608)	(0.576)
Mexico	521	58.146	2.903
		(35.529)	(0.653)
Nicaragua	97	22.082	2.397
		(33.634)	(0.543)
Northern Ireland	135	24.237	2.840
		(33.056)	(0.778)
Poland	348	21.718	2.893
		(26.340)	(0.637)
Portugal	377	22.180	2.824
		(28.070)	(0.620)
Republic of Ireland	161	40.118	2.766
		(40.829)	(0.769)
Spain	137	28.949	2.745
		(30.570)	(0.624)
Sweden	390	89.571	3.196
		(12.148)	(0.547)
Turkey	329	8.760	2.711
		(25.850)	(0.396)
United States	1,534	14.879	3.320
		(30.355)	(0.653)
Observations	10,665	10,665	10,665

Notes: Entries are means. Standard deviations are in parentheses.

Table 2: Union Density, Management Scores, and Firm Characteristics by Region

	(1) Total	(2) Latin America	(3) North America	(4) Europe
Management	2.955	2.721	3.282	2.966
	(0.669)	(0.634)	(0.650)	(0.644)
Operations	2.901	2.586	3.274	2.941
	(1.039)	(0.979)	(1.096)	(1.001)
Monitor	3.264	3.056	3.555	3.275
	(0.816)	(0.794)	(0.772)	(0.811)
Target	2.875	2.610	3.182	2.910
	(0.789)	(0.749)	(0.776)	(0.768)
People	2.780	2.581	3.138	2.763
	(0.661)	(0.579)	(0.690)	(0.643)
% of Union Members	35.09	53.34	19.97	30.58
	(37.82)	(38.38)	(34.18)	(34.95)
% college degree managers	60.95	71.28	57.73	55.82
	(33.18)	(32.92)	(32.85)	(32.02)
% college degree non-managers	10.61	9.903	13.40	10.17
	(15.81)	(14.76)	(18.11)	(15.57)
Firm Age	45.91	40.94	51.27	46.72
	(39.77)	(29.08)	(41.66)	(43.23)
Employment	688.3	567.2	1155.9	592.4
	(1870.0)	(910.9)	(2715.3)	(1869.7)
Multinational owned	0.448	0.278	0.532	0.512
	(0.497)	(0.448)	(0.499)	(0.500)
Observations	10,665	3,021	1,953	5,691

Notes: Entries are means. Standard deviations are in parentheses.

3 Empirical Strategy

Estimating the effect of union density on management practices has important identification challenges as unionization is not exogenous across the firms and unobserved confounders such as labor market conditions, institutional environments or firm-level characteristics may contemporaneously affect both union formation and managerial choices. To address this concern, we use instrumental variables (IV) strategy as the primal empirical approach. Ordinary Least Squares (OLS) estimates are reported as descriptive benchmarks.

3.1 Baseline Specification - OLS

As a starting point, we estimate the following linear specification:

$$Management_{itsc} = \beta_0 + \beta_1 Union_{it} + A'_{it}\theta + \gamma_s + \tau_t + \rho_c + \varepsilon_{itsc}, \tag{1}$$

where $Management_{itsc}$ denotes the standardized WMS management score of firm i in year t, industry s, and continent c. The management score ranges from 1 (worst practice) to 5 (best practice) and is constructed by averaging responses across 18 management practice questions from the World Management Survey following 7.

The key explanatory variable, $Union_{it}$, captures the union density as the percentage of union members within the firm. The vector A_{it} includes workforce composition (the share of managers and non-managers with a college degree) and firm characteristics (firm age, employment, and multinational enterprise status). All specifications include industry fixed effects (γ_s), year fixed effects (τ_t), and continent fixed effects (ρ_c). Continent fixed effects are used in place of country fixed effects to mitigate multicollinearity concerns arising from the high prevalence of multinational firms in the sample. Standard errors are clustered at the firm level to account for serial correlation. Equation (1) provides a useful benchmark, but the coefficient β_1 may be biased due to endogeneity in which we rely on an IV strategy

for causal interpretation.

3.2 Instrumental Variables Strategy

The main identification strategy instruments firm-level union density using exogenous variation in labor market participation and labor regulation. First, labor market conditions influence union formation as high and rising unemployment weakens worker militancy and reduces unionization (Ashenfelter and Pencavel (1969)). Second, labor regulations (labor law) shape the legal environment for union formation by defining workers' rights, firm obligations, and dismissal costs, thereby affecting both union recruitment and individual membership decisions (Marshall (2005)) .

