Workplace Networks and Civil Society Organizations in Autocracies: Evidence from Jordan

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Abstract

Why are some organizations able to develop and sustain autonomy in non-democratic settings? I point to an under-theorized resource: the networks individuals develop working within the autocratic state. Clustered, dense workplace networks facilitate the transformation of individualized grievances into collective political frames and produce the localized participation that sustains autonomy. I field and analyze a networks elicitation survey to formalize how workplace networks differ across similar state institutions in Jordan. I then use interview evidence to trace how different networks allow workers in one sector to sustain organizational autonomy while rendering their peers' organizations susceptible to co-optation and capture. I finally show that workplace ties to recently sanctioned activists are strong predictors of organizational support, even when accounting for alternative resources like Islamist or ethnic networks. This research underscores how even highly visible networks sustain mobilization and the constraints incumbents face when manipulating the state to entrench their power.

1 Introduction

While an expansive research tradition has documented the importance of a robust civil society for democracies (Putnam, Leonardi, and Nanetti 1992; De Tocqueville 1889), autonomous organizations can also strengthen political accountability, improve the quality of government services (Tsai 2007) and contribute to democratization and mass mobilization even in non-democratic settings.[1] Because these organizations can be viewed as a threat to regime stability, incumbents often seek to co-opt and demobilize potentially independent sources of mobilization and claims-making, attempting to "cultivate an organizational ecology favorable to regime survival" (Berman 2018, 2). As a result, many nominally independent civil society actors in authoritarian settings represent the interests of highly embedded organizations or elites (Robertson 2007; Schmitter 1974). Far from engaging in the meaningful interest group representation or staging the contentious protest that reflect autonomy, scholars have shown that autocrats can instead reshape civil society in ways that deepen their own control (Mattingly 2019; Jamal 2009). Yet despite the challenges that repression poses to these actors, surprisingly well-organized, autonomous organizations have played notable roles in recent path-breaking protest waves and political transitions across contemporary autocracies (Havel 2009; LeBas 2006; Cook 2010; Clarke 2014; Bishara 2018, 2020). Why are some organizations, but not others, able to retain their autonomy in repressive autocratic contexts?

One source of strength outside of regimes is thought to come from the networks in which individuals are embedded (McCarthy and Zald 1977; Tilly and Tarrow 2015). Theoretical work has advanced this research by highlighting that some network structures are more useful for mobilization than others, especially in producing collective action in repressive or violent environments (Ohlemacher 1996; Watts and Strogatz 1998; Centola and Macy 2007; Siegel 2009). Empirically-grounded scholarship echoes an emphasis on the structure of social ties when studying how ethnic (Larson and Lewis 2018), kinship and family (Parkinson 2013), or religious networks (McAdam 1983; Munson 2001) influence organizational or movement resilience, even as scholars often lack access to data that allows them to formalize how these networks are structured or how they differ from one another.

I join these scholars in underscoring the importance of networks in civil society autonomy and organizational resilience, but point to an under-theorized setting where individuals

1. This research received IRB approval from MIT's Committee on the Use of Human Subjects in Experimental Research, #2101000302.

can develop them: at work, for the very state they are mobilizing against. As the largest employer in most autocracies, regimes controlling state bureaucracies have the capacity to re-engineer the social networks of those they employ, but can nevertheless struggle to then monitor and control them. Where individuals engage in sustained interaction with their immediate colleagues across dispersed workspaces, state employees become embedded in highly-clustered, dense networks. These networks allow individuals to engage in the sustained conversations that can allow them to collectively connect workplace grievances with political frames. They also produce the high levels of local participation and bottom-up contentious action that can sustain organizational autonomy, even despite the extensive information and non-violent tools regimes can use to control their employees. These autonomous organizations can be highly influential in politically polarized environments where independent civil society organization is rare. Where individuals lack these workplace networks, non-violent tools of personnel management, infiltration and co-optation allow regimes to more effectively demobilize or capture their civil society groups.

I provide evidence for this theory by exploring variation in organization across two sets of frontline state employees in Jordan: workers in education and healthcare. These employees experience similar selection processes and share similar grievances amid ongoing economic liberalization. They also confront similar repressive tools and face the threat of capture in an environment where East Bank tribal actors and the Muslim Brotherhood have dominated oppositional ecologies for decades. But public school teachers have for decades resisted both capture and non-violent efforts at control, such that their efforts to organize have routinely provoked unusually public repression. After winning the right to unionize, teachers have in recent years mobilized across Jordan's principal ideological and ethnic divisions in favor of broadly destabilizing strikes and political action. Their activism centered not only around pocketbook issues, but also high-level corruption, inequality, associational life, and national identity. Teachers stand in stark contrast to workers in the healthcare sector, where extra-institutional activism sporadically occurs, but usually outside of unions re-instated in the 1970s. For much of their histories, these unions have frequently been dominated by larger, polarized parties or networks. While public sector healthcare workers join protest during periods of opportunity like the 2011 Arab Spring, these workers rarely engage in bottom-up or independent collective action during periods of limited opportunity.

I collect and analyze several forms of data to first measure differences in workplace networks across sectors and then to show that advantages in teachers' workplace networks explain their ability to sustain unusual levels of autonomy. In a first empirical section, I

pair evidence from a networks elicitation survey fielded in twenty public schools and healthcare institutions across Jordan with findings from ninety-five interviews with public sector teachers, healthcare workers, activists, and elites. I first show that public sector education and healthcare workers from the same communities have broadly similar attitudes toward their work. Analyzing the findings of the networks elicitation survey, I then present a series of descriptive statistics to show that, when compared with healthcare institutions, public school workplace networks more closely resemble the clustered, dense networks that fit between the empirical typologies of small world or village clique networks (Watts and Strogatz 1998; Siegel 2009; Ohlemacher 1996).

I then trace the pathways through which these workplace networks allow teachers to sustain the autonomy to launch transgressive contentious action, even in periods of limited political opportunity. Routine interaction in highly clustered, dense networks allow teachers to coalesce around frames for their grievances and direct blame toward the central government. Teachers' embeddedness in these networks allows them to produce routine, bottom-up collective action and generates high levels of school-level participation beneficial when organizing and formalizing a national-level movement. Because these networks render more subtle tactics of co-optation, infiltration, or capture less effective, Jordan's regime must often resort to reputationally-costly repression to limit teachers' organization. Healthcare workers more isolated from their immediate colleagues are less likely to coalesce around collective frames or to engage in bottom-up, workplace level activism. As a result, individual healthcare activists who articulate strikingly similar narratives as their counterparts in education must instead rely on political and social networks from outside of their workplaces, limiting their autonomy and lending themselves to capture by elites, ethnic movements, or political parties.

I finally examine a large, observational quantitative dataset to provide micro-level evidence that teachers' workplace networks shape participation supportive of the organization during one indicative repressive episode. The dataset matches the most recent voter file from teachers' union elections, a list of 150 activist teachers sanctioned for their activism in a recent crackdown, and signatures on a public petition supporting teachers' organization circulated in the immediate aftermath of that crackdown. Matching activists and petition signees to their workplaces, I show that the immediate colleagues of repressed activists are significantly more likely to express public support for teachers' activism. I draw on a genealogical resource and introduce novel, highly-disaggregated Jordanian parliamentary election results to show that this relationship remains robust even when accounting for well-known drivers of

mobilization like tribal ethnicity and local Muslim Brotherhood support.

This research makes three primary contributions. First, I underscore the importance of social networks in explaining how autonomous organizations can emerge despite autocrats' efforts to control them (Jamal 2009; Mattingly 2019). By supplementing a formal depiction of network structures with qualitative evidence from movement and organizational participants, I provide detailed evidence of how highly clustered, dense networks (Watts and Strogatz 1998) underpin the formation of autonomous civil society organizations. Amid scholarship highlighting how more fragmented, less visible networks shape the resilience of clandestine organizations (Parkinson 2013; Larson and Lewis 2018; Amat 2023), I show that highly-visible networks are advantageous to organizational resilience when they facilitate collective grievance formation and produce localized bottom-up action and organizational support.

Second, I point to important sources of variation in incumbents' ability to control their bureaucrats and frontline workers. This control is necessary as autocrats task frontline bureaucrats with implementing regime goals. However, while work on bureaucratic control has focused on autocratic management of personnel - for instance, through hiring, firing, and deployment of individual bureaucrats (Rosenfeld 2020; Hassan 2017) – I suggest that managing personnel is insufficient alone. Autocrats seeking to maintain control also need to consider the ways their bureaucrats interact, and how conditions like the built environment or bureaucrats' schedules can further mobilize or demobilize employees. As scholars highlight how autocrats use education as a tool for indoctrination (Paglayan 2021, 2022), this research underscores the need for further scrutiny of how autocrats go about ensuring state workers' - and especially teachers' - compliance.

Finally, I contribute to growing scholarship on the frequency with which "labor market insiders" and public sector workers engage in protest, especially in contemporary autocracies in the Middle East and North Africa. Expanding scholarship on state worker activism rarely scrutinizes why impactful organizations emerge out of some state sectors, but not others (Bellin 2002; Buehler 2015; Barrie and Ketchley 2018; Hertog 2023; Lacouture 2024). I underscore that the long-term effects of state employment manifest not only in altered economic expectations, but also in re-shaping individuals' social and mobilizational networks.

2 Workplace Networks and Civil Society Activism

Why and how are some groups of individuals, but not others, able to develop and sustain autonomous organizations in non-democratic contexts? Civil society groups are those formalized "self-organizing movements, groups, and individuals" developed to collect or act on behalf of a set of individuals (Linz and Stepan (1996) quoted in Mattingly 2019, 6). Though organizations need not have explicitly political aims, civil society autonomy is often linked to a range of political outcomes, from enforcing norms of political accountability to protest mobilization. Unlike social movements, formal civil society organizations develop rules based "procedures and structures" that can ensure interest representation over time and broaden an organizations' mobilizational capacity (Kadivar 2022).

Incumbents prefer to manage and control civil society first and foremost through non-violent measures like co-optation, infiltration, and institutional manipulation. Individually, these measures include the co-optation of movement leaders or the installation of favored personnel (Mattingly 2019). Institutionally, autocrats can use legalistic measures like dictating the acceptable boundaries of representative demands in exchange for formal inclusion (Collier and Collier 2002, 968), structuring representation in ways that guarantee monopolies to favored groups (Schmitter 1974; Bellin 2002), or manipulating electoral institutions as they do autocratic legislatures (Gandhi and Lust-Okar 2009). As Robertson (2007) suggests, autocrats can also allow elites or embedded organizations to capture organizations as part of coalitional or elite bargains, such that mobilization only occurs "when it is in the interest of powerful elements of the elite" (781).

Taken together, these practices demobilize organizations by severing the relationship between groups of individuals and the leaders representing them. Rather than conceding genuine interest-group representation or deploying visible repression, autocrats who use these measures can instead channel demands through vertically-managed civil society organizations divorced from bottom-up accountability. Some autocracies are so successful in these efforts that they are to able use civil society as a vehicle to deepen their own control, as scholars have shown in settings from Palestine (Jamal 2009) to China (Mattingly 2019). Rather than confronting the daunting array of tools autocrats can use to manipulate formal organizations, some movements opt for invisibility (Fu 2018) or avoid formalization altogether (Yom 2022) to ensure minimalist survival, but in ways that ultimately undermine their mobilizational capacity.

And yet, time and again, civil society organizations emerge as genuine vehicles for interest representation resistant to efforts at co-optation and capture. A surprising number of them emerge from a highly unlikely source: within the state itself. In the cases of the 1980 dockworkers who launched the Solidarity Movement in Poland (Osa 2003), the public school teachers at the forefront of mobilization against autocracies in Mexico, Peru and Cuba (Cook 2010; Angell 1982; Suchlicki 1968), and those Egyptian tax collectors who led a drive for independent union leadership in the years preceding the Arab Spring (Bishara 2018), state workers launched bottom-up calls centered on fairly particularistic demands and subsequently established influential organizations channeling interest demands and generating mobilization on a national scale.

Scholars posit a range of explanations for the emergence of these organizations. Public sector workers who are exposed to liberalization (Hertog 2023) may mobilize against autocrats when their interests come under threat (Bellin 2002; Levitsky and Mainwaring 2006). Ideology can inform state workers' mobilization, even as that ideology differs across settings (Cook 2010; Angell 1982; Bishara 2018). Opportunity structures - especially relative to regime fears of the industrialized *private* sector - may allow relatively organizations to emerge from comparatively neglected state workspaces (Bishara 2018). State workers who do protest may be able to leverage certain advantages, especially precious physical and symbolic access to state space (Lacouture 2024). These explanations, while useful, nevertheless provide incomplete answers as to why durable organizations emerge from some segments of the public sector, but not others.

I expand our understanding of why some groups of individuals launch impactful civil society organizations by emphasizing the role of the dense, highly clustered networks that some individuals become embedded in *at work for the state.* Networks are widely thought to be key sources of organizational resilience and autonomy (McCarthy and Zald 1977; Tilly and Tarrow 2015) across contexts. Scholarship on mobilization in repressive or violent environments often locates the source of mobilizationally-useful networks in social institutions where organizations draw on familial or kinship, ethnic, or religious ties (Petersen 2001; Parkinson 2013). These networks are thought to be especially resilient because they sit beyond the reach of their opponents, who struggle to access information necessary to target violence or repression (eg, Parkinson (2013), Larson and Lewis (2018), and Amat (2023)).

The networks of state personnel are visible and penetrable by definition. Indeed, regimes very frequently strategically select individuals for state work so as to deepen their embeddedness in regime patronage networks (Lust 2006), to generate bonds of coercive dependence

(Albertus, Fenner, and Slater 2018), or to cultivate a regime-dependent middle class (Rosenfeld 2020). In addition to the tools incumbents deploy against other actors, they also manage hiring, firing, and employee rotations (Hassan 2020), can infiltrate and directly monitor state workspaces (Rosenfeld 2017) and encourage public employees to report on one another (Forrat 2018). They often explicitly design some state institutions to hedge against defection (Greitens 2016).

But autocrats select, compensate, and monitor state workers while balancing across multiple objectives. When they develop state institutions to provide core services, extract taxes, or even to indoctrinate, autocrats are more likely to use more meritocratic selection procedures than when selecting inner-circle or repressive personnel, from whom they might prioritize loyalty (Egorov and Sonin 2011). For reasons that include architecture, scheduling, gender, workplace size, occupational mixing or hierarchy, and dispersion, the quotidian day-to-day of public sector employees varies dramatically across the state. While some public sector employees frequently engage in sustained interaction with colleagues who become their close friends, others spend their days isolated from one another or from those with whom they have much in common.

Variation in the institutional design of the autocratic state allows some individuals to become embedded in the highly-clustered, dense networks useful for contentious action and resistant to regimes' preferred, top-down efforts to tame civil society. Because individuals are influenced by their immediate peers, network structures can lead to different mobilizational and organizational outcomes even given a similar distribution of individuals who are or are not pre-disposed to participation (Siegel 2009; Tilly and Tarrow 2015). *Clustered* networks are ones where individuals' connections are more likely to be tied to one another (Opsahl 2013). In a network where individuals are nodes and ties represent the connections between them, an individual in a clustered network is more likely to share mutual ties with their connections. These networks are in contrast to those where each individuals' ties are independent of those to whom their connections are connected. *Dense networks* are ones where individuals have relatively short paths to reach one another – in other words, even if any individual does not have a direct tie with someone else in the network, they can reach them by moving through relatively few mutual ties (Watts and Strogatz 1998). Siegel (2009) finds that networks with these empirically common characteristics generate higher levels of aggregate political participation when compared with more hierarchical networks or those where a few elites are dominant (134).

Embeddedness in these clustered, dense workplace networks allows some state employees

to launch and sustain autonomous civil society organizations by facilitating the transformation of individualized grievances into collective political frames and by generating high levels of bottom-up contentious action and localized participation. These high levels of bottom-up contentious action and localized participation are more resistant to regimes' preferred, non-violent efforts to limit accountability between individuals and the organizations representing them via top-down manipulation. Instead, regimes are often left to turn to openly repressive tools to demobilize organizations representing these well-networked groups.

These networks first sustain civil society organization through facilitating collective political frames (Benford and Snow 2000). As frontline workers are citizens with demands for good governance, state work has the potential to shape their attitudes and engagement in civic and political life by positioning them to access politically-relevant information about the nature of governance and service provision (Lipsky 2010).[2] State workers embedded in dense and clustered workplace networks are more likely to engage in extensive conversation about these phenomena that allow them to collectively channel blame onto external actors. In workplaces where quotidian interaction is more rare, hierarchical, or fragmented, proximate colleagues may be similarly aggrieved but more likely to avoid extensive conversation on workplace issues. In these settings, employees may be more likely to shift blame onto one another or to seek solutions within workplace organizational hierarchies, in turn deepening their mutual mistrust.

