

State-Society Relations and Sustainable Industrial Growth: The Case of Post-Revolution Tunisia

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STATE-SOCIETY RELATIONS AND SUSTAINABLE INDUSTRIAL GROWTH: THE CASE OF POST- REVOLUTION TUNISIA¹

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Abstract

This paper investigates the effect of state-society relations (SSRs) in the industrial sector on sustainable economic growth in post-revolution Tunisia. The empirical part of the paper mainly relies on qualitative data collected from fieldwork interviews with the most important actors and publications of civil society organizations (CSOs). The paper suggests the presence of state capture as the defining characteristic of SSRs in post-revolution Tunisia. The combination of having powerful tycoons, a weaker state, and ineffectively organized social actors produced conditions that harmed sustainability. These circumstances allowed tycoons to violate environmental regulations and prevented the adoption of green innovation and green technologies. Two important industrial sectors with a notorious record of environmental pollution are studied: the textiles sector and the phosphate extraction industry. In the textiles sector, the comparative power of tycoons and multinational corporations (MNCs) allowed them to neglect regulations against health and safety hazards (HSH). The low value-added of the industry placed tycoons under low pressure to use more environmentally friendly technologies. The relatively lower commitment of international developmental organizations toward environmental hazards reduced the power of environmental CSOs' resistance in the sector. The more labor-saving nature of suggested green technologies could have resulted in less enthusiasm toward these technologies. The prominence of a less dominant and incapable state in the phosphate extraction industry has, on the other hand, enabled environmental CSOs to be more effective in facing environmental violations. The lack of trust and different ranking of priorities between the UGTT and some environmental CSOs prevented the realization of a more productive outcome that would have led to more sustainable operations in the sector.

Keywords: State-society relations, Sustainability, Health and safety hazards, Tunisia, State, Tycoons, Entrepreneurs, Labor, Civil society organizations, State capture.

JEL Classifications: Q53, P52, O44, O43, O5.

ملخص

تبحث هذه الورقة في تأثير العلاقات بين الدولة والمجتمع في القطاع الصناعي على النمو الاقتصادي المستدام في تونس ما بعد الثورة. يعتمد الجزء التجريبي من الورقة بشكل أساسي على البيانات النوعية التي تم جمعها من مقابلات العمل الميداني مع أهم الجهات الفاعلة ومطبوعات منظمات المجتمع المدني. تشير الورقة إلى أن وجود الاستيلاء على الدولة هو السمة المميزة لإصلاحات القطاع الأمني في تونس ما بعد الثورة. أدى الجمع بين وجود أباطرة أقوياء ودولة أضعف وجهات اجتماعية منظمة بشكل غير فعال إلى ظهور ظروف تضر بالاستدامة. سمحت هذه الظروف لأباطرة الأعمال بانتهاك اللوائح البيئية ومنعت اعتماد الابتكارات الخضراء والتكنولوجيات الخضراء. وتجرى دراسة قطاعين صناعيين مهمين لهما سجل سيئ في التلوث البيئي: قطاع المنسوجات وصناعة استخراج الفوسفات. في قطاع المنسوجات، سمحت القوة المقارنة لأباطرة الأعمال والشركات متعددة الجنسيات بإهمال اللوائح ضد مخاطر الصحة والسلامة. وضعت القيمة المضافة المنخفضة للصناعة رجال الأعمال تحت ضغط منخفض لاستخدام تقنيات أكثر صداقة للبيئة. أدى الانخفاض النسبي في التزام المنظمات الإنمائية الدولية تجاه المخاطر البيئية إلى تقليل قوة مقاومة منظمات المجتمع المدني البيئية في هذا القطاع. كان من الممكن أن تؤدي الطبيعة الموفرة للعمالة للتقنيات الخضراء المقترحة إلى تقليل الحماس تجاه هذه التقنيات. من ناحية أخرى، فإن بروز حالة أقل هيمنة وعجزًا في صناعة استخراج الفوسفات قد مكّن منظمات المجتمع المدني البيئية من أن تكون أكثر فعالية في مواجهة الانتهاكات البيئية. وقد حال انعدام الثقة واختلاف ترتيب الأولويات بين الفريق الاستشاري وبعض منظمات المجتمع المدني البيئية دون تحقيق نتائج أكثر إنتاجية كان من شأنها أن تؤدي إلى عمليات أكثر استدامة في هذا القطاع.