We use two country-year level instruments. The first instrument is the labor force participation rate ($LFPR_{ct}$), defined as the share of the population aged 15 and above that is either employed or actively seeking employment. This measure is obtained from the World Bank's World Development Indicators (The World Bank (2025)). In the matched sample, labor force participation ranges from 48.21 to 75.71 percent. Higher participation reflects stronger labor market attachment and greater scope for collective organization, increasing the feasibility of union formation.

The second instrument is the Regulation of Collective Dismissals (ROCD), drawn from the OECD Employment Protection Legislation (EPL) database (Organisation for Economic Co-operation and Development (OECD), 2013). ROCD captures the stringency of legal and procedural requirements governing collective dismissals of workers on regular contracts. The index aggregates multiple dimensions of dismissal regulation, including procedural requirements, notice and severance pay, the regulatory framework for unfair dismissal, and enforcement mechanisms. Each component is scored on a scale from 0 (least restrictive) to 6 (most restrictive), with higher values indicating stricter dismissal regulation. In the matched

sample, ROCD ranges from 0 to 4.375.

One of the crucial assumptions of IV strategy, exclusion restriction, requires that labor force participation and collective dismissal regulation affect management practices only through their impact on union density. This assumption is plausible for several reasons. First, both $LFPR_{ct}$ and $ROCD_{ct}$ vary at the country-year level and capture broad labor market and institutional conditions that influence workers' organizational capacity, rather than firm-specific managerial choices, WMS specific management practices measures. Second, the analysis controls for industry, year, and continent fixed effects, absorbing persistent cross-industry differences, common time shocks, and broad regional heterogeneity in management practices. Third, firm-level controls account for workforce composition and organizational characteristics that may directly affect management quality.

Importantly, neither labor force participation nor collective dismissal regulation directly prescribes internal management practices such as monitoring, target setting, or people management. Instead, these instruments primarily affect the bargaining environment between workers and firms, altering the likelihood and strength of union representation. Any remaining direct effect on management practices would therefore operate primarily through unionization.

The IV estimation proceeds in two stages:

$$Union_{it} = \pi_0 + \pi_1 LFPR_{ct} + \pi_2 ROCD_{ct} + A'_{it}\pi + \gamma_s + \tau_t + \rho_c + u_{itsc}, \tag{2}$$

$$Management_{itsc} = \beta_0 + \beta_1 \widehat{Union}_{it} + A'_{it}\theta + \gamma_s + \tau_t + \rho_c + \varepsilon_{itsc}, \tag{3}$$

where $\widehat{Union}_{it}$ is the predicted union density from the first stage. All specifications include the same controls (worker composition level and firm levels controls) and fixed effects as in

the baseline model, and standard errors are clustered at the firm level.

Under the identifying assumption that labor force participation and dismissal regulation affect management practices only through their impact on union density, conditional on controls and fixed effects, the IV estimates recover the causal effect of unionization on managerial practices. The IV results are therefore interpreted as the primary empirical findings of the paper.

4 Results

Table 3: Union Density and Management Practices: OLS Estimates

	(1)	(2)	(3)
Union Rate	0.00086***	0.00094***	0.00045**
	(0.00018)	(0.00018)	(0.00018)
Mean Management Score	2.955	2.955	2.955
Observations	10,753	9,470	8,884
R^2	0.171	0.212	0.276
Industry fixed effects	✓	✓	✓
Year fixed effects	✓	✓	✓
Continent fixed effects	✓	✓	✓
Workforce composition (CM, CNM)		✓	✓
Firm controls			✓

Notes: The dependent variable is the overall management score (scale 1–5). Column (1) reports baseline OLS estimates controlling for industry, year, and continent fixed effects. Column (2) additionally controls for workforce composition, measured by the share of managers and non-managers with a college degree. Column (3) further includes firm characteristics (firm age, employment, and multinational status). Standard errors clustered at the firm level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: Union Density and Management Domains (OLS)

	(1) Operations	(2) Monitoring	(3) Target	(4) People
Union Rate	0.00153***	0.00094***	0.00064***	-0.00049***
	(0.00029)	(0.00022)	(0.00021)	(0.00018)
Mean dep. var.	2.901	3.264	2.875	2.780
Observations	8,879	8,884	8,884	8,884
R^2	0.187	0.241	0.228	0.200
Industry fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓
Continent fixed effects	✓	✓	✓	✓