Beyond these collective frames, these networks sustain civil society organization by generating high levels of localized workplace participation useful in the launch, contagion, and maintenance of mobilization and organization. Highly-clustered, dense workplaces in which co-workers routinely share their views on workplace challenges are more likely to produce bottom-up activism before regime infiltration can occur, even in settings where regimes have very detailed information. Over time, these networks allow any single individual who arrives holding more activist beliefs to travel shorter and more efficient paths to persuade their immediate colleagues to launch activism before a regime can use less-visible tools to sanction the activist. With some workplaces transformed into "enclaves of participation" (Siegel 2009, 130), autocrats often must turn to public, coercive response. Once activism is launched, social norms these dense, clustered workplaces mean that those less-predisposed to activism – so-called "fence-sitters" (Tilly and Tarrow 2015) – are more likely to join calls to participate.

2. This potential for explicitly politicized blame attribution can differentiate movements emerging from state workplaces from those in the private sector but is unlikely to occur in the absence of robust workplace networks.

By contrast, initial activism is unlikely to *launch* from workplaces that lack these advantageous networks, where individual activists with available frames have a more difficult time mobilizing their colleagues. With lower levels of clustering, they must instead mobilize their colleagues one-by-one rather than in small groups. Infiltration will be more effective in de-mobilizing activists before they produce any visible, bottom-up activism. These activists will face sanctions like reshuffling, firing, or arrest without any local, workplace-level public support from their immediate colleagues. Where activism is not launched in the first place and norms undermine workplace participation, co-workers may not even discuss an activists' rumored sanctioning with one another and fence-sitters definitionally do not join ongoing movements.

Beyond supporting the launch and contagion of mobilization, dense, clustered networks can also render regimes' strategies of institution manipulation less effective in demobilizing existing organizations. Activists who can draw on high levels of localized support from their immediate colleagues within these advantageous networks are able to use them to confront the electoral interference that facilitates the capture and co-optation of existing organization. Programmatic activists with local bases of support can succeed in elections against state-sponsored candidates or those who draw on extra-occupational ties. When these activists are sanctioned or repressed, they can credibly threaten strikes and other forms of disruptive mass action. Because dense, highly clustered networks are by definition non-hierarchical, they also reduce the importance of any single activist, allowing organizations to replace co-opted leaders. Taken together, these networks allow organizations to sustain autonomy across periods, limiting regimes' ability to use their preferred, non-violent tools.

Workplaces where networks are more sparse and less clustered are more susceptible regime efforts to limit autonomy by severing the relationships between individuals and the organizations representing them. These organizations are more subject to capture from regime-embedded organizations or movements, who can draw on their extra-occupational ties to win low-turnout elections. Individual, programmatic activists face sanction with little outcry, and regimes are able to use co-optation or infiltration to install leaders who are difficult to replace. Individuals with similar individualized grievances may mobilize during larger protest waves, joining the general population rather than their immediate colleagues. These organizations will feature weaker interest representation and be less likely to engage in independent activism during periods of more limited opportunity.

3 Case and Research Methods: Autonomous Teachers, Captured Healthcare Workers in Jordan

I study how my theory explains why organizations representing public school teachers in Jordan are able to consistently organize activism and retain autonomy even as similarly-positioned healthcare workers are susceptible to co-optation and capture. After mobilizing in 2010, teachers won the right to unionize in 2011 – their formalization marking a rare national, "large-scale organization" (Yom 2022, 153) to emerge out of the Arab Spring. In subsequent years, teachers gradually mobilized across substantive ideological and ethnic divides in favor of broadly destabilizing strikes and political action.

In resisting outright capture from elites, dominant political parties, or ethnic movements and sustaining independent organization, one interviewee told me that a 2019 teachers' strike "set the country on fire," drawing enough popular support that the regime used COVID-19 defense laws to suspend the union in 2020. Locking the union's branches, security services arrested union leadership and up to 1,000 additional teachers. As the remote COVID-19 school year began, the Ministry of Education sent approximately 150 activist teachers to early retirement and the Ministry of Information announced a publication ban on any coverage of teachers' issues in locally-registered media. These efforts to squash teacher protest have been reputationally-costly for Jordan's foreign-aid dependent regime: When Freedom House downgraded Jordan from "Partly Free" to "Not Free" in 2021, it principally cited the regime's visible efforts to repress teachers' organization.[3]

While grabbing headlines recently, teachers' activism has long forced the Jordanian regime into unusually visible repression. Teachers alongside healthcare workers were central players during a period of political instability in the 1950s that ushered in forty years of martial law. Jordan's monarchy then granted other professions organizing rights in the wake of domestic conflict in the 1970s, even as it resisted teachers' efforts to organize. Following the re-introduction of parliamentary elections in 1989, the regime remained staunchly resistant to representation for public school teachers – which remained a central political debate of the era. Amid current repression, during which the teachers' union remains indefinitely suspended, one former Minister of Education referred to the Arab Spring concession to allow teachers a union as a "mistake that we all regret" (Interview 33).

Public school teachers' sustained, autonomous organization stands in contrast to their

3. "Jordan: Freedom in the World 2021," Freedom House, Link.

counterparts in the public healthcare sector. Jordan's regime legally recognized its healthcare unions in the 1970s, but these organizations are often either captured by political parties or ethnic actors or infiltrated by state agencies (Clark 2013). While healthcare workers do join major protest movements - calling strikes during riots in 1989, the 2011 Arab Spring, and in a 2018 national mobilization - these actors are unable to sustain contentious action outside of periods of political opportunity. Healthcare workers' limited response to the repression during COVID-19 is indicative of their broader demobilization. At nearly the same time as its public, costly visible repression of teachers, Jordan's regime was able exploited schisms between the union president and its elected board to appoint its own hand-picked leadership group for the doctors union. This infiltration was costly, even as at elicited almost no public fanfare or response. In the words of one activist, the government-appointed council signed "a raft of paperwork crippling the profession we never would have agreed to and will spend a decade trying to undo" (Interview 85). Another activist lamented that his youth movement had suspended operations after the "kidnapping" of the doctors' union, which had deprived his movement from the "formal cover" it needed to engage with the Ministry of Health (Interview 49). Given this status quo, visible activism from healthcare workers remains limited, emerging around ties made outside of the workplace or from small subsets of employees within a single workplace. Why is Jordan's regime able to capture and co-opt organizations representing healthcare workers, but must resort resorting to attention-grabbing repression to combat teachers' organization?

3.1 Research Methods: Qualitative Interviews, Networks Elicitation Survey, Observational Data on Activism

I selected these cases for comparison as a most-similar systems design (Seawright and Gerring 2008; Slater and Ziblatt 2013). Consistent with the logic of a most-similar comparison, teachers and healthcare workers are similar on a number of dimensions that are often used to explain differences in activism and organization across groups. The section that follows discuss these plausible alternative explanations in more depth. After selecting these cases, I used methods of inductive iteration (Yom 2015) to refine my theory that teachers' more sustained organization is best explained by advantages in their workplace social networks, which grant them the ability to stage recurrent bottom-up mobilization the regime is forced to visibly quash. Inductive iteration involves developing theory based on pre-existing knowledge, and refining theory amid immersion in the data and case. I refined the theory while gathering evidence from ninety-five interviews with teachers, healthcare workers, other pub-

lic sector workers, labor activists, and government officials in-person during ten months in Jordan between August 2021 and February 2023.

In what follows, I pair this interview evidence with data from a short, networks-elicitation survey of 745 public sector employees working in 11 Jordanian schools, 9 health centers, and one hospital in May 2023. Budget constraints prevented me from selecting a representative sample, so I instead selected pairs or triplets of institutions in the same neighborhoods - and frequently right across the street from one another – to ensure the validity of the cross-sector comparison. While seeking national variation across urban/rural, north/south and socioeconomic divides, drawing communities from within the same neighborhoods ensured that these institutions employ from the same labor pool and served comparable populations with similar socioeconomic backgrounds. To elicit workplace networks (Larson and Lewis 2020; Marsden 1990), the survey asked respondents to list the colleagues they would turn to in order to overcome challenges at work, and then to list those with whom they interact most frequently. I use these questions to describe key differences across networks in these sectors, including global clustering (Opsahl 2013), the log-scaled average path length (Watts and Strogatz 1998), and the betweenness centrality (Freeman 1977) of workplace directors (Principals or Directors) within each workplaces. In each institution, non-response of individuals who were present during enumeration was below 10%. To ensure network completeness, we sought to survey a minimum of 80% of employees in each institution.

Beyond these enumeration questions, the short survey featured minimally sensitive questions to be appropriate in the workplace context, beginning with questions on individuals' backgrounds at work, tenure in their workplace, and motivations for employment. Following the network questions, the survey concludes with questions intended to measure bureaucratic attitudes linked to job performance and mobilization, including satisfaction with compensation, collective efficacy, belief in the quality of the institution, belief the sector will improve, and motivation for the work.

In the sections that follow, I first show that existing explanations for the determinants of mobilization are insufficient in explaining this differential autonomy. I then introduce data from the networks elicitation survey alongside my qualitative interviews to formalize differences in workplace social networks, and then to trace how these differences have allowed teachers but not healthcare workers to sustain an autonomous organization rare in contemporary autocracies. In a final section, I use multi-variate regression to show that workplace social ties are strong predictors of individual-level support for activism among teachers.

3.2 Teachers and Healthcare Workers as Controlled Comparison

Teachers and healthcare workers share similarities in how they are selected for their jobs, their experiences at work, and the repressive and institutional contexts they operate in. Hiring processes mean that teachers and healthcare workers are unlikely to be more or less inclined to political participation before entering their jobs. Jordan's Civil Service Bureau manages hiring for the Ministries of Education and Healthcare through relatively transparent, meritocratic processes, such that teachers and healthcare workers are roughly ethnically representative of the communities in which they work.[4] These groups thus differ from some other sectors in the Jordanian state, like the military or intelligence services, where public sector employment can serve as economic redistribution and where East Bank Jordanians are perceived to be over-represented (See Appendix A.2.1, Massad 2001).

Individuals applying for these jobs confront similar constrained choices in a setting of high unemployment. The Civil Service Bureau publishes long wait lists for entry into government work in both professions; private sector education and healthcare workers that I interviewed often voluntarily named their "place in line," which updates regularly on a government website. While national high school exam schools play a key role in determining professional life in Jordan, higher scores on these exams for individuals who become doctors would typically predict higher levels of political engagement (Almond and Verba 2015). Both teaching and healthcare are especially attractive jobs for women in a country that faces - by some measures - the lowest female labor force participation in the world. Survey data reflect these gendered differences; Appendix A.2.2 shows that while female teachers are more likely to reference gender in their career choice than female healthcare workers, male teachers and healthcare workers report similar reasons for selecting their professions.

While on the job, teachers and healthcare workers have similar opportunities to develop resonant, politicized grievances. Both the education and healthcare sector have been impacted by policies of economic liberalization.[5] As Lacouture (2021) details, activists emerging from Jordan's public sector have drawn on this liberalization to make strident critiques of the incumbent around the Arab Spring period. But while individuals activists in both sectors articulate critiques around the misuse of foreign aid and high levels of corruption,

4. This makes these sectors different than in cases like post-Soviet Russia or sites like contemporary Iraq or Lebanon, where elites who manage ministries or industries are able to control employee hiring and then deploy those employees when it is politically convenient (Robertson 2007).

5. Many of the political-economic issues in education and healthcare run in close parallel, as detailed in Appendix A.2.3. These include corruption, extreme centralization, poor infrastructure, overcrowding, and declining public trust in the quality of these services.

only teachers' have been able to consistently organize around these grievances.

Teachers and healthcare workers also share material grievances. The World Bank's cross-national data on bureaucratic pay suggest that healthcare workers are in fact *more* underpaid in Jordan's public sector (Appendix A.2.3). Survey data and interviewees reinforce this cross-national and interview data: Appendix Figure A.6 shows that public healthcare workers are indeed more likely to express dissatisfaction with their compensation than the education workers I surveyed. If material grievances were to explain these outcomes, we would tend to expect greater mobilization from among healthcare workers.

Operating in the same political system, teachers and healthcare workers also confront similar forms of repression and polarization. The Hashemite monarchy that governs Jordan is one of the world's longest-lasting autocracies, having governed Jordan since its creation following World War I. Heavily dependent on foreign aid, the monarchy has historically avoided high levels of repression that could meet with international opprobrium. The institution of the monarchy retains the ability to directly appoint Prime Ministers, cabinet members, and leading personnel of the repressive apparatus, while a parliament with few formal formal legislative powers has come to be viewed primarily as a channel for patronage distribution (Lust 2006; Kao 2015).

The organizational ecology in Jordan has featured remarkable stasis for decades, as East Bank tribal groups and the Muslim Brotherhood remain the primary formal vehicles for claims making and representation. While scholars debate the extent to which either East Bank or Brotherhood activism in Jordan should be viewed as transgressive (Wagemakers 2020; Schwedler 2022), intelligence services intervention have prevented more confrontational Islamist groups from gaining legal footing.[6] In this status quo, more transgressive youth activists chafing against the dominance of East Bank tribal actors have consciously resisted formalization to ensure continued autonomy, but in ways that have limited their long-term impact (Yom 2022).

Organizations representing teachers and healthcare workers both have corporatist monopolies on sectoral representation and technically operate as professional associations. Like parliamentary institutions, their electoral institutions leader to the over-representation of East Bank tribal groupings, and union elections have often produced bodies that reflect capture from the Muslim Brotherhood or tribally backed candidates, or infiltration from

6. "Jordan: Partnership and Salvation Party members threatened, targeted by intimidation campaign," *EuroMed Monitor,* May 10, 2023, https://euromedmonitor.org/en/article/5632/Jordan:-Partnership-and-Salvation-Party-members-threatened,-targeted-by-intimidation-campaign.

candidates backed by the intelligence services (Interviews 12, 20, 22, 26, 27, 40, 49, 55, 58, 68). Capture by these actors proscribes limits on these movements' popularity and their ability to engage in responsive, programmatic activism. While there are some differences in the social benefits distributed by each union that date to organizational incorporation (Clark 2013), teachers' exclusion from legal organizing rights can also be seen as a *product* of these workplace networks, as detailed by historians like Kalisman (2022) and Anderson (2005).

Beyond organizational infiltration and capture, individual activists also confront targeted coercive tools. In addition to arrests, these tools include regularly rotating activists to unfavorable positions (Interview 83), blacklisting activists and their families from public or private employment, and preventing them from gaining licenses to work abroad (Interviews 12, 20, 22). Security services also resort to petty extra-legal tools to block public gatherings, like calling meeting halls and tent companies to block organizers from logistically planning events (Interviews 24 and 68). Finally, teachers and healthcare workers also face the threat of informal, horizontal monitoring from their immediate co-workers, who might report on or sanction their colleagues for speech or activism crossing red lines – especially criticism of the monarchy – chilling the quotidian conversation my theory highlights as foundational to mobilization (Interviews 45, 48, 76, 84, 85, 94, 95).

4 Workplace Networks and Activism from Jordan's Public Sector Workers

Why do teachers and healthcare workers hold such distinct positions within Jordan's organizational ecology, despite these otherwise apparent similarities? I highlight critical differences in the structure of teachers and healthcare workers' workplace networks and the regime's ability to control the activism emerging from them to explain their different roles in Jordan's civil society landscape.

These opportunities stem from a bundle of workplace differences that, in aggregate, produce divergent social networks. These differences include not only relative occupational homogeneity and relative dispersion of the teaching workforce, but also teachers' routinized schedules, the architectural lay out of public schools, and the single gender nature of these workforces. Over the course of a workday, teachers interact with their immediate peers when they move between classrooms and when they eat lunch or grade assignments together in shared teachers lounges during routinely-timed breaks in their work. This frequent interac-

tion generates strong direct social ties between immediate colleagues, which at the workplace level aggregate into dense, clustered networks.

Doctors, nurses, pharmacists and others in health centers and hospitals are far less likely to form strong, overlapping social bonds with their co-workers. These workers typically have individually-assigned offices and non-routinized schedules within mixed-gender workspaces. Some healthcare workers even rotate across different institutions. While overcrowding in schools leads to teachers crowding into a lounge, overcrowding in healthcare institutions mean harried personnel often call each other on the phone from neighboring offices. When individuals do engage with their co-workers, they often do so across occupational or gender boundaries in a context with overarchingly patriarchal gender norms. These realities limit health care workers' opportunities for routine, informal interaction with their colleagues over the course of the day. The absence of strong informal relationships often leaves healthcare workers to resort to formal chains of command, as personnel frequently engage with the health center or hospital's director when resolving workplace challenges.

4.1 Formalizing Network Differences

Data from the networks elicitation survey highlights that these institutional features of the workplace aggregate to generate workplace social networks with different structural characteristics. Figure 1 presents a visual of four pairs of school and health center networks in four communities, formalizing individuals' responses to the questions "Who are the colleagues you would turn to in order to solve challenges?" and "Who are the colleagues with whom you interact most frequently?". Visually, the figure shows that school networks are more dense and tightly interwoven, and also highlights the impacts of occupational homogeneity in healthcare workplaces.

Figure 2 confirms these visually apparent differences by presenting three summary statistics about the 21 networks where I collected survey data. The top panel of Figure 2 reports each network's *global clustering coefficient* (Opsahl 2013). This statistic is a measure of cohesiveness, capturing the likelihood that each individual's connections are also connected with one another. Often also referred to as the aggregate transitivity of a network, this statistic is higher for each set of schools than for the health center or hospital surveyed in its neighborhood. Informally, this statistic means that each teachers' close colleagues are also more likely to be close to one another, compared to workers in the health center or hospital across the street.