1. Introduction

The world is becoming increasingly alarmed by the current extent of environmental degradation as it continues to worsen. Sporadic denial campaigns are retreating in front of the growing realization of the heavy environmental burden, inducing multilateral and international agreements and summits such as the Paris Climate Accords of 2015 and the Sharm El-Sheikh Climate Change Conference (COP27) held in November 2022. In such settings, more democratic systems are expected to be more welcoming to sustainable development objectives, where those suffering from environmental hazards and pollution would expectedly find an effective means for representing their interests in having a better life through various civil society organizations (CSOs), political parties, parliamentarians, and even elected cabinet ministers. Such an assumption withstood the shock that followed US President Donald Trump's withdrawal from the Paris Accords, an action that was reversed by his successor President Joe Biden shortly after assuming office in 2021.

Agreeing with these assumptions, the democratization of Tunisia seemed to go hand-in-hand with the greening of the country's developmental efforts. Enormous international developmental aid, especially from the European Union (EU), flew to the country in the aftermath of the Jasmine Revolution of 2010-11, much of which targeted the creation of a more environmentally sustainable economy. CSOs were freed from the oppressive grip of the former Ben Ali regime, and new CSOs with an environmental mission evolved. Nevertheless, social protests for environmental issues have intensified. Further, accounts of major violations of environmental regulations and laws and inadequacy in the legal framework governing environmental issues kept flowing a decade after the revolution and the accompanying democratic transformation. The Tunisian industrial sector was responsible for much (if not most) of the activities that brought about the public frustration fueled by environmental issues.

This paper investigates the effect of state-society relations (SSRs) on the sustainable development of the industrial sector in post-revolution Tunisia. SSRs are investigated based on the power dynamics governing the interaction among the main actors, identified here as the state, businesspeople, labor, and environmental CSOs. Tunisia provides a very interesting and rich case study. The intense political and social struggles in the country's democratic transition produced a unique situation in the whole region. Despite the increase in political freedoms and association rights, environmental hazards still pose a major challenge to the population and particularly to industrial labor. The ambiguity increases when looking at the massive international developmental assistance that poured into the country following the revolution, where many of the major donors and aid providers, such as the EU, had a clear green agenda.

The paper suggests the presence of state capture as the defining characteristic of state-business-labor relations (SBLR) in post-revolution Tunisia. This refers to a situation where big businesspersons (or tycoons) dominate the state and other social actors are weaker, despite the freedom of association that a more open political system provides (see Hellman et al., 2003; Innes, 2014; Sabry, 2022a). The combination of powerful tycoons, a weaker state, and

ineffectively organized social actors produced conditions that harmed sustainability and exposed the population, especially labor, to environmental hazards. Tycoons were able to violate environmental regulations, and the adoption of green innovations and technologies was discouraged. Two industrial sectors that are crucial for the Tunisian economy and have notorious records of environmental pollution are studied with reference to the main actors in SSRs: the textiles and phosphate extraction industries. The empirical part of the paper depends on qualitative data collected from fieldwork interviews and publications of CSOs, as well as other available academic publications.

The paper starts with a theoretical perspective exploring how SSRs affect sustainable development, with a focus on state capture as a relevant SSR mode for the Tunisian case. Some hypotheses are formulated accordingly, followed by the methodology section. Then, the paper examines the case of Tunisia and analyzes the two identified two sectors. Finally, the paper concludes.

2. Theoretical perspective SSRs in transition

Many works in the literature discuss how major changes accompanying the transition to democracy affect economic outcomes. Special attention is given to state-business relations (SBRs), but some works also address the wider scope of SSRs.

Democratization is believed to shift the power balance among different state-society actors to the advantage of social players. Authoritarian regimes are likely to produce a dominant state vis-a-vis social actors, even if it favors one social actor at the expense of others as is the case in crony capitalist orders, where business tycoons are privileged but subservient and loyal to the state (Sabry, 2022a). In more democratic countries, however, social actors are freer to organize, and with the help of independent business associations, labor unions, and other forms of civil society organizations, there are more balanced power dynamics in place. The degree of such a balance depends on the degree of democratization and other different conditions that shape the resulting power allocation. Democracy often gives more power to tycoons relative to other social players and even relative to the state. The literature refers to this case as state capture, and it is more common in countries experiencing a transition to democracy (Hellman et al., 2003).