Notes: Each column reports OLS estimates for a management domain score constructed from World Management Survey questions. All specifications control for workforce composition (shares of managers and non-managers with a college degree) and firm characteristics (firm age, employment, and multinational status). Standard errors clustered at the firm level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Instrumental Variables Estimates of Union Density on Management Practices

	(1) Union Rate	(2) Management
Panel A: First Stage		
Labor force participation rate	0.9277***	
	(0.0850)	
ROCD	2.5503***	
	(0.3850)	
Panel B: Second Stage		
Union Rate (instrumented)		0.0066***
		(0.0011)
Mean Management Score	2.955	2.955
Observations	7,971	7,971
Industry fixed effects	✓	✓
Year fixed effects	✓	✓
Continent fixed effects	✓	✓

Notes: Panel A reports first-stage estimates of firm-level union density on the excluded instruments. Panel B reports second-stage (2SLS) estimates of management practices on predicted union density. All specifications additionally include controls for workforce composition (share of managers and non-managers with a college degree) and firm characteristics (firm age, employment, and multinational status). Standard errors clustered at the firm level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5 Robustness and Sensitivity Analysis

5.1 Model Sensitivity Check: Logit Specification

As a sensitivity check, I assess whether the baseline findings are robust to an alternative econometric specification. While the main analysis relies on linear OLS and instrumental variables regressions, the dependent variable—the management score—is bounded between 1 and 5. To examine whether the results are sensitive to this functional form, I estimate a logit model that focuses on the likelihood of a firm exhibiting relatively high management quality.

Specifically, I construct a binary indicator equal to one if a firm's average management score—computed as the mean of the Operations, Monitoring, Target-setting, and People Management scores—exceeds the sample average, and zero otherwise. This transformation allows the analysis to focus on whether union density is associated with a higher probability of being among better-managed firms, rather than changes in the management score at the mean.

The logit specification includes the same set of covariates as the baseline OLS models: the shares of managers and non-managers with college degrees, firm age, firm size, and multinational enterprise status, as well as industry, year, and continent fixed effects. This ensures that differences across specifications reflect changes in functional form rather than differences in conditioning variables.

The logit estimates indicate that higher union density is associated with an increased likelihood that a firm belongs to the high-management group. The direction and statistical relevance of this association are consistent with the linear probability implications from the OLS framework. As in the OLS results, the estimated association attenuates once multi-

national status is included, which is consistent with the presence of cross-firm knowledge diffusion and network effects among multinational enterprises discussed earlier.

To aid interpretation, I also compute marginal effects from the preferred logit specification. These marginal effects confirm that increases in union density are associated with a higher probability of being a high-management firm, holding other covariates constant.

Although dichotomizing a continuous outcome necessarily sacrifices some variation around the cutoff, the consistency of the results across linear and nonlinear models provides reassurance that the positive relationship between union density and management quality is not driven by functional form assumptions. Taken together, the logit sensitivity check supports the main conclusion that unions are positively associated with the adoption of better management practices.

Table 6: Union Density and High Management Quality: Logit Estimates

	(1) Baseline	(2) Full controls
Panel A: Logit Coefficients		
Union Rate	0.00325***	0.00125*
	(0.00061)	(0.00071)
Constant	−0.468*	−3.532***
	(0.275)	(0.417)
Panel B: Average Marginal Effects (dy/dx)		
Union Rate		0.00023*
		(0.00014)
Observations	10,697	8,822
Industry fixed effects	✓	✓
Year fixed effects	✓	✓
Continent fixed effects	✓	✓
Workforce composition (CM, CNM)		✓
Firm controls		✓

Notes: The dependent variable is an indicator equal to one if a firm's overall management score is above the sample median. Panel A reports logit coefficients. Panel B reports average marginal effects evaluated at observed covariate values. All specifications include industry, year, and continent fixed effects. Firm controls include firm age, employment, and multinational status. Standard errors clustered at the firm level are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

6 Conclusion

Using a rich and unique set of restricted panel data from the World Management Survey in 2002-2014, this paper investigates the effect of union density on managerial practices across more than 10,000 private manufacturing firms in Latin America, North America, and Europe. The analysis emphasize that unionized firms are, on average, better managed overall, even though union presence is associated with weaker People Management practices. This apparent tension is explained by strong positive associations between union density and three other core management domains (Operations, Monitoring, and Target-setting) which more than offset the negative relationship with personnel-related practices.