The second panel of Figure 2 measures the *average path length* in the network, or the average distance each node or individual would travel to reach any other individual in the network. Following Watts and Strogatz (1998) observation of how observed networks scale in practice, the figure presents the average path length scaled to the log number of nodes in the network (in this case, the number of surveyed individuals). This panel shows that, in all communities except for one, each worker in a public school would travel a shorter distance (or move through fewer additional co-workers) to reach any of their immediate colleagues, when compared with healthcare workers. Taken together, the higher levels of clustering and shorter average path lengths in schools shows they better fit the definition of the Watts and Strogatz (1998) "small world networks" that Siegel (2009) shows are highly conducive to collective action.

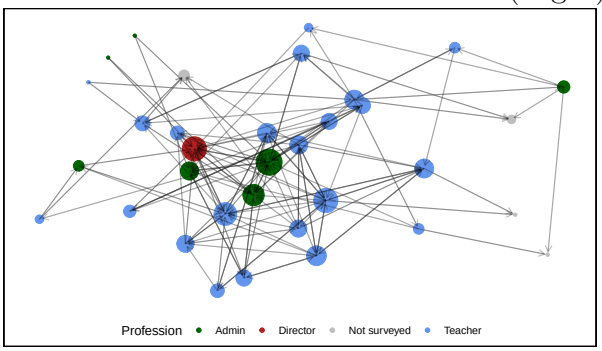
The bottom panel of Figure 2 presents a third statistic, the normalized *betweenness centrality* of each school and healthcare institution's principal or director. This statistic measure how many of all of the possible pathways between between any two colleagues pass through the institution's principal or director. While incomplete data prevents me from estimating this statistic in two of 21 cases, the data show that school principals in all communities except for one sit on a smaller proportion of pathways than their counterparts in hospitals or health centers. This statistic suggests that school networks are less informally hierarchical; principals are less likely to sit at the center of these networks than hospital or health center directors.

4.2 Dense, Highly Clustered Networks Facilitate Organization

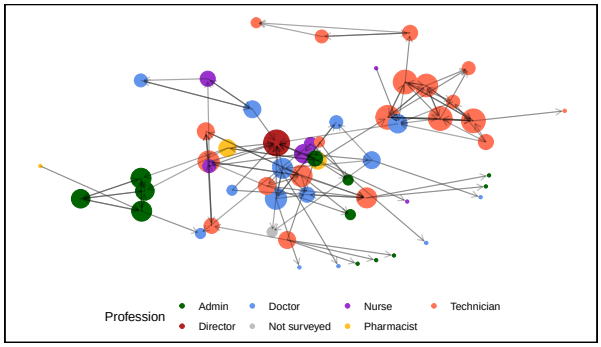
Teachers' dense, highly clustered networks facilitate their organizational autonomy.[7] My qualitative interviews reveal two principal mechanisms through which workplace social networks explain why teachers are able to sustain activism and civil society autonomy but healthcare workers do not. First, these workplace social ties allow teachers to coalesce around collective, politicized frames. Second, these networks produce highly-localized bases of movement participation and bottom-up collective action facilitate the mobilization that underpin the launch, contagion, and maintenance of organizational autonomy. Because Jordan's regime struggles to co-opt or infiltrate teachers' movements and existing polarized actors cannot fully capture them, the regime instead opts to visibly repress or outlaw their

7. Attitudinal data from the survey provides suggestive evidence for this claim: teachers embedded within these networks feel that they and their colleagues are more capable of overcoming the challenges they face in the workplace and greater pride in their workspaces (Appendix Figure A.6).

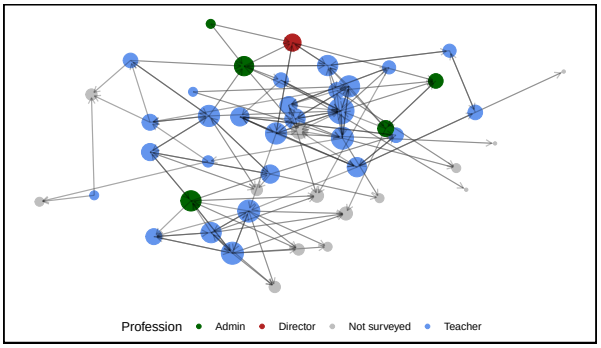
Visualizing differences in networks across Schools (Left) and Healthcare Centers (Right) in the same neighborhoods



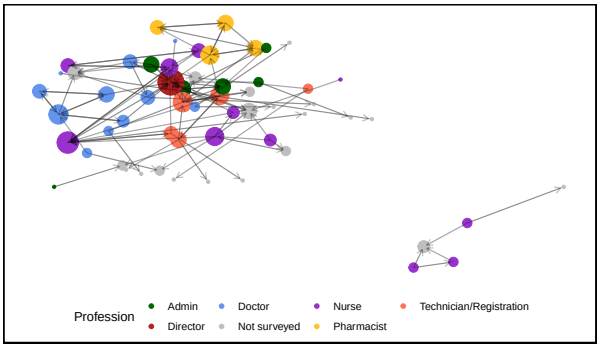
(a) Southern Town School



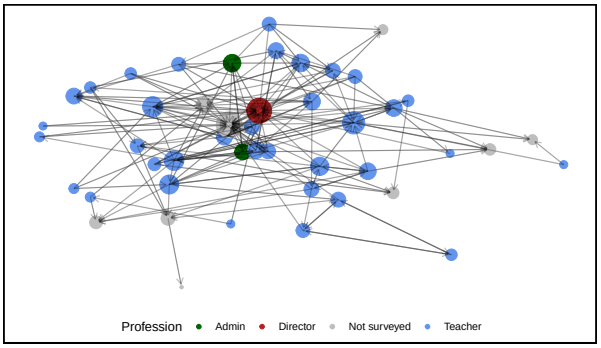
(b) Southern Town Health



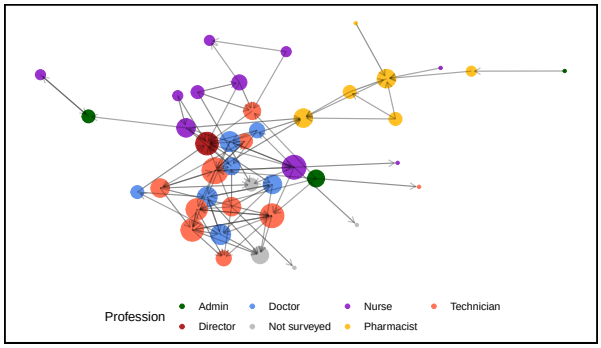
(c) Middle Class Amman 2 School



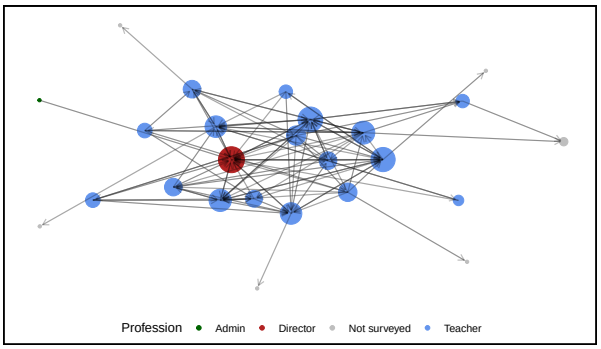
(d) Middle Class Amman 2 Health



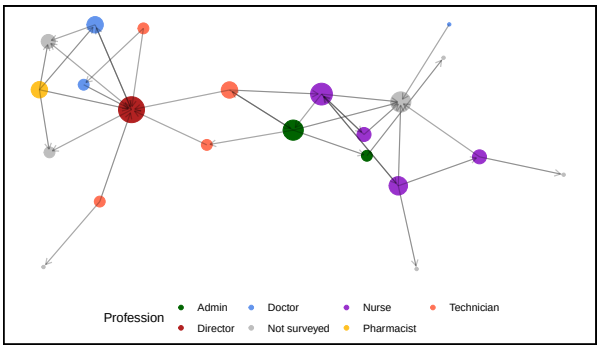
(e) Zarqa School



(f) Zarqa Health



(g) Rural NW School



(h) Rural NW Health

Figure 1: The above figure displays social networks in four pairs of schools (left) and health centers (right) in Jordan based on survey data collected in May 2023. Node sizes are scaled to degree and node colors represent self-reported occupations.

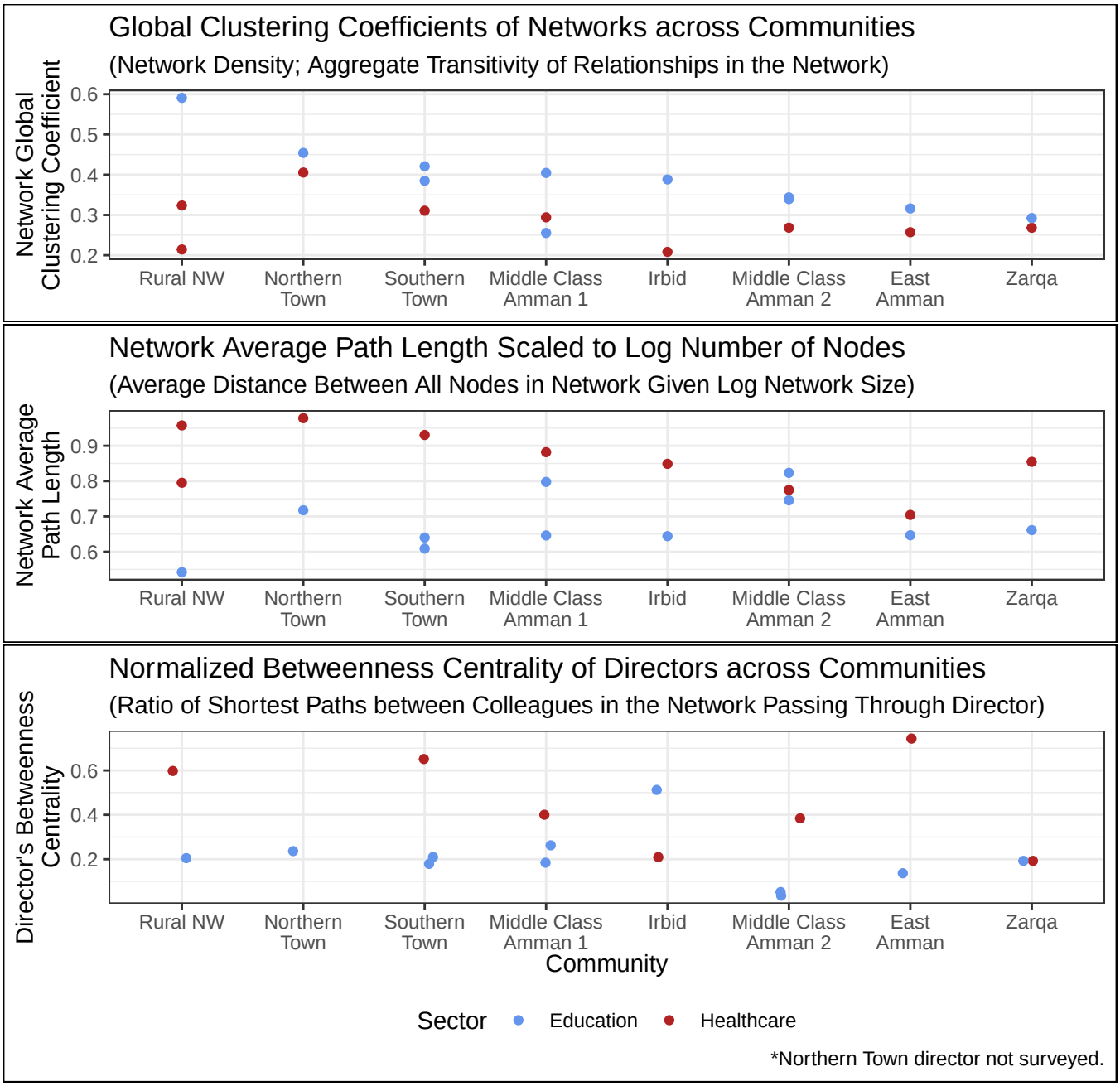


Figure 2: *Sources: Network Survey* Summary statistics of network pairs reveal that, when compared with the healthcare institutions in their own community, workplace social networks in schools have higher Global Clustering Coefficients and shorter Average Path Length in relation to overall network size. Compared with hospital and health center directors, school principals are less likely to sit on pathways between other employees. There are no measures of uncertainty because the estimates are unique to each network.

organizations. The frailty of healthcare workers' occupational social networks limit their collective grievance attribution and contributes to lower levels of localized participation. Strikes, protests, and sit-ins very rarely emerge from public sector healthcare settings, and

healthcare activists are left to rely on extra-occupational networks both to organize collective action and in elections. As a result, healthcare activists confront more targeted repression with little public outcry and healthcare organizations face co-optation and capture. Below, I use interview evidence to describe these pathways in turn.

Teachers' workplace networks allow them to coalesce around collective political frames: Teachers' embeddedness within these networks allows them to channel their individualized grievances into collective, politicized frames. As described above, teachers and healthcare workers have similar available grievances, around their wages but also around potentially-politicized issues like the curriculum, training, overcrowding, infrastructure, centralization, and corruption. But teachers, unlike healthcare workers, are able to more quickly establish the strong social ties with their colleagues that allow them to place blame externally, often channeling grievances upward toward the Ministry.

In discussing the teachers unions in relation to unions from doctors and other healthcare workers, one teacher's activist laid this out clearly: "You have to understand, teachers are generally sitting together all day. They know one another, they know each others' families, and they understand one another. Among doctors, in these huge hospitals, they might not even know each other's names" (Early teachers' activist, Salt, Interview 55). In the words of another interviewee, "At any given time in a school, there will be two or three teachers chatting. They talk about work but they also open up about their lives, their problems. It becomes a very trusting environment" (Male Teacher, Shooneh, Interview 91).

In these highly clustered networks, teachers can come to collective, shared agreement on the sources of workplace problems. These issues are often very quotidian, but they can translate into broader collective action. A group of four teachers described how their ties to one another allowed them to coalesce around the decision to launch their own strike, independently of the union, when the local directorate installed a principal they found lacking:

> **A:** We all had a lot of experience, and they re-assigned us an extremely weak principal. She'd just listen to whatever her husband would tell her to do about any issue in the school. She was limiting us in a huge number of ways... We communicated with the union, told them we were doing it, but the decision was our own...;
> **B:** We fully agreed on it quickly... We were a team and we honestly were all close. We decided that if they fired us, they'd fire us all together. There was a lot of pressure, but we lasted for 20 days, and we drew national news. After our strike they actually changed the laws nationally...
> **C:** We generally coordinated among ourselves, we were very united. -*Focus group with female teachers, Irbid*

In healthcare, by contrast, the weakness of workers' social ties to one another renders it difficult for them to identify shared interests. Even as doctors, nurses, and nurses assistants describe similar grievances as those in education, they often cite them to explain withdrawal, isolation, and hopelessness. One doctor in Amman's largest hospital recounts:

> I don't even call this a hospital. I'll tell you a story about my first experiences. I was in the residency room during my first year, on beds that were cardboard, deteriorating, like everything else. [Discussion of overwork & neglect] ... I lost my respect for those above me and those below me. I decided that if I stayed as a public servant in an incompetent, deteriorating system, I would do what's logical, and keep my attention only on myself and my work. -*Male doctor, Amman, Interview 74*

This absence of interaction and collective framing demobilizes healthcare workers, even where these individuals are embedded in extra-occupational social networks that might shape collective action. In a newly expanded health center financed by foreign donors, every employee I interviewed hailed from the same influential local East Bank tribe. During interviews at the center three months after its renovations, recent rainfall had revealed a leaky roof and rendered an entire floor inoperable. But while every interviewee independently cited the roof as an example of corruption or graft, none expressed any efficacy in holding a central actor to account. An experienced nurse articulates these dynamics:

> Can you believe that – we have this brand new building, and water is pouring in from the roof. That shouldn't be normal. It's a huge problem. There's water in all of these different rooms, we've had to abandon some of them. Who knows if anything will happen... They should confront the construction company, but it's all lies. The ministry is fast asleep. ...We do get along well here – we're all from the same family [tribe]. But you also know how it is: the nurses are pushing against the pharmacists are pushing against the doctors...We're all close, but not necessarily when we talk about work. -*Female nurse, health center in rural northern Jordan*

Teachers' workplace networks produce bottom-up activism and localized-participation more resistant to regime control

Beyond the facilitation of collective frames, qualitative interviews highlight how these networks facilitate organization at a national level. First, teachers' dense, highly-clustered networks produce localized hotbeds of participation that produce recurrent bottom-up activism, even during periods of repression. Second, these networks generate strong social norms of participation that draw fence-sitters into movement participation. Finally, these networks give programmatically-oriented activists support from their immediate co-workers, a key political resource in a setting where co-opted individuals otherwise draw on backing

from the security services or ethnic or religious ties. Taken together, these networks render tactics of coercion and co-optation from Jordan's regime and embedded organizations less effective in controlling teachers' activism, allowing them to sustain an autonomous, confrontational civil society organization.