State capture refers to a situation where tycoons dominate the state, influence policymakers, and mold policies to fit their interests at the expense of other actors (Adly, 2010; Enderwick, 2005). It is likely to emerge from a relatively more democratic system that, however, has inadequate levels of political liberalization. These conditions enable the capture of the state through tycoons' involvement in funding election campaigns and various other means (Hellman et al., 2003; Innes, 2014). Other social actors normally have more space to aggregate their power and organize independently from the state. Yet, certain obstacles prevent them from amassing enough power to balance tycoons' power. The managers and owners of small and medium enterprises (SMEs), who would be referred to here as "entrepreneurs" to

differentiate them from tycoons, have several organizational dilemmas that prevent them from effectively operating as a collective actor. This includes the likely dominance of tycoons over various business associations (Bennett, 1998). It also includes entrepreneurs' likely workplace isolation (unlike labor) and their reduced capability to fund election campaigns (unlike tycoons) or offer substantial voting votes to politicians (unlike labor) (Shadlen, 2002). The prevalence of a substantial informal private sector dominated by SMEs in developing countries is a further point to be considered. Labor also suffers from collective action problems, including fragmentation along industrial sectors, skills, and other differentiating lines (Reich et al., 1973; Streeck, 2009). The presence of a sizable informal sector in developing countries again decreases labor's collective power (Schneider, 2009). Similar obstacles for CSOs could be anticipated, especially when speaking about environment-oriented organizations operating in developing countries. This might include fragmentation, possible conflicting interest representation, lack of funding, and low public awareness.

3. Tunisia's transition and state capture

There are several reasons why SBLRs in post-revolution Tunisia until 2021 could be described as state capture.³ The Tunisian state in the post-revolution period was generally weaker than it had been before 2011. A number of factors contributed to this outcome. One of the leading factors was the Islamist-Secularist polarization that reached its climax in 2013 and continued thereafter to cause constitutional deadlocks; frequent cabinet changes; general political instability (Carboni, 2022; Tamburini, 2022); power fragmentation and the struggle between the president and the ministry; and, ultimately, the state's inability to implement "a coherent long-term economic strategy" (Paciello, 2013). The bureaucratic apparatus was an arena contended between the two competing political powers, with each party trying to infiltrate and control it (Boubekeur, 2016). Moreover, the administration that persisted – and many elements of which were represented as independent technocrats (Carboni, 2022) – had inherent sentiments against the Islamist Al-Nahda party, which contributed to reform blockage and diminished government effectiveness (Marzo, 2019). This fragmentation and polarization also paralyzed the parliament and negatively affected its legislative role. The popularity of the political parties and the meaning of political electoral competition also diminished with the increase in technocratic elements in ministries, which were increasingly used as a consequence of power fragmentation (Carboni, 2022). The disappointment with the political system was translated into lower voter turnout (Aliriza, 2020; Carboni, 2022; Marzo, 2019).

Against this background, tycoons' power was freed from the constraints of the Ben Ali state. At the same time, they maintained connections with the administration that survived the fall of Ben Ali. They joined dominant political parties, funded electoral campaigns, and won parliamentary seats (Oubenal and Ben Hamouda, 2018). They also controlled a significant part of the banking system (Oubenal and Ben Hamouda, 2018). However, their control over the biggest and only accepted representative of business interests in economic and social dialogues,

³ For a more detailed discussion, see Sabry (2022b).

the Tunisian Union for Industry, Commerce and Handicraft (UTICA), is debated (Sabry, 2022b).

Democratization also opened the way for entrepreneurs to organize and defend their interests. However, the role of the UTICA in this regard is, again, debatable. Further, the Confederation of Citizen Enterprises of Tunisia (CONNECT), the business association that is more representative of SMEs, was denied representation in economic and social dialogues (Sabry, 2022b). On the other hand, democratization unleashed the power of the biggest labor union in Tunisia, the Tunisian General Labor Union (UGTT), which evolved into a dominant political player and the most organized social actor. It mainly represented public sector workers and was less representative of private sector workers. Despite the emergence of other unions in the aftermath of the revolution, the UGTT had the exclusive right to represent labor interests in social dialogues.