These findings suggest that unions induce the adoption of more structured, formalized, and performance-oriented management systems, particularly in areas related to operational discipline, performance tracking, and goal-setting. At the same time, unions may restrict managerial discretion in human resource practices such as hiring, promotion and dismissal. From a productivity growth perspective, our findings imply that unions can reinforce firm performance via organizational structure and process discipline, while simultaneously limiting the use of individualized personnel practices. This domain-specific pattern helps reconcile mixed evidence in the existing literature on unions and productivity.

The results underscore the importance of human resource management as a critical margin in union–management relations. Improvements in the design of personnel practices that preserve worker protections while maintaining incentives for performance and talent retention may allow firms to better capitalize on the organizational benefits associated with union presence. In this sense, unions need not be viewed as inherently incompatible with productive management. Instead, impact of union depends on how industrial relations interact with specific managerial practices.

Future research could build on these findings by combining management surveys with richer union- and worker-level data, longitudinal information on organizing activity, or quasi-experimental variation in labor institutions. Such extensions would help clarify the causal pathways through which unions influence managerial choices and firm performance. This paper contributes to the literature by highlighting a nuanced role of unions in shaping management practices and by demonstrating that unionization is associated not with uniformly worse management, but with a reallocation of managerial emphasis across domains that matter for productivity.