Confrontational activism launches from individual schools: The same dynamics that allow teachers to go on strike over quotidian issues like a weak principal can also produce more contentious, bottom-up activism. Teachers, and especially ones with known political ideologies, previous arrests, or activist family members, routinely confront horizontal monitoring from their colleagues. But even as they lament "always being written about" (Interview 45), they also emphasize winning the trust of skeptical colleagues over several years, and later drawing on those ties in impactful ways (Interviews 45, 48, 49).

Across dispersed workspaces, bottom-up activism continuously re-emerges directly from an individual school or schools, and then spreads as teachers draw on their dense ties. Indeed, every organized movement of teachers has emerged first from a single school, from movements in the 1970s and 1990s through to a campaign that began in 2010 and subsequently won teachers formal union rights as an Arab Spring concession (Interviews 33, 39, 45, 48, 49, 70). One activist detailed the 2010 movement's emergence:

> Our school did play a big role [in the 2010 movement that a year later won teachers the rights to organize]. XXX School, which is here, in XXX, in Amman. We knew the history, we talked about it amongst ourselves, and in 2010 we put out the first public call [an ad on a national TV station] for a meeting at the teachers' club in Amman. We were the first to call for an open discussion of the topic, in this space. The powers were surprised by it, that almost immediately there was a huge reaction. -*Interview 33, Retired male teacher, Amman*

Confrontational bottom-up collective action, meanwhile, rarely emerges from healthcare workplaces, and is viewed as far more harrowing. Visible forms of mobilization from doctors and other healthcare workers outside of major periods of contentious action often constitutes groups of staffers staging single-day actions, reflecting workplace hierarchies and anonymity. These actions are short-lived and are often de-mobilized ahead of time as the government uses infiltration to quickly rotate potential activists elsewhere in the Ministry (Interviews 7, 50, 69, 84, 85, 94).

Workplace Networks Generate Strong Participatory Social Norms that Reinforce Mobilization and Organization: When visible activism forces the government into public response, networks activated among colleagues within schools subsequently generates high levels of participation that reinforce mobilization and organization.

As teachers in highly-clustered networks discuss ongoing mobilization, teachers with high levels of school-level influence can encourage further participation (Interviews 45, 49). One impactful activist from the initial 2010 mobilization explained that others called him to represent them on behalf of the union precisely because of his school- and district-level reputation within workplace networks: "I was not a member of a party, but I had always been very interested in legal rights and issues that came up at work. So, for instance if my colleagues wanted to apply for retirement, or apply for transfer, they would come to me and I would help them with the paperwork. It was unsurprising they called me once the movement began" (Interview 55). Describing subsequent 2012 and 2014 strikes that did not spread across the entire country, an activist explained that teachers' strikes were school-level events: "It is all or none. Generally, all of the teachers in a school strike, or none of them do. If you're on the fence, you won't show up if all of your colleagues are out" (Interview 27, Early Male Teachers' Activist, Amman). In the rural northern town of Shooneh, a veteran teacher echoed these sentiments when recalling the 2019 strikes: "If I say that I'm joining the strike, I know that I'll always bring four or five teachers with me, and soon the school is closed" (Interview 92, Male Teacher, Shooneh).

These processes draw fence sitters with fewer pre-existing political commitments into movement support. As participation becomes a social norm in the workplace, embeddedness within workplace networks stands out as a strong predictor of engagement in collective action like strikes, protests and expressed support on social media. One teacher recounted the high-levels of solidarity required to hold the the 2019 strike that was the longest in Jordan's history, constantly referring to herself and her colleagues' decisions in the plural:

> ...At first all of us [teachers] were really just enjoying ourselves, having a great time. It was fun. Then, as it went on, there was fear. Our principal let us know that she needed to write the names of every teacher on strike and send it to the ministry. It wasn't her fault – we know her, we know it's her job, and we're close with her. We all thought we'd be fired, collectively, but we weren't. We kept up really strong communications with the union – they were very effective there – and in the end our victory was unheard of. I never thought we'd feel so powerful.
> *-Interview 76, Female teacher, East Amman*

By contrast, healthcare activists explicitly discuss how difficult it is to organize their colleagues in their more isolated work settings. In the words of one activist, "It's very very very difficult to operate. You want to network with any party, get in touch with anyone, advocate on behalf of a raise, a bonus, working conditions, you're prevented, the government does not want you to intervene" (Interview 94). Another activist often in union leadership expresses similar frustration at low levels of workplace-level participation: "The conditions

in [Jordan's largest hospital] used to be far better - very high quality. And I know, I have been there for thirty years. But the staff are not used to speaking loudly. They want others to speak for them, but who will? The government, and its fist on our associations, has succeeded in many ways" (Interview 85).

Workplace networks empower independent activists, limiting co-optation and capture: These networks sustain high levels of local participation that serve as critical resources for more independent and programmatically-oriented activists. Because activist teachers can more easily mobilize through the shorter average path lengths of their workplace networks than activists in healthcare (Figure 2), teachers' national-level movement is more resistant to infiltration from state agents or to outright capture from these tribal movements or the Muslim Brotherhood.

For instance, as teachers' mobilized for union rights in 2010 on the eve of parliamentary elections, some activists organized pledges from their co-workers to vote *against* tribal candidates who did not back the teachers' movement, a staunch norm violation in a highly tribal district.[8] When teachers won union rights, these networks aided the organization in cultivating a leadership base from outside of either the Muslim Brotherhood or tribal circles. One key media activist on teachers' issues described how his school's principal drove his involvement: "I began as a teacher in 2005, and I didn't really have any political outlook. I learned a lot from the principal of my school, who was one of the first members of the Free Amman Teachers' Committee. I gradually followed him and became more involved myself" (Interview 25, Male Teacher, Amman).

High levels of support from within these networks is especially advantageous during elections, when the Muslim Brotherhood, tribal groups, and state-backed candidates are often perceived to benefit from low turnout (Cammett and Luong 2014; Gao 2016). At 76%, teachers' 2019 election featured the highest known turnout recent turnout in a national-level election, compared with 29.6% and 50.5% for recent doctors and dentists elections and 29% for 2020 parliamentary elections. Independent activists who rely on turnout from their workplace networks to win elections often explicitly compare them to other powerful forms of societal belonging:

> I don't belong to a tribe, and I'm not a member of the Brotherhood. But we, the teachers, we know one another well, and can defend one another. ... In my school, there are 56 teachers. After a few years of working, I got to know all the teachers in the school and in the seven schools in our area. That's 300 teachers,

8. "[AR] Al Anaswheh encourages Salt's teachers to participate in elections," *Al Madehnah News*, November 7, 2010, Link.

in my corner, and I automatically have a seat. -*Active independent teacher's activist, Zarqa, Interview 12, Second Interview*

[Everyone wants me on their list] because they know I can call the teachers in my school, the teachers in the neighboring schools, and bring them votes. If we want to strike, I can call, and the schools in my area will be closed in fifteen minutes. -*Early independent teacher's activist, Zarqa, Interview 28, First Interview*

This local competition has limited other political actors from establishing clear-cut dominance in union elections, often forcing rare bridging coalitions in teachers' union leadership (Interviews 12, 27, 45, 47, 49, 55). This form of coalition emerged in the national movement to revive the union in 2010 and then again in 2019.[9]

Programmatically-oriented activists in healthcare do not report drawing from workplace networks. One current independent unionist reports gaining attention on social media, despite lengthy experience where they could have mobilized their colleagues:

I've worked in almost every public hospital in the country, because ever since I became active the government rotates my workplace every two weeks as a way to get to me, to tire me out. Prior to that, I'd worked at XXX for 12 years, a long time... I'd always participated in any strike. But I rose to my position, and gained my recognition, via my reflections on social media. -*Active independent doctor's activist, Amman*

As a result, national-level movements in healthcare must draw on networks developed elsewhere, often Islamist or tribal. As a result, healthcare workers and independent activists alike express the sentiment that the union becomes a 'bargaining chip' for parties like the Muslim Brotherhood, who might threaten strikes in exchange for government concessions elsewhere. "There's despair, of course, from the public sector when it comes to the union," in the words of one independent unionist who had withdrawn from the union. "The union should have a big role, but it's politicized. I am a positive person, but I saw I could not be effective there" (Interview 94, Female Head of Health Center, Amman).

Amid perceived capture of these unions, programmatic campaigns often mobilize from outside of them, without formal bargaining rights or well-defined organizational structures, as was the case with a 2019 campaign that drew on medical residents' university ties (Interview 50, Healthcare Activist, Amman). As healthcare workers share similar underlying grievances, these actors have joined national mobilizations during political opportunities in 1989, 2011, and 2018. Outside of these periods, differences in these sectors' workplace networks shape the status of teachers and healthcare workers' organizations in the ecology of Jordanian

9. Marwan Al Amed, "[AR:] The Jordanian Teachers Union, [Part] 4," *Ammonnews,* September 14, 2019.

civil society. While teachers have emerged as, for some, "the nation's only truly democratic actor" and for others "a substantial problem" (Interview 44, former Minister of Education), activism from healthcare workers remains either captured in un-responsive institutions or operates outside of the public eye.

5 Micro-Level Evidence of How Workplace Social Networks Sustain Teachers' Activism

I finally provide quantitative evidence that the relationships teachers develop with one another *at work* sustain mobilization through a close examination of expressed support for teachers' autonomy following a government crackdown on the organization. After introducing the data below, I use regression analysis to show that having immediate workplace ties a sanctioned activists strongly predicts expressed support for teachers' organization, even when accounting for school-level ethnicity and the local strength of the Muslim Brotherhood's political party. While I lack data to test how network parameters themselves shape these outcomes, this analysis reinforces the role of workplace networks in teachers' organization and the limitation of alternative explanations centered around either Muslim Brotherhood influence or East Bank grievance.

5.1 Data: Individual Petition Signatures and Workplace Ties to Activists

Teachers' signatures on an online petition circulated in support of the teachers' union amid government repression in early January 2021 are the dependent variable in this analysis. Circulated online during school closures at the height of the COVID-19 pandemic, the petition confrontationally decries the ways "reactionary forces" violated the nation's laws and constitution as well as the "rights and freedoms" of a "legitimate, professional, humanitarian, and legal" body that had provided an "exceptional opportunity for the return of democratic expression," while vowing future activism.[10] 5,600 individuals signed the petition and publicized their name and location, usually at the district (n = 12) level.

10. "[AR] A statement issued by the general body of the Jordanian Teachers Union", *Areda Online,* January 18, 2021, Link.

For the analysis that follows, I identify petition signatories who are working public school teachers by comparing signatures to the voter file in the teachers union's most recent elections, published in February 2019 on the teachers' union now-defunct website. This data contains the name and workplace of all teachers eligible to vote in those elections.[11] Removing private school teachers and those who work in Ministry offices, the data contains 53,216 teachers across 3,131 schools, of whom 2,200 signed the petition. I construct the dependent variable as a binary outcome that takes the value of 1 if the teacher has signed the petition, and 0 if the teacher has not signed the petition.

I measure my key explanatory variable - individuals' mobilization in the workplace - by recording whether any individual teacher works in the same school as a teacher who has recently been sanctioned for their activism. To do so, I compile a list of approximately 150 teachers who had been sent to early retirement in August or December 2020. These newsworthy files were leaked in the Jordanian media, with the status of the affected teachers becoming a well-known grievance. The early retirements immediately followed the government's July 2020 actions to dismiss the union leadership, enforce a ban on domestic media coverage on any issues related to teachers, and arrest hundreds of teachers in the protests that followed. Among the listed teachers are individuals nationally associated with teachers' activism, including many members of the council elected in 2019, many of whom had been imprisoned several times in the subsequent period. Of these sanctioned teachers, I am able to locate 115 of their workplaces in the data, for a total of 80 unique workplaces.[12] After removing the activists themselves from the dataset, there are 2,042 teachers in the dataset who are their immediate colleagues. In the analysis below I label this variable *Activist Co-Worker.*

My theory predicts that individuals who work with a sanctioned activist should express higher levels of support for teachers' activism by signing the petition. Table 1 displays summary statistics of how this variable relates to petition signatures. Figure 3 visualizes the national distribution of activists sent to retirement and local level petition signature rates.

Activist	Num Schools	Num Teachers	Prob Signing Petition	Total Signing Petition
0	2985	51203	0.0407	2085
1	80	2067	0.0590	122

Table 1: Summary Statistics of Key Variables in Dataset

11. Approximately 15% of the data is missing because voter files for 6 of Jordan's 42 sub-districts were not posted online.

12. There are 160 teachers, principals, educational supervisors, and computer or special education teachers in the lists published online. Workplaces of the educational supervisors and guidance counselor teachers are not in the data, while the 15% of voter files not posted online account for the remaining missing data.

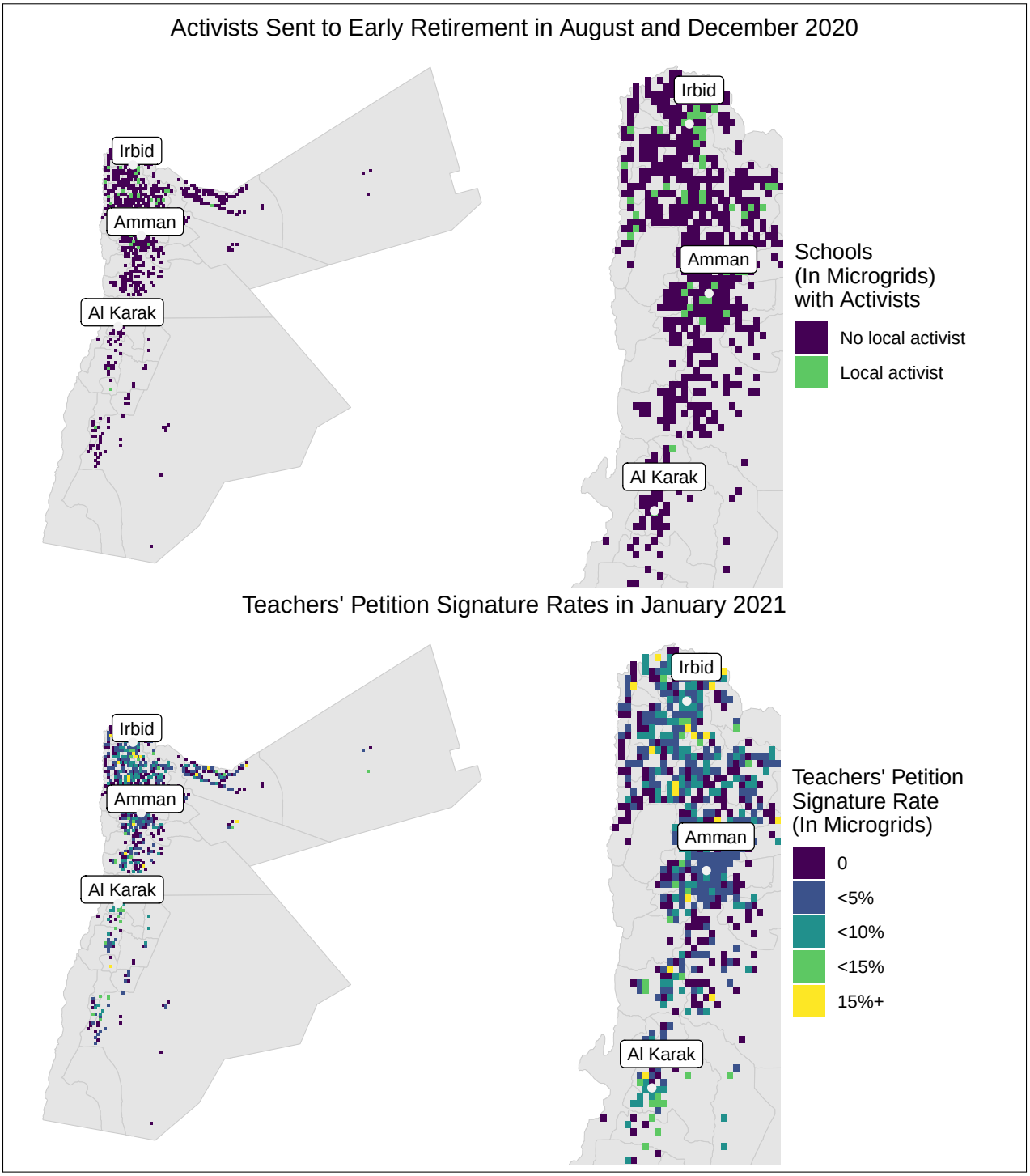


Figure 3: *Sources: Teachers' Voter File; Sanctioned Activists via TelescopeJo, Jo24.net; Petition signatures via Areda Online.* Top: Teachers in schools across Jordan were referred to early retirement in August and December 2020. Bottom: School-level petition signature rates in January 2021. Grid cells group schools within the same approximately 5 square kilometers for visualization.

5.2 Covariates and Empirical Specification

I include several other variables meant to capture prominent complementary or alternative explanations for teachers activism in the regression. I create two measures of local ethnic geography. First, I use information from a regional crowd-sourced genealogy website, rabettah.net, to match whether teachers have the 200 most commonly identified Jordanian and Palestinian surnames. Of the 53,216 teachers in the dataset, 26,460 carry these names, excluding names that appear in both lists.[13] I use this data to capture a variable of the overall ethnic composition of the workplace; a higher value of *Avg. School Ethnicity* means that a higher percentage of teachers in the school carry recognizably Jordanian last names. Appendix Figure A.5 shows the resulting measures accord with the common understanding that Palestinian family names are more common in urban areas and in schools neighboring Palestinian refugees camps, reinforcing the validity of the measure.