With the diminished power of the state and the boosted and more dominant power of tycoons, post-revolution Tunisia seemed to reproduce the conditions of state capture. Such a development is not uncommon for countries undergoing a democratization transition. Nevertheless, what was rather special about the Tunisian case was the almost matching power to tycoons of labor unionism represented by the UGTT. The presence of the union was rather limited in the private sector and was specifically powerful in the public sector, suggesting that both tycoons and the UGTT were dominant in their respective fields of influence.

4. State capture and sustainable development

SSRs shape policies. Power dynamics within SSRs affect the formulation and/or the actual implementation of industrial policies and ultimately affect sustainable growth through this mechanism. The main focus here is on policies on health and safety hazards (HSH), on the one hand, and innovation and technology, on the other hand. Formulated and – more importantly – implemented policies in these two areas affect the level of sustainable development.

How would the power dynamics in state capture impact sustainable development? Tycoons' power allows them to control state resources, whether natural resources, legislations and regulations, or licenses and permits. They are more likely to pressure for the formulation of favorable regulations and policies (Enderwick, 2005; Hellman et al., 2003; Hellman and Kaufmann, 2001). The stronger their power and the weakness of the other contending social actors and the state, the more their expected gains. Yet, tycoons do not always act as a unified collective actor. As pointed out by Schneider (2005), tycoons' lobbying on the legislature is more likely to be fragmented and to seek individualistic gains and the allocation of resources, and less likely to seek broader policy change or reform. This could be rather minimized when broad-based cross-sectoral associations exist, where these business associations could contribute to building consensus among tycoons (Shadlen, 2002). Hence, in state capture, tycoons are more powerful than other social players but there are many limits to their power,

including other social actors' organizational power and inter-tycoons' conflicting interests when they cannot act collectively.

Tycoons' power could be exercised by blocking the enactment or implementation of legislations and regulations less favorable to their interests. There is a gap that often exists between policy enactment and implementation. Lemos' (2017) study on the US suggests that accountability measures are harder to enforce with the implementation of policies and regulations in comparison to their enactment. Furthermore, the contacts between lobbyists and state enforcers are largely unregulated. Democratization should foster political accountability, yet some conditions in political systems that are not mature could arguably shield tycoons' practices by protecting their partner officials from being accountable.

Health and safety regulations should be strongly defended by labor. The International Labor Organization (ILO), which represents trade unions on a global scale, is an ardent defender of labor against HSH in the workplace and has set occupational safety and health standards that are ratified by many countries (ILO, n.d.). Trade unions should be supported by environmental CSOs, where the latter's role would be specifically important in raising awareness of environmental issues, even among labor. In terms of lobbying for these sets of policies, labor unions would be more influential, but CSOs could also play an important role through their connections and communications with the government and the ministries handling environmental issues. The role of CSOs would be amplified by foreign donors' assistance, especially when they operate in developing countries that depend heavily on foreign aid and assistance. The EU is especially active in supporting environmental policies internationally (EU, n.d.). The enactment and implementation of health and safety regulations are expected, however, to meet much resistance from both tycoons and entrepreneurs given the costs that are likely to accrue with the enforcement of these policies. It is expected that such resistance is fiercer the more the country depends on low value-added activities and its export goods are more cost-sensitive. Tycoons' upper hand in state capture suggests that they would hinder the enactment and/or the implementation of health and safety regulations. Thus:

Hypothesis 1: The higher the power of tycoons vis-a-vis the state, the lower the enactment or implementation of environmental laws.

Hypothesis 2: The lower the value-added generated by an industrial sector in state-captured countries, the lower the enactment or implementation of environmental laws.

Tycoons' success in doing this depends, however, on the power of the resisting coalition composed of labor unions and environmental CSOs. The power of these CSOs, and their possible coalition with labor unions, would be fostered by the openness of the country to international aid and especially from countries and organizations with a green mission, such as the EU. Hence:

Hypothesis 3: The more open a democratic country is to developmental aid from partners committed to a green agenda, the higher the power of environmental CSOs.