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7 Appendix

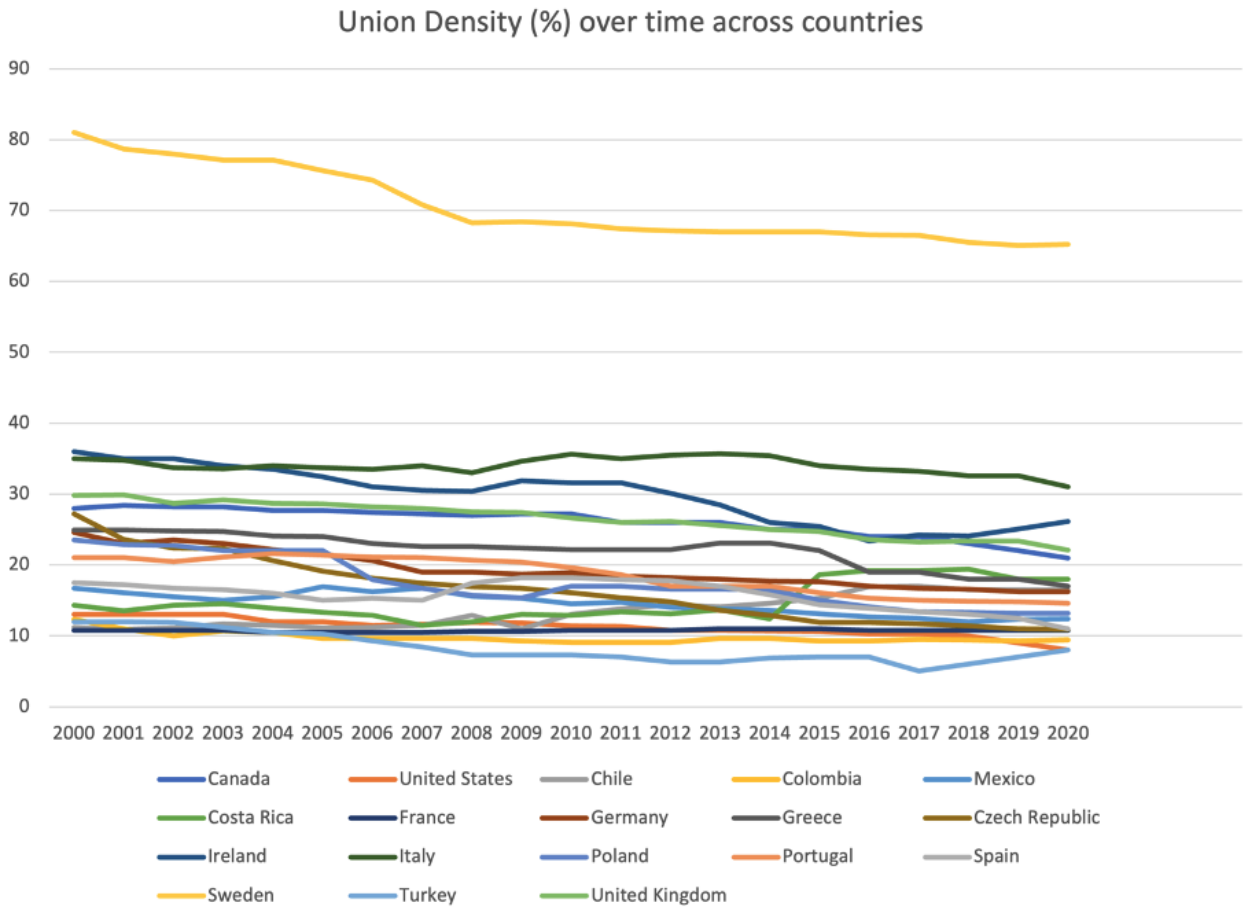

Figure 1: Union Density in OECD countries

Table 7: World Management Survey (WMS) Management Practice Questions

Management Domain	Survey Question Description
Operations Management	
Introducing Lean Techniques	Measures the extent to which lean (modern) manufacturing techniques have been introduced.
Rationale for Lean Adoption	Assesses the motivation for operational changes and the clarity of the change narrative communicated to employees.
Continuous Improvement	Measures attitudes toward continuous improvement and whether lessons learned are systematically captured and documented.
Monitoring Management	
Performance Tracking	Evaluates whether performance is tracked using meaningful metrics and with appropriate frequency.
Performance Review	Measures whether performance outcomes are regularly reviewed and communicated to staff.
Quality of Performance Dialogue	Assesses the quality and constructiveness of performance review conversations.
Consequence Management	Measures whether differences in performance (process- or plan-based rather than personal) lead to differentiated consequences.
Target Management	
Balance of Targets	Evaluates whether targets cover a broad set of metrics and balance financial and non-financial objectives.
Target Alignment	Measures whether targets are clearly linked to organizational objectives and effectively cascaded through the firm.
Time Horizon	Assesses whether firms adopt a multi-horizon (short-, medium-, long-term) approach to planning and targets.
Target Stretch	Measures whether targets are based on sound rationale and are appropriately challenging.
Clarity and Comparability	Evaluates how understandable performance targets are and whether performance outcomes are transparently communicated.
People Management	
Talent Mindset	Measures the emphasis placed on overall talent management within the organization.
Incentives and Appraisals	Assesses whether the firm systematically identifies high and low performers and rewards them accordingly.
Managing Underperformance	Evaluates how effectively the organization addresses persistently poor performance.
Promotion and Development	Measures whether promotions are performance-based and whether talent is actively developed internally.
Employee Value Proposition	Assesses the strength and distinctiveness of the employee value proposition.
Retention of Top Talent	Measures whether the organization makes strong efforts to retain its highest-performing employees.

Notes: Each management practice is scored on a scale from 1 (worst practice) to 5 (best practice) based on open-ended interviews conducted under the World Management Survey methodology (**?**).

Table 8: ROCD Index: Categories and Regulatory Components

Category of Dismissal Regulation	Regulatory Components
Procedural Requirements	Notification procedures required prior to dismissal; mandatory time delay before notice of dismissal can be given.
Notice and Severance Pay	Length of statutory notice period; amount of severance pay required upon dismissal, measured at different job tenure thresholds.
Regulatory Framework for Unfair Dismissal	Definition and scope of unfair dismissal; length of the trial period during which unfair dismissal claims cannot be made; compensation owed to workers following unfair dismissal; possibility of reinstatement after unfair dismissal.
Enforcement of Unfair Dismissal Regulation	Maximum time allowed to file an unfair dismissal claim; burden of proof in dismissal disputes; requirement of ex-ante validation by an external authority; availability of pre-termination resolution mechanisms granting unemployment benefits.

Notes: The Regulation of Collective Dismissals (ROCD) index is constructed using data from the OECD Employment Protection Legislation (EPL) database. Each category is scored on a scale from 0 (least restrictive) to 6 (most restrictive), and the overall ROCD index is calculated as the average of the four category scores. Higher values indicate stricter regulation of collective dismissals.