I introduce an additional dataset to generate a novel measure for the local influence of the Muslim Brotherhood. To do so, I digitized the polling-place level results (n = 1,412) of Jordan's December 2020 parliamentary elections from one month prior to the petition's circulation. While previous electoral results have relied on data at the district (n = 42) level, the polling-place level data allows for a much finer-grained analysis of the Muslim Brotherhood's influence. For each polling-place, I created a measure of the total vote share for the lists sponsored Muslim Brotherhood's political party, the Islamic Action Front (IAR). I merge the data on teachers' workplaces first to the 1,412 schools that serve as polling places. For the remaining schools, I then use geo-spatial methods to find the voteshare for the IAF at the nearest polling place. tThe IAF fielded electoral lists in only 14 of Jordan's 23 electoral districts (Appendix Figure A.5), requiring me to truncate the dataset to these electoral districts when including this variable in the analysis (1,764 of 2,921 schools, n = 35,112 teachers).

In addition to these variables, I include the number of teachers in a given school, *School Size*, which captures both the degree of interaction between teachers and the reality that rural schools tend to be smaller. I include a variable for school *Gender* composition. Because schools are separated by gender after third grade, we can infer that all of the teachers in schools for girls above third grade are female, and vice-versa. There are several different pathways that gender may shape support for teachers' activism, but expectations derived from other forms of activism suggest that women should be less likely men to express public

13. This high proportion with relatively few names reflects how incredibly common some Jordanian tribal names are in rural areas.

support. In Table 2, I first use a logit regression to model the binary dependent variable, followed by the same specification with ordinary least squares. For each form, I then run the regression with and without inclusion of the IAF elections data.

5.3 Results: The Colleagues of Repressed Teachers are more Likely to Express Public Support for Teachers' Activism

The results in Table 2 and Figure 4 support the assertion that workplace social networks contribute to teachers' sustained activism. Row 1 of Table 2, *Activist Co-Worker*, shows that the co-workers of sanctioned activists are more likely to express support for the movement by publicly supporting teachers' activism despite ongoing regression, significant at 95% levels across all specifications of the model in each column. Figure 4 interprets this coefficient in terms of an individual's predicted probability of signing the petition. In the logistic regression specification, the figure shows that the immediate co-worker of a recently sanctioned activist has a 4.9% probability of signing the petition in the first specification, compared with the 3.6% probability of a teacher with no workplace ties to an activist, an increase of 35.4%.[14] The results imply that activist teachers were able to draw support from their immediate colleagues – even when they were unlikely to interact with them in-person given both national school closures due to COVID-19 and their enforced early retirement.

The remaining rows of the table provide additional insight into the nature of teachers' mobilization. Consistent with extensive research on mobilization in the Jordanian context, Rows 2 (*Average School Ethnicity*) and 6 (*Percent IAF Pollplace*) show that individuals in schools with a high proportion of individuals with common Jordanian last names or in communities with higher voteshares for the Muslim Brotherhood's political party are associated with higher rates of petition signatures at levels of conventional statistical significance. These statistical relationships highlight the depth of cross-cutting support for the teachers' movement among oft polarized Islamist-East Bank divides, a phenomenon worthy of additional study. *Male Upper School* and *Mixed Elementary School* in Rows 3 and 4, meanwhile, jointly imply that male teachers were far more likely to publicly support activism than the female teachers in *Female Upper Schools.* Finally, the results show that there is no consistent association between school size and total signatures.

14. In Appendix Table **??**, I show the regression produces similar results when including district fixed effects.

Table 2: Multivariate regression analysis of a petition circulated in the wake of repression shows that teachers' working directly recently sanctioned activists were significantly more likely to publicly support the teachers' union than those with no working ties to sanctioned activists.

	Dependent variable:			
	Petition Signatures			
	logistic		*OLS*	
	(1)	(2)	(3)	(4)
Activist Co-Worker	0.335***	0.297***	0.015***	0.013***
	(0.114)	(0.101)	(0.005)	(0.004)
Avg. School Ethnicity	0.239***	0.172***	0.009***	0.006***
	(0.060)	(0.047)	(0.002)	(0.002)
Male Upper School	0.599***	0.659***	0.023***	0.025***
	(0.059)	(0.049)	(0.002)	(0.002)
Mixed Elementary School	0.472***	0.439***	0.018***	0.015***
	(0.109)	(0.078)	(0.004)	(0.003)
School Size	−0.0003	0.002	−0.00001	0.0001
	(0.001)	(0.001)	(0.0001)	(0.00005)
Pct IAF Pollplace	0.867***		0.035***	
	(0.292)		(0.012)	
Constant	−3.588***	−3.625***	0.026***	0.025***
	(0.069)	(0.051)	(0.002)	(0.002)
Observations	35,037	52,973	35,037	52,973
Note:				*p<0.1; **p<0.05; ***p<0.01

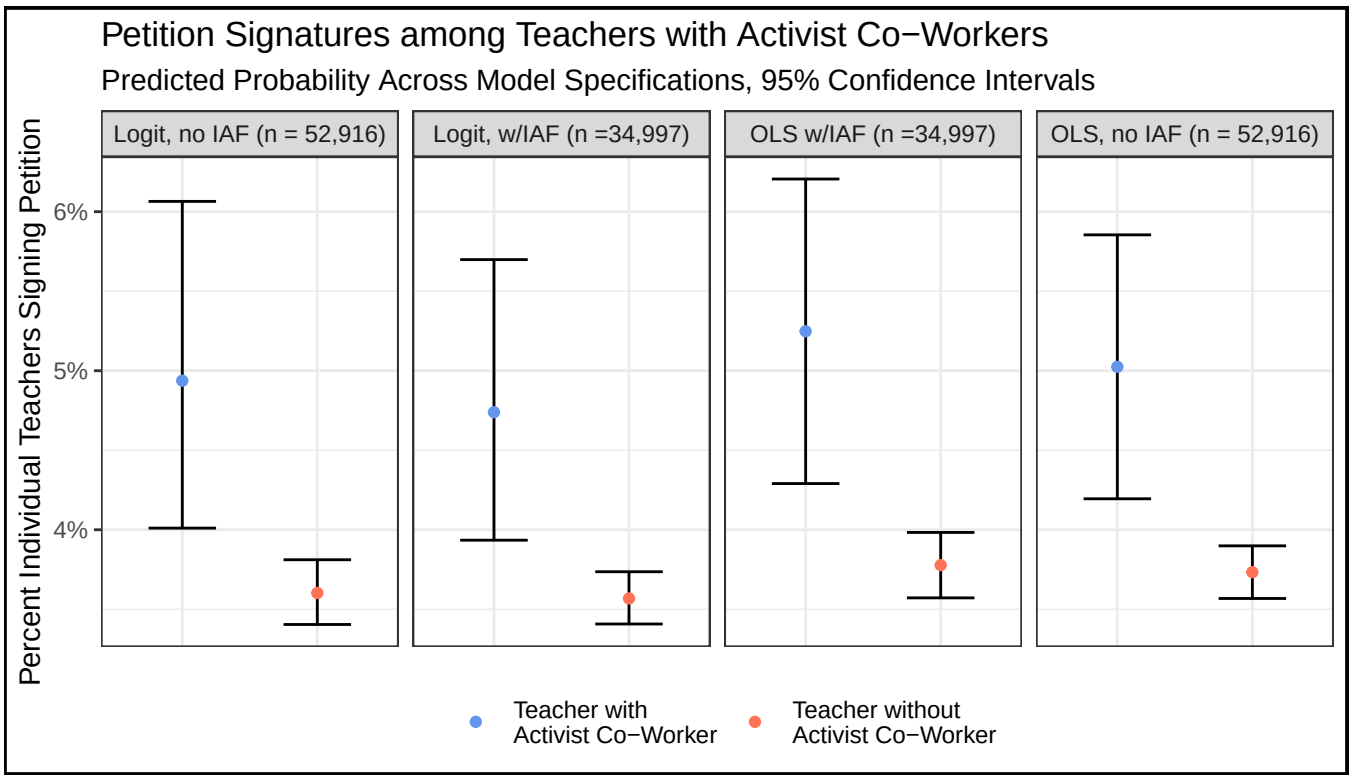


Figure 4: Across model specifications in Table 2, teachers who are the immediate co-workers of teachers fired for their activism are more likely to sign the petition. This figure shows that teachers with activist co-workers are between 24.9% and 35.4% more likely to sign the petition.

6 Discussion

This research provides evidence that workplace networks shape even ideologically-similar individuals' ability to launch and sustain autonomous civil society organizations. Bringing together network analysis, qualitative interviews, and micro-level quantitative data, I bridge careful qualitative research on how certain social networks can sustain organization in repressive or violent settings (Parkinson 2013; Larson and Lewis 2018; Amat 2023) with formal analyses of the mobilizational advantages of empirically common network typologies like densely clustered networks (Watts and Strogatz 1998; Siegel 2009).

Motivating further study on when and how autocrats are able to control civil society, this research also holds implications for when repression is made visible. In arguing that autocratic tools can be more effective at demobilizing some groups rather than others, I highlight two possible equilibriums for autocratic engagement with civil society. In a first equilibrium, reflecting the case of Jordan's healthcare unions, autocrats are able to use non-public strategies of repression and co-optation to control or limit the autonomy of civil society

actors. By using these non-visible tools, regimes benefit from using those organizations to deepen social control (Mattingly 2019) as they also bolster their international reputation for political pluralism (Kelley and Simmons 2020). In a second equilibrium, autocrats are unable to effectively contain civil society actors without resorting to reputationally costly repression. Where non-violent tools are ineffective, regimes may prefer to formally outlaw civil society organizations - no matter the reputational cost.

This study also prompts further inquiry into when and how regimes are able to effectively use public education to indoctrinate (Paglayan 2021, 2022), given the secondary challenge of controlling the public school teachers they hire to do so. As in democracies (Schneider 2022), public school teachers have also been notably influential in nore autocratic settings. For instance, they organized the first protest of the 1933 Cuban Revolution;[15] staged the first protest in Tunisia's capital at the outset of the Arab Spring;[16] scored a remarkable "breakthrough in the sectarian political system" of Lebanon (Bou Khater 2022, 117); hobbled top-down corporatist efforts in authoritarian Mexico (Cook 2010); and consistently went on strike to "make [the] government dance" in authoritarian Zambia (LeBas 2006, 151). In addition to the content of education (Darden 2013) and the ways schools can allow students to broaden their networks (eg, Zeira 2019), the regularity of teachers' collective action suggests a distinct pathway through which the expansion of education can shape political participation.

The Jordanian case suggests two favorable conditions for teachers and other state workers. First, organizations in Jordan likely benefit from the nation's extreme centralization of governance provision and resulting corporatist arrangements for interest representation, which can aid them in developing national-level organizations transcending relevant ethnic boundaries (LeBas 2011). Second, the regime's meritocratic hiring procedures likely allows some politically-oriented teachers access to state work who might be barred more repressive settings. Further research should explore how cross-national variation in governance centralization and hiring policies shape the influence of organizations representing state workers.

Finally, scholars often define civil society in explicit contrast to the state, for instance as "a set of organizations that operate between the state, the family' and firms (Mattingly 2019 referencing Kopeck and Mudde 2003 p. 5). In some settings civil society organizations are often conceptualized as the product of primordial or explicitly extra-state commitments (Migdal 1988). By conceptualizing differences between regimes and their states, and pointing

15. "Cuban Teachers Vote Strike Over Back Pay", *The New York Times (Archive),* Dec. 5, 1932, Link.
16. "Popular Protests in North Africa and the Middle East (IV): Tunisia's Way, "International Crisis Group, Apr. 28, 2011, Link.

to understudied organizations that emerge from state workplaces, this research describes another pathway through which the state can reconfigure social networks.

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A Appendix

A.1 More Details on Research Methods

Qualitative: I used methods of purposive snowball-sampling to ensure that my interviewees were occupationally representative across potential categories like gender, national geography, and relationship with Islamist groups. I conducted most interviews in Arabic, with the exception of some interviews with elites. While I sought a purposeful sample of individuals from around the country, interviewees often arranged to meet me while passing through Amman or Zarqa, home to more than half the country's population. Toward the end of my fieldwork, I sought to ensure representativeness beyond the networks I had developed individually - which naturally skewed towards individuals more inclined to activism and so accustomed to interviews with a researcher, journalist, or development actor, or those within those individuals' networks - and worked with two research assistants who were able to arrange interviews with every day civil servants in both sectors. Among organizational leaders or influential activists, I met with at least two individuals representing what other interlocutors referred to as the key ideological or movement blocs within each organizations. I met with individuals playing central roles in teachers' organizations or movements in the 1970s, 1990s, 2010s, and 2020s, and with healthcare organizations in the late 1980s, 2010s, and 2020s. Though I do not draw extensively on this interviews in this research, I also regularly met with private sector healthcare workers and teachers.

I used methods of relational interviewing (Fujii 2017) when speaking with interviewees, some of whom I met with multiple times or developed longstanding relationships with through the process of snowball sampling. Throughout, I remained cognizant of my status as a U.S. citizen researching at a U.S. institution in a context where U.S. development agencies and funded projects shape education and healthcare policy and where the U.S. has significant policy influence, and how this positionality might shape my research. One risk of my positionality in this context relates to so-called '(dis)courtesy bias,' wherein my interlocutors would understand my research as directly tied to either development programming or journalism in ways that would shape their interaction with me (Parkinson 2022). To minimize the potential for this bias, I often engaged in extensive introductory conversation on the longer-term goals of the research agenda as different than those of foreign-sponsored development evaluations or journalism.

I further followed Schwedler (2022)'s research in Jordan in avoiding extensive discussion

of events occurring outside of the public eye. I did not record interviews except in cases where senior public figures explicitly requested that I do so. Teachers confronted public-facing retaliation throughout the period of my research: the union remained in a legally-complex suspension, with its headquarters and branch offices formally shuttered, domestic local media banned from covering many day-to-day teachers' union issues, and some of the teachers' unions leading contemporary activists facing re-arrest that they publicized.

I was nevertheless able to more straightforwardly pursue qualitative research around teachers activism than around that from healthcare workers. First, I benefited from having spent a year teaching in a Jordanian public school well before the 2019 strike, which granted me useful networks and a contextual foundation from which to approach interviews on the topic. Second, I avoided interviews with individuals at the center of contemporary, week-to-week developments around the teachers' union contemporary legal context - which were not the focus of my research - and instead prioritized interviews with informed individuals active over longer periods. By refraining from extensive questioning around the very latest developments, I also minimized the potential for interviewee beliefs that I was a journalist, as discussed above. Third, the 2019 strike and the 2020 retaliation meant that teachers were in the middle of the national conversation. Legal trials related to the teachers' unions suspension were continuously in court and the subject of day-to-day conversation in social spaces, activist spaces, and on social media. Over interviews spanning approximately two years, interlocutors regularly expected teachers to win reinstatement within weeks or months, with teachers' lawyers winning the relevant cases in summer and fall 2022 amid continued public facing activism from teachers. Because the subject was currently relevant in national political life and it was not taboo to share opinions on teachers' activism, my interlocutors frequently wanted to better understand where teachers' activism had come from and had their own opinions on the subject. This allowed me to pursue interviews rooted within acceptable boundaries of public narratives that minimized interviewee risk.

While following similar practices to purposively snowball sample among public-facing healthcare activists and every day healthcare workers, healthcare workers' organizational legal status also allowed me to develop networks and generate observations through participant observation. I attended and observed public union events and press conferences held at unions' offices, interviewed candidates in the run-up to doctors' union elections held in spring 2022, and attended events sponsored by university groups and professional development networks.

Networks and Petitions: A networks elicitation survey is unusual for most respondents

because it requires individuals to disclose their names and the names of their colleagues. By being present in person, I was able to answer questions related to data protection processes and ensure a uniform consent process. I stored networks data in password protected files and converted proper names to random numbers after cleaning the network data. Data for the replicated petition dataset will be anonymized. While all of the data I present was initially public, the teachers' union voter file is no longer available online as the website is defunct. This limits concerns around reverse engineering of the data (Milliff 2022).

A.2 Controlled Comparison

A.2.1 Qualitative Discussion and Labor Market Evidence on Hiring in Healthcare and Education

As frontline workers, teachers and healthcare workers receive their jobs via more meritocratic, rules-based selection processes. To gain these and other "frontline" jobs, individuals apply at the Civil Service Bureau, which has long been responsible for ranking and selecting candidates according to their university grades and local-level demand.[17] Interviewees indeed reinforce the notion that teachers and healthcare workers are unlikely to see the receipt of their jobs as part of a contingent exchange, even as these jobs - especially for doctors - are relatively well-paid. They share apocryphal stories of individuals called off the list decades after applying, while even activists critical of the role that favoritism plays in Jordan's economy deny that individual-level connections or networks determine selection for these frontline jobs outside of the most extreme cases.[18][19]

These more meritocratic processes mean that workers in healthcare or education are also less likely to represent either side of Jordan's principal identity divide. As one prominent politician emphasized, "There is no Jordanian or Palestinian divide in the Ministry of Health of the Ministry of Education, as there might be in the Ministry of Interior or the Ministry of Foreign Affairs, or the intelligence or police services." Figure A.5 examines labor market panel data on public employment rates in the repressive apparatus or bureaucracies (clerks), which are understood to often be distributed according to patronage networks. The figure shows there is no relationship between these jobs and those in frontline jobs like education and health.