Moreover, in sectors that tycoons do not dominate, the resistance of environmental CSOs and/or labor would likely be stronger and more effective. Therefore:

Hypothesis 4: The less the sector is dominated by tycoons, the higher the resistance and effectiveness of the resistance of environmental CSOs and their environmentalist coalition with labor unions.

State capture might be detrimental to innovation and technology upgrading, with green technology not being exceptional. Green innovation refers to innovations that result in less pollution, besides other objectives such as energy saving, green product design, waste recycling, and/or corporate environmental management (Chen et al., 2006, p. 332). Innovation in this regard could refer to product or process innovation, where the latter refers to major changes in production and distribution methods (Sdiri, 2022). Tycoons might choose to defend their market share by lobbying for strict regulations. Accordingly, SMEs would be denied from easily entering the market and trying to acquire significant market share through innovation. This could also be true for green technologies and innovation. Even in the presence of a more welcoming culture, there would likely be fewer incentives to win market share by using the appeal of green technologies and innovation when the market entry is rather blocked and reserved for incumbents. Thus:

Hypothesis 5: The less competitive the market, the less adoption of green innovation and technologies.

On the other hand, labor could be a rather active actor standing against green technology adoption and innovation. Generally speaking, labor-saving technologies would be resisted by powerful labor unions whenever they feel endangered (see Frey, 2019). Strong labor unions were accused of rent-seeking that limits enterprise research and development (R&D) spending and thus hinders innovation, with some empirical evidence supporting this claim (Bradley et al., 2017). Yet, other works argue that this should not always be the case and that other factors, such as market size and labor demand elasticity, play a role (Calabuig and Gonzalez-Maestre, 2002; Dowrick and Spencer, 1994). Therefore, green technologies that are more labor-saving and spending on R&D to innovate greener technologies and techniques might be resisted if they affect workers' material gains, even if they minimize HSH.

Hypothesis 6: The more labor-saving (capital-intensive) green technology is, the more likely it is to be resisted by labor.

5. Methodology

The empirical work of this paper largely depends on qualitative data collected from several interviews conducted mainly with members of the government (Ministry of Environment), business associations (UTICA and CONECT), the main Tunisian labor union (UGTT), local branches of EU development cooperation organizations (GIZ), and Tunisian and international CSOs (FTDES, Rosa Luxemburg Foundation, Fredrich Ebert Foundation, Heinrich Böll Foundation, HIVOS, and Advocate Sans Frontier) during several field trip visits to Tunisia in 2022. The interviewees are anonymous and agreed to be referred to using their organizational affiliation. Details about the interviewees are reported in the Appendix. Secondary sources, including statistical data, are obtained from various publications and datasets, including the publications of CSOs and international organizations.

Given the peculiarities of the Tunisian case, tycoons in this research refer to big Tunisian business families who control a big market share or significant market shares in different sectors. Big Tunisian families often have holding groups with various enterprises operating in different sectors (Oubenal and Ben Hamouda, 2018). The individual enterprises controlled by these holding groups are not necessarily large firms and could actually be SMEs, at least in terms of employment (Sabry, 2022b). Thus, the term ‘entrepreneurs’ here refers to owners and managers of SMEs that are not part of large holding groups.

Multinational corporations (MNCs) are another important constituent of tycoons. These enterprises are largely from the EU, particularly France, Germany, and Italy, since these countries dominate foreign direct investment in Tunisia (Guesmi and Moisseron, 2018).

6. The Tunisian case

6.1 General outlook

After the revolution, many policy initiatives and funding opportunities that were strongly supported by foreign donors and international development organizations targeted the creation of a more sustainable economy and industrial sector. The 2014 Constitution accounted, in an unprecedented way (Mabrouki and Ben Othmane, 2022), for environmental rights in its articles 44 and 45 on the right to clean water and a good environment, respectively (Labiadh and Gaaloul, 2022, p. 14). Tunisia also signed a number of international agreements that targeted the realization of more sustainable economic development.