17. Interviews 28, 29, 30
18. Interviews 12, 22, 32
19. Activists do take programmatic aim at the Civil Service Bureau's selection processes programmatically.

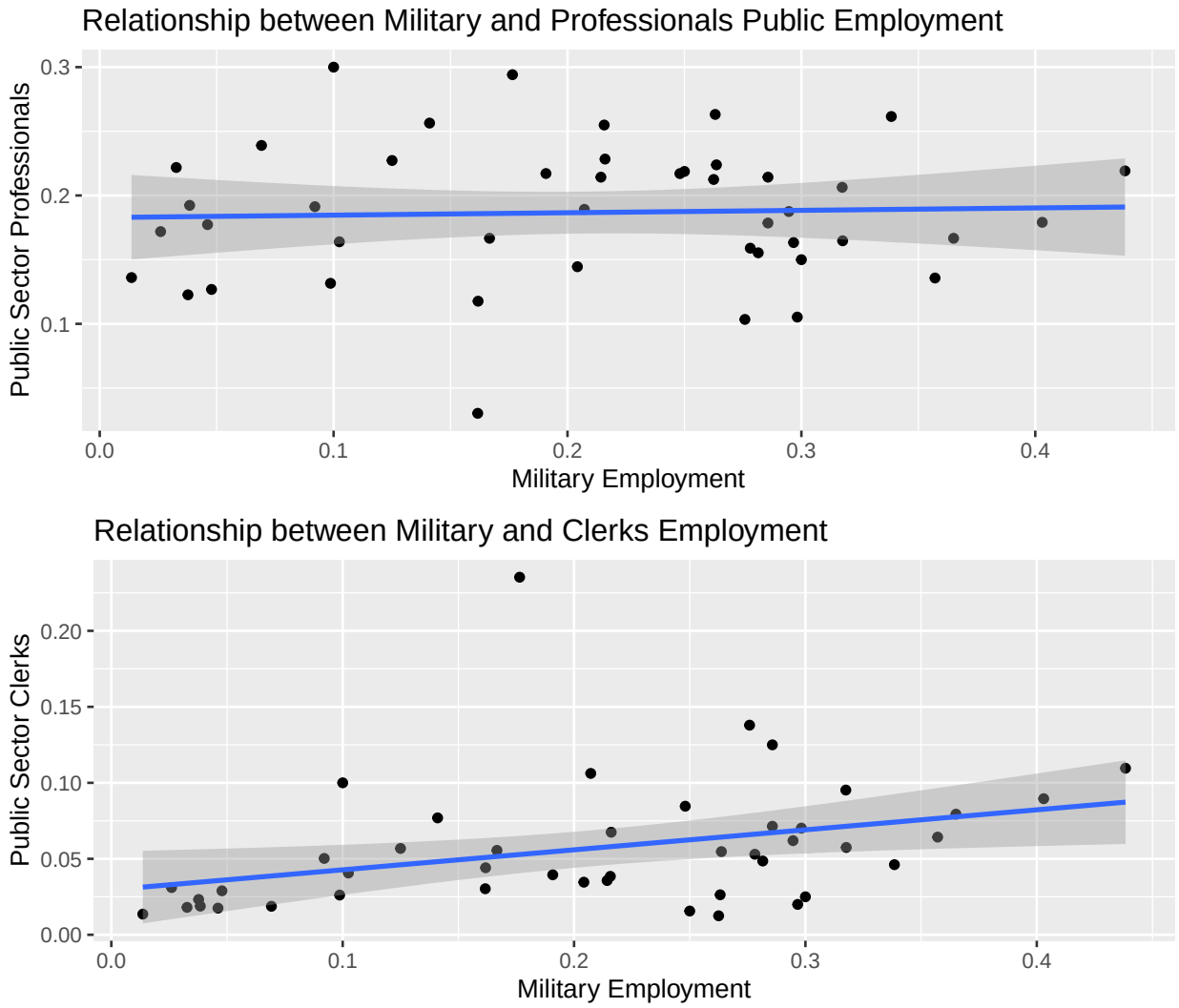

Figure A.5: This figure reports the relationship between employment in the military in Jordan and public sector professionals (lawyers, healthcare workers, teachers, and engineers) (Panel 1) and "Clerks" (Panel 2) at the district level (n = 45). There is no relationship (p = 0.79) between military and professional employment, but a significant relationship (p = 0.01) between military and clerks employment. Extensive research on the Jordanian military emphasizes that it over-represents East Bank Jordanians (Baylouny 2008). The absence of a relationship between military employment rates at the district level and public sector employment in legal, engineering, teaching, and health professions suggests employment in these professions are not distributed in an ethnic-clientelistic manner. The category of clerks includes the 273 in the panel who describe their public sector work as "Customer services," "General and keyboard" or "Numerical and material recording" clerks or "Other clerical support workers."

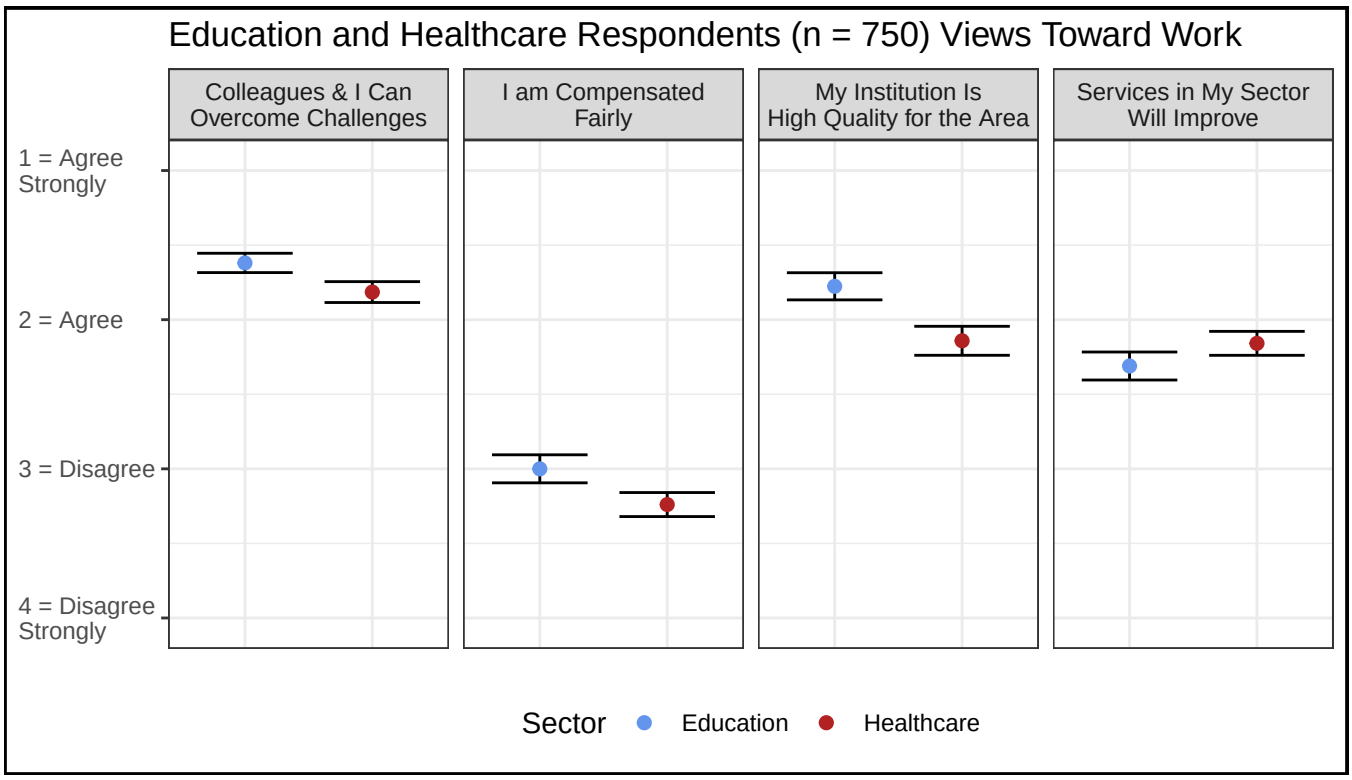

Figure A.6: *Source: Authors' Survey Data. Plotted points represent sectoral means and 95% confidence intervals. Survey conducted in May 2023 of employees in 20 public education and healthcare institutions in Jordan.* While teachers expressed more satisfaction with their compensation, stronger beliefs in the quality of their own institution, and higher efficacy with colleagues, healthcare workers expressed more optimism in the outlook of services in their sector. These results are consistent when controlling for gender and urban/rural divides.

A.2.2 Survey Data on bureaucratic attitudes and intrinsic motivation

The networks survey concluded by asking a range of questions linked to both bureaucratic attitudes and mobilization: Together, I feel that myself and my colleagues can overcome most challenges we face at work (*Collective Efficacy*); I feel that I am fairly compensated for my work (*Material Grievance*); I feel that my profession is highly respected in society (*Social Status*); Through my work, I make sacrifices in order to benefit society (*Intrinsic Motivation*); The quality of services provided by my school/hospital/health center is high, when compared with others in the area (*Pride in work*); I am confident that the quality of public education/healthcare services provided will improve in the next five years (*Optimism.*)

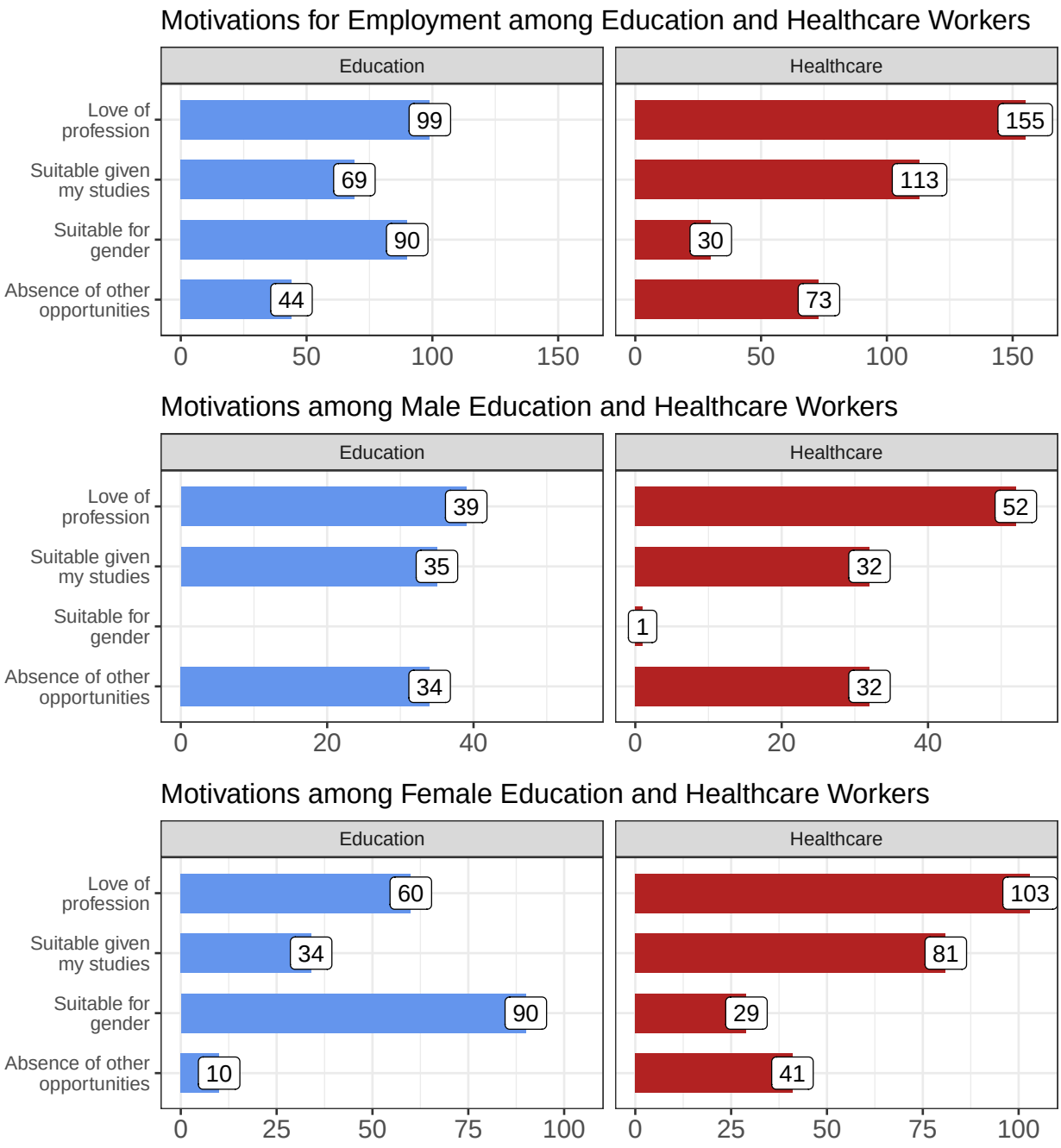

Figure A.7: This figure reports survey respondents' first response to the question, "Why did you choose the profession of education/healthcare?" The top panel shows responses among all respondents, while the bottom panel shows responses among male respondents only. The discrepancy highlights the attractiveness of education careers to women, as working hours allow them to accommodate social norms around caring for family and children and working spaces allow some women to limit social interaction with unrelated men.

A.2.3 Frontline workers often see and publicize corruption in Jordan and are similarly exposed to liberalization

While the logics of selection into teaching and healthcare differ from other forms of state work where clientelistic selection is more common, teachers and healthcare workers nonetheless serve in roles that expose them to politically-relevant information enabling them to to tie their workplace grievances to national-level political grievances, often to powerful effect. In my interviews with teachers and healthcare workers - including in both the public and private sector - those grievances are myriad. But state workers are also likely to tie what they see in the workplace to some of the more politicized topics in Jordan's political economy around corruption, inequality, the role of foreign aid, and the deteriorating quality of public services.

In several cases, teachers have been able to create national-level issues out of seemingly-quotidian controversies. For instance, during the 2019 teachers' strike, teachers forced a major public outcry over the use of Ministry and international donor funds for an education initiative sponsored via a royal foundation. The outcry was severe enough that the initiative dissolved, the Queen issued an extremely rare public statement, and international donors newly channeled the project through government ministries and outside of royally-linked foundations. One teachers' union leader describes the effectiveness of this form of insider critique:

> The government's challenge is that they have gotten used to dealing with parties, to quieting them and dividing them. But they have been surprised by individuals who are independent, activist thinkers with no affiliation, like [this teachers' activist] who speaks from his experience and according to what he sees, honestly and without an ideological background. The government has absolutely no tools to silence those types of people, and that scares them. (Interview 41)

Healthcare workers have also gained national, independent political bona fides for publicizing and problematizing governance-related scandals. In healthcare, one recent leader of the doctors' union gained fame for attempting to block a jailed, corrupt, royally-linked businessman's request to travel to the U.S for "medical care". When the businessman was subsequently spotted shopping in London with his family, the doctor's actions plastered the pages of every semi-independent national newspaper and launched his political career.[20] Doctors I have interviewed have also lobbied criticisms toward the Royal Court's practice of granting "medical exemptions," which allow individuals to petition the court to pay or waive

20. Suha Philip Ma'ayeh, "Fury as convict allowed to leave Jordan", *The National,* April 12, 2011, Link.

their fees for specialized healthcare or surgeries unavailable in public hospitals.[21] Doctors and healthcare workers similarly blamed corruption and underinvestment for the deaths of 10 COVID-19 patients when a public hospital in the city of Salt ran out of oxygen in March 2021.[22] These interviewees point to state employment as a potentially politicizing experience, while underscoring that differences in attitudes are unlikely to explain the different levels of mobilization across sectors.

21. While recent reforms have attempted to make accessing these exemptions more transparent, they are considered a primary way for the regime to reward those in its networks or sanction those outside of them (Doughan 2017), while also limiting the regime's incentive to invest in high quality public healthcare.

22. These instances stretch beyond these two sectors: As Lacouture (2021) details, public sector workers have also successfully publicly pressured the regime over its sale of the nation's phosphates.

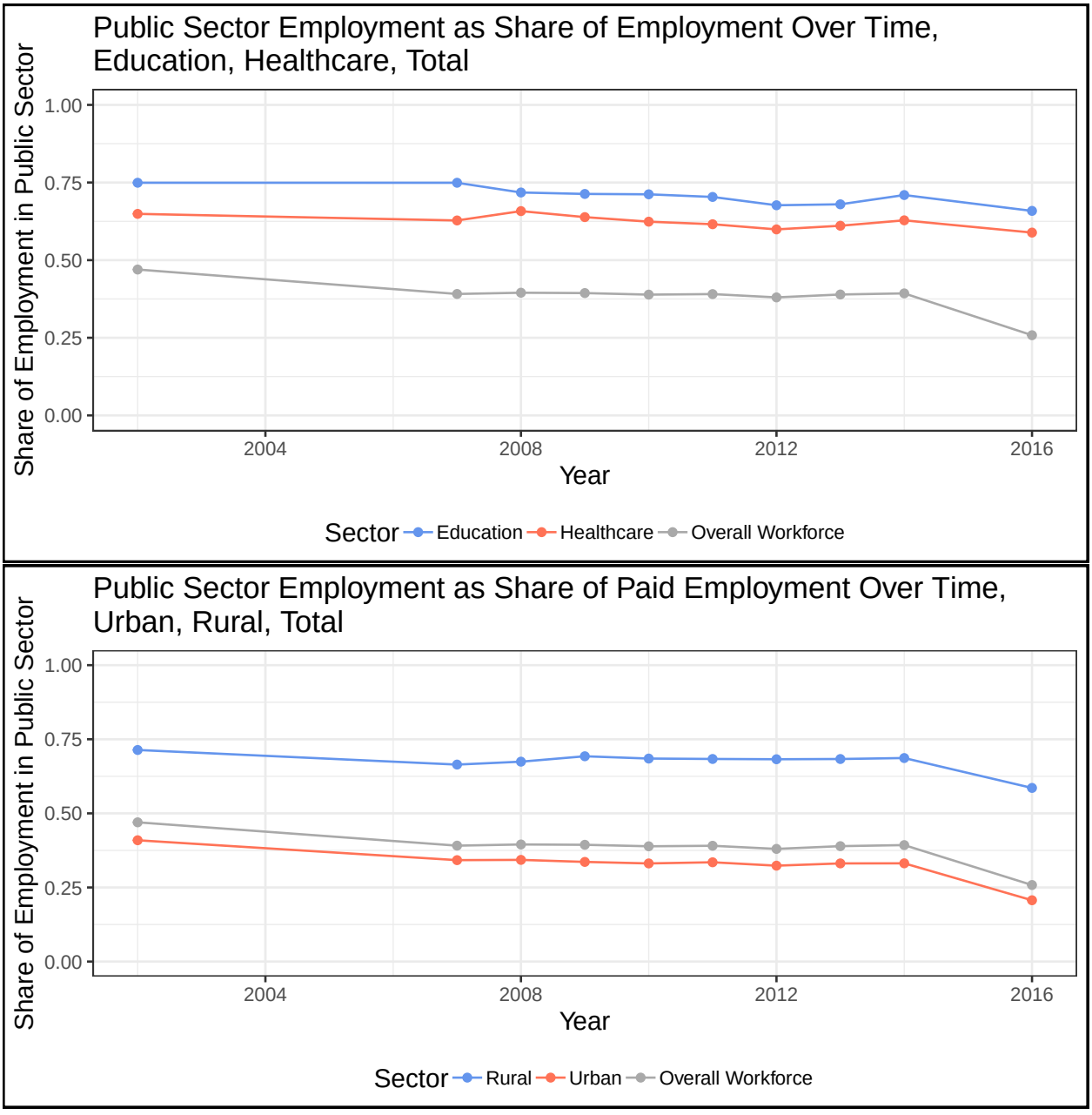

Figure A.8: *Source: World Bank Governance Indicators, Jordan Department of Statistics Labor Market Survey 2002-2016.* These figures report calculations from the World Bank's Governance Indicators making use of the Jordanian census bureau's annual labor market reports. The top pane shows that the share of workers in education and healthcare who are employed by the public sector diminished slightly from 2004 to 2016, though not as much as in the overall economy. The bottom pane shows that even as the government has adopted economic liberalization, the "rural bias" in public employment remains stark.

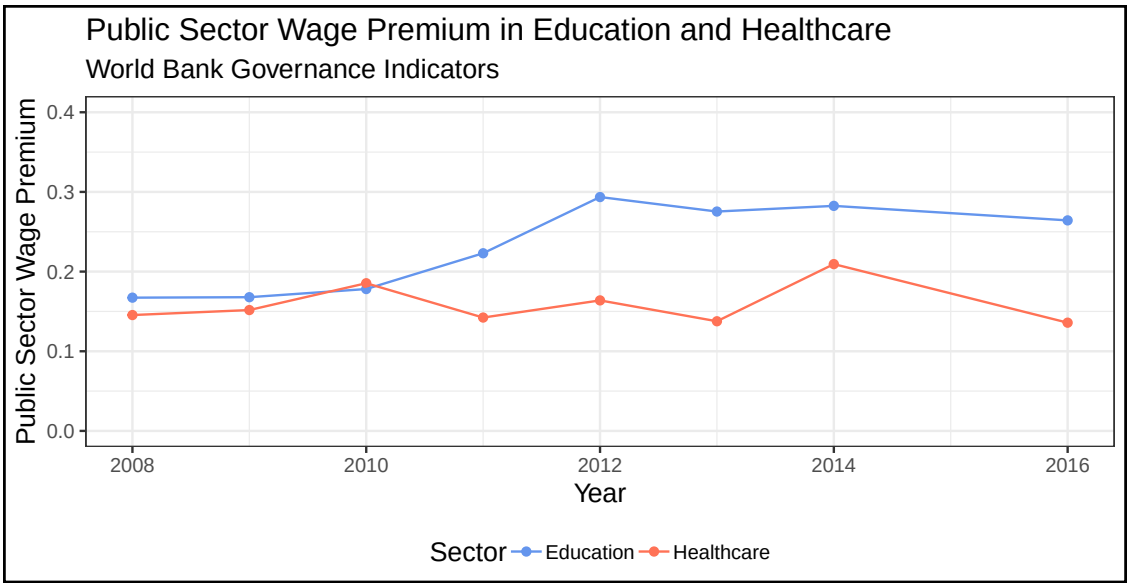

Figure A.9: *Source: World Bank Governance Indicators.* World Bank data shows that both public sector teachers and healthcare workers make more than their counterparts in the private sector. For teachers, this wage premium is higher. This difference increased after 2011, when teachers won a substantial raise as part of the concession that won them full union organizing rights amid the Arab Spring.

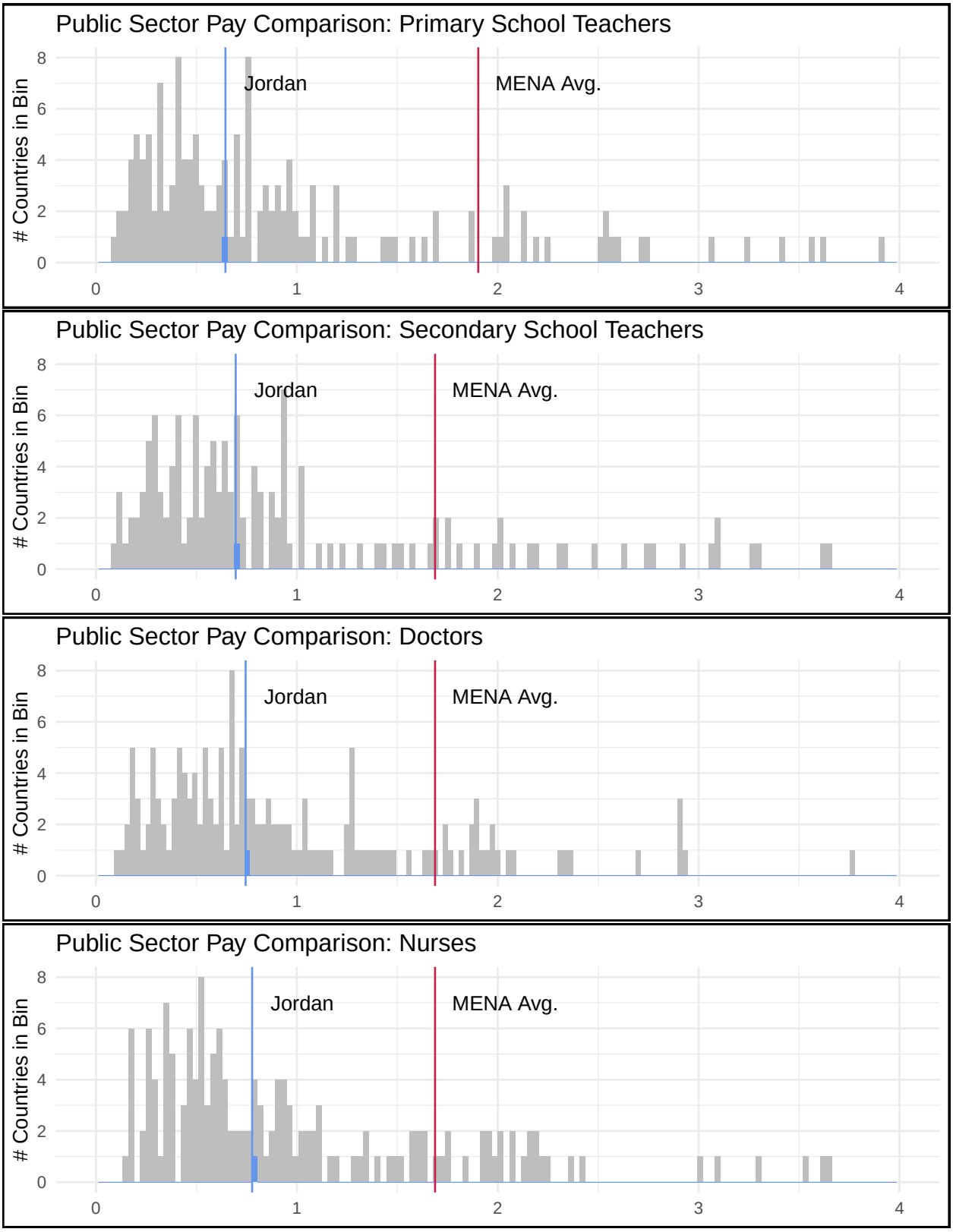

Figure A.10: *Source: Worldwide Bureaucracy Indicators, 2017* These figures report "wages of the indexed occupations within the reference country to the global median for the same category," benchmarked to local purchasing power parity (Baig et al. 2021). As of 2017, Jordanian Primary School Teachers, Secondary School Teachers, Doctors, and Nurses were similarly relatively underpaid in global and regional perspective.

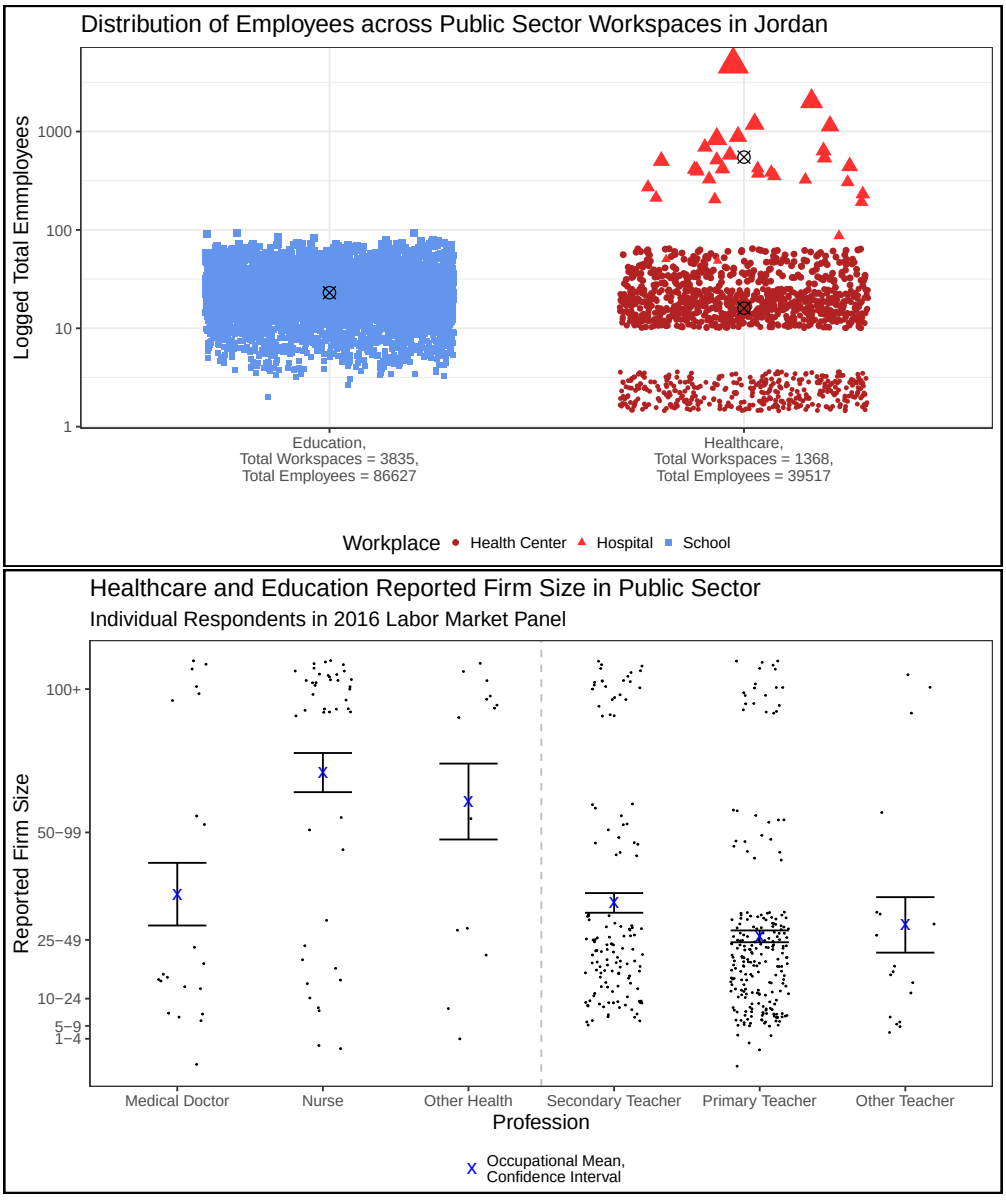

Figure A.11: *Source: Top - Jordanian Ministries of Health and Education. Bottom - Jordan Labor Market Panel Survey* The top figure shows the distribution of employees by workspace in Jordan in 2018. The data for health centers reflects only jittered means. The bottom panel shows the same data broken down further by occupation.

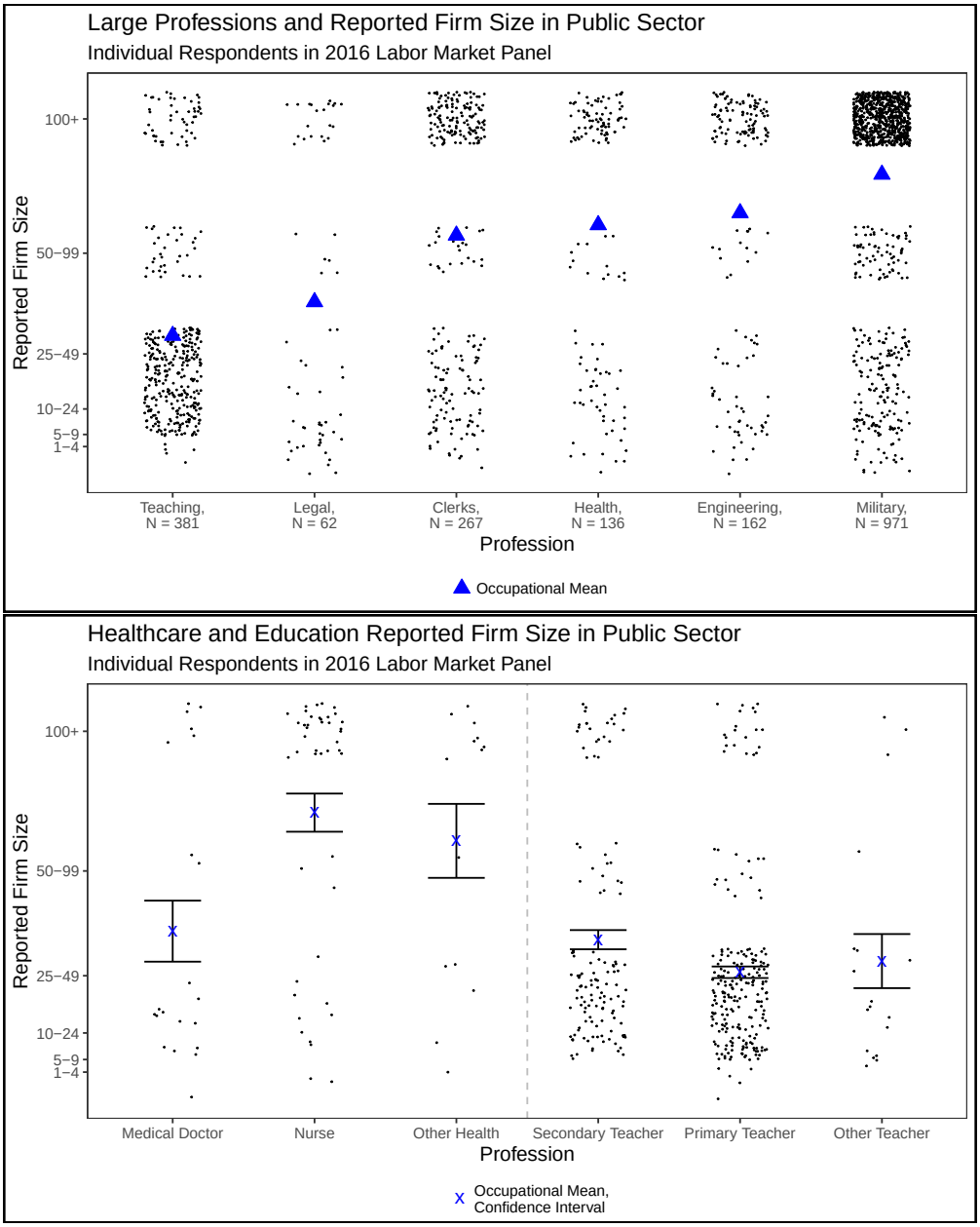

Figure A.12: *Source: Jordan Labor Market Panel Survey, 2016.* Teachers report the smallest firm size of individuals employed in major professions. Occupational means reflect numerical means of categorical variable.

A.3 Strikes and Data on Unionization

(a) Female teachers in Mughayir.

(b) Female teachers in Aqaba.

(c) Male teachers in Amman.

(d) Female teachers in Jiza.

(e) Male teachers in Balqa.

(f) Male teachers in Zaatari.

(g) Male teachers in Madaba.

(h) Male teachers in Tafilah.

(i) Female teachers in Salt.

Figure A.13: Teachers in schools across Jordan share their support for an ongoing 2019 teachers strike outside of their schools.

Public Sector Employment Job Category	Surveyed in 2016 JLMPS	Public Unionization Rate 2010	Public Unionization Rate 2016
Military	989	0.03	0.06
Teaching professionals	390	0.04	0.67
Business and administration professionals	276	0.06	0.19
Clerks	271	0.03	0.06
Science, engineering, electrical	166	0.16	0.2
Cleaners, refuse workers, helpers	163	0.02	0.05
Drivers	148	0	0.08
Health professionals	142	0.26	0.42
Legal	63	0.12	0.26
Construction	36	0	0.06
Hospitality, services, food	26	0	0.04
Total	2670	0.05	0.2

Table A.3: Categories of Public Employment (n $>$ 20) and Unionization Rates, 2010 and 2016 JLMPS

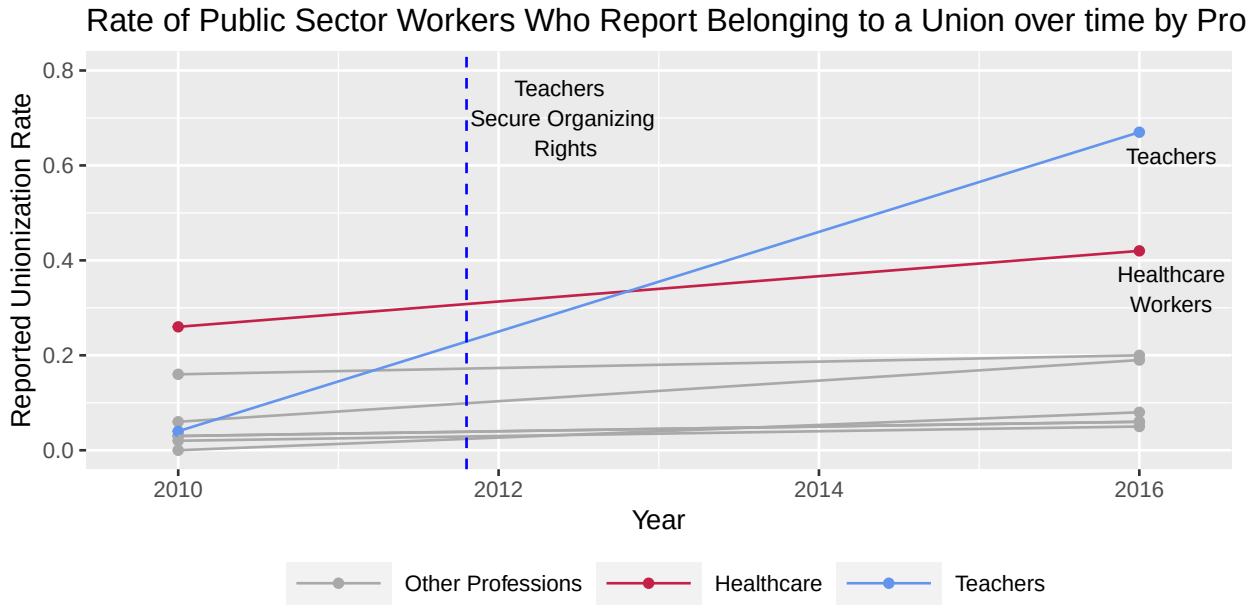

Figure A.14: *Source: Economic Research Forum's Jordan Labor Market Panel Survey.* This figure shows the percentage of individuals in large public sector professions that report belonging to a 'trade union or league' in public sector professions in a nationally-representative survey. After teachers won the rights to a union as an Arab Spring concession, they quickly became the professional group in society most likely to self-report union membership.

A.4 Visualizing Petitions & Alternative Specifications

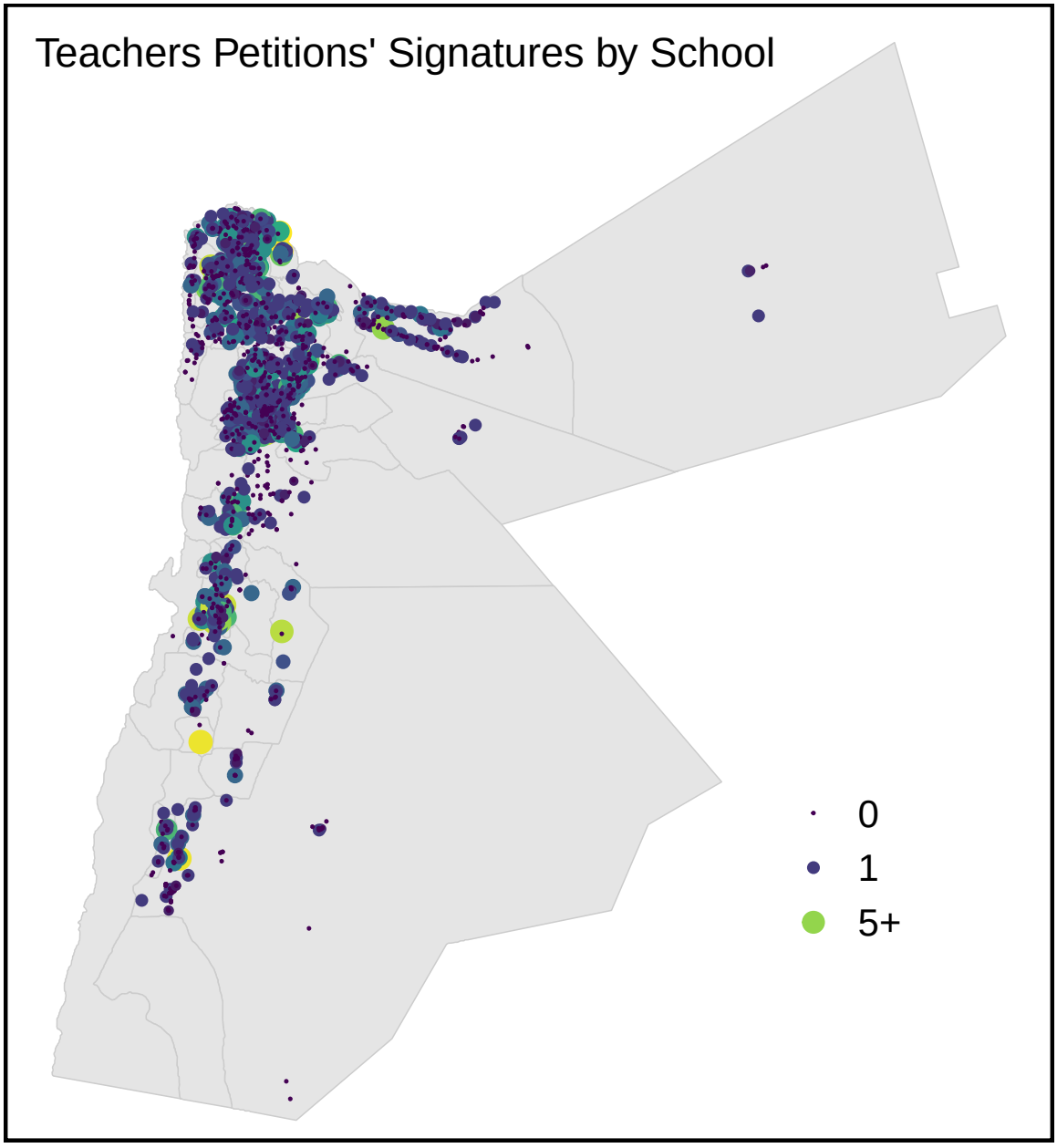

Figure A.15: *Sources: Teachers Petition Signatures and Teachers' Voter File.* While teachers across schools nationally signed the 2021 petition, the largest concentration of teachers signed in the cities of Karak and Irbid, home to notable teachers' union leadership.

Table A.4: Regression analysis using an alternative specification that includes district-level fixed effects similarly shows that teachers' working with sanctioned activists were more likely to publicly support the teachers' union than those with no co-working ties to sanctioned activists, drawing from a petition circulated in the wake of heavy-handed repression of the teachers' movement.

	Dependent variable:			
	Petition Signatures			
	logistic		*OLS*	
	(1)	(2)	(3)	(4)
Activist Co-Worker	0.326***	0.228**	0.015***	0.010**
	(0.118)	(0.107)	(0.005)	(0.004)
Avg. School Ethnicity	0.119	0.041	0.004	0.001
	(0.077)	(0.064)	(0.003)	(0.002)
Male Upper School	0.571***	0.636***	0.022***	0.024***
	(0.060)	(0.049)	(0.002)	(0.002)
Mixed Elementary School	0.396***	0.309***	0.014***	0.010***
	(0.129)	(0.087)	(0.005)	(0.003)
School Size	0.0001	0.001	0.00000	0.00004
	(0.002)	(0.001)	(0.0001)	(0.00005)
Pct IAF Pollplace	0.880***		0.035***	
	(0.315)		(0.013)	
Constant	−3.448***	−3.408***	0.032***	0.034***
	(0.104)	(0.085)	(0.004)	(0.003)
District (n = 42) FE	Yes	Yes	Yes	Yes
Observations	34,984	52,899	34,984	52,899
Note:				*p<0.1; **p<0.05; ***p<0.01

A.5 Visualizing IAF Voter Share and Common Family Names

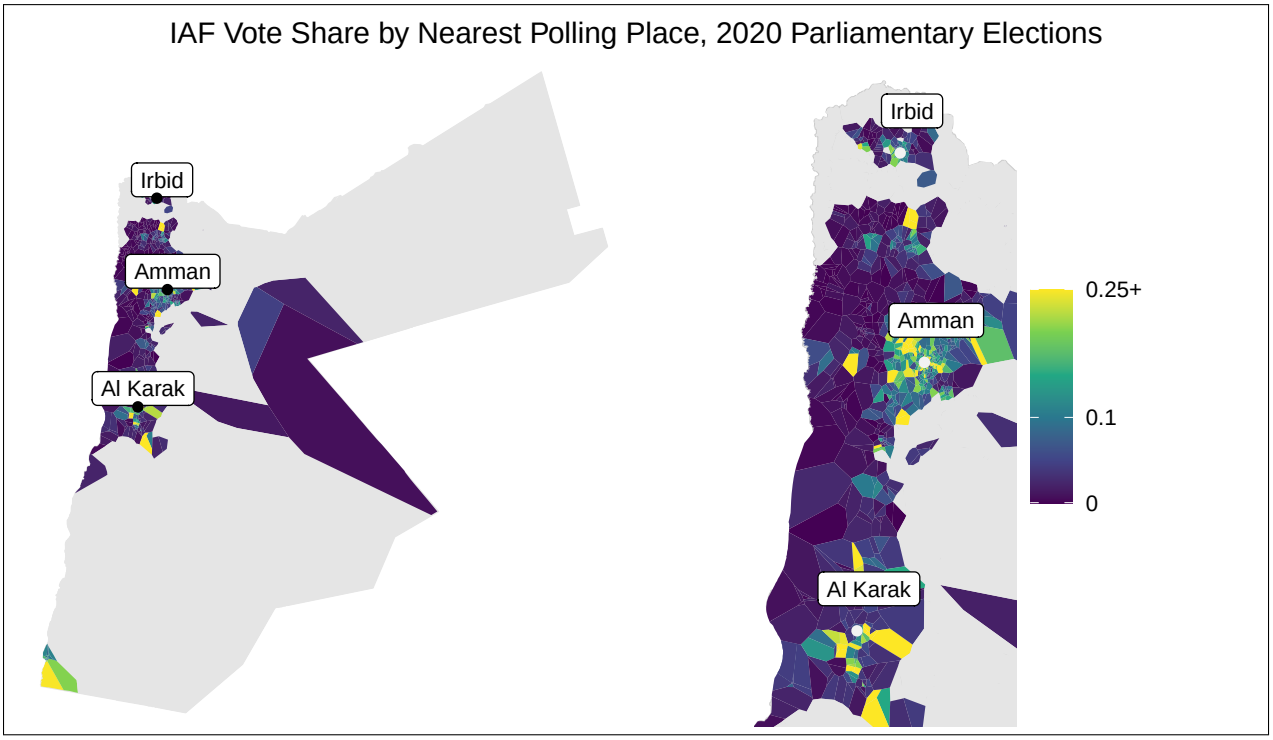

Figure A.16: *Sources: Jordanian elections commission.* Vote share for lists sponsored by the Islamic Action Front in Jordan's December 2020 parliamentary elections. While results are available at precisely the polling place's latitude and longitude, for visualization purposes this map displays results in the closest polling place to any given location using voronoi methods. The IAF sponsored lists in 14 of Jordan's 23 electoral districts.

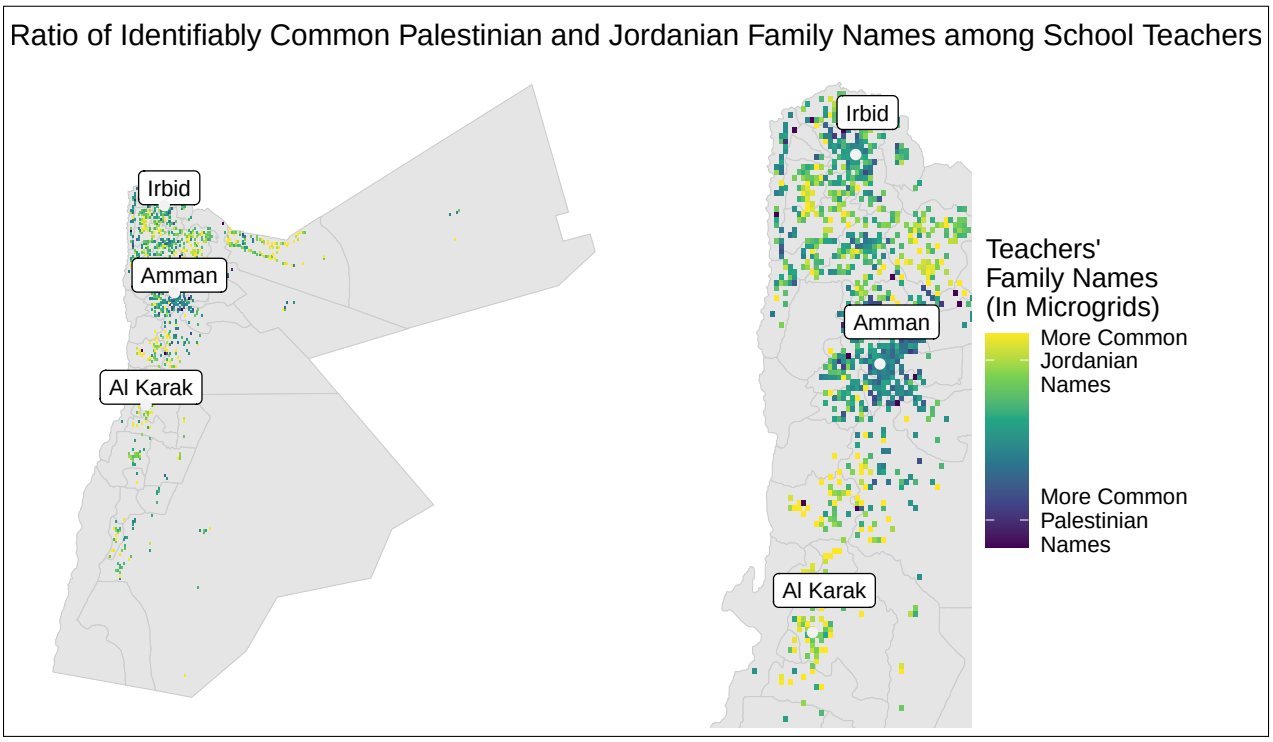

Figure A.17: *Sources: Rabettah.net and Teacher's Union Voter Files.* This map visualizes the ratio of identifiably common Jordanian and Palestinian family names among school teachers listed in the teachers' union voter files. Jordanian and Palestinian family names are drawn from the one hundred most common names for each nationality listed on *rabettah.net*. The visualization accords with a common understanding that Palestinian family names are more common in cities like Amman and Irbid and in schools neighboring Jordan's ten refugees camps, suggesting the validity of the measure.