Nevertheless, sustainable development in Tunisia is still in a rather dissatisfactory position. Various indicators reveal this, some of which are reported in Table 1 and Figure 1. The levels of particulate matter (PM_{2.5}) have generally increased by more than 10 percent between 2001-05 and 2016-20, although the figure stays below the average figures of the Arab World, middle-income countries, and the world. The percentage of the population exposed to at least 35 micrograms per cubic meter – which is far above the level accepted by the World Health Organization (WHO) guidelines of 10 micrograms per cubic meter – increased by about 68

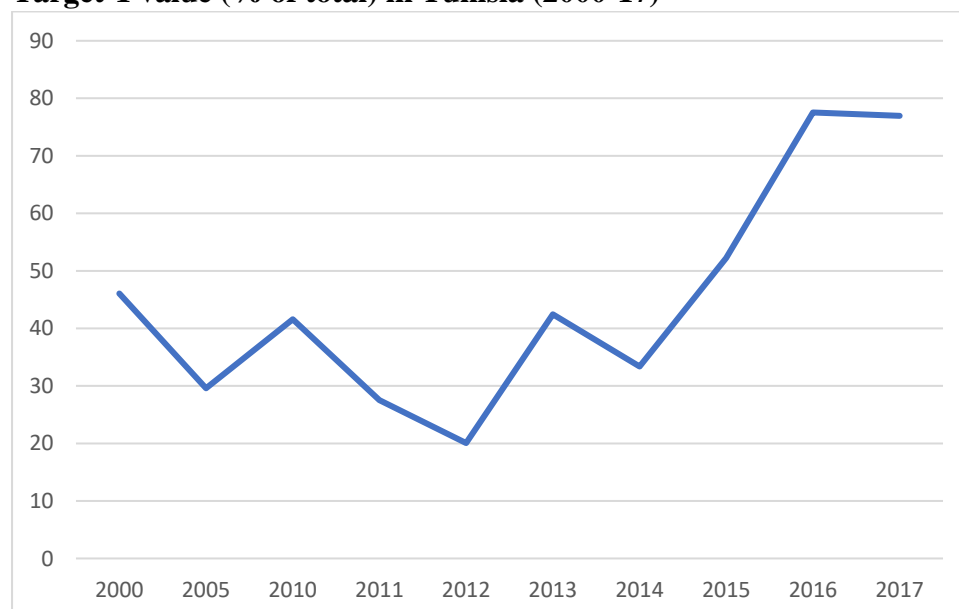
percent in the same period, exceeding 77 percent. Different CSO publications, however, suggest the presence of even harsher environmental problems.

Table 1. Tunisia’s performance in some environmental indicators in a comparative perspective

		PM2.5 air pollution, mean annual exposure (micrograms per cubic meter)	PM2.5 air pollution, population exposed to levels exceeding WHO guideline value (% of total)	PM2.5 pollution, population exposed to levels exceeding WHO Interim Target-1 value (% of total)
	2001-2005	34.58	100.00	46.07
	2006-2010	35.55	100.00	41.58
	2011-2015	34.67	100.00	35.13
Tunisia	2016-2020	38.05	100.00	77.25
	2001-2005	52.73	100.00	..
	2006-2010	53.79	100.00	..
	2011-2015	54.60	100.00	..
Arab	2016-2020	58.73	100.00	..
	2001-2005	55.07	99.38	..
	2006-2010	59.03	99.36	..
Middle income	2011-2015	55.84	98.97	..
	2016-2020	52.45	97.94	..
	2001-2005	47.15	95.33	..
	2006-2010	50.25	95.14	..
	2011-2015	47.90	93.85	..
World	2016-2020	45.35	91.32	..

Source: Author’s calculation using data from the WDI (World Bank, n.d.).

Figure 1. PM2.5 pollution, population exposed to levels exceeding WHO Interim Target-1 value (% of total) in Tunisia (2000-17)



Depending on data from the WDI (World Bank, n.d.).

Two main factors could be identified here as being responsible for the persistence of low sustainability in the post-revolution period. These are suggested to be the easiness of violating environmental laws and regulations, and the obstacles facing innovation and technological upgrading in general and in terms of green technologies in particular. Both factors are a consequence of state capture characterizing SSRs in the post-Jasmine Revolution Tunisia.

Even if Tunisia was among the first international signatories of international agreements on human rights and environmental issues, the enactment of laws was rather slow, as pointed out by ASF1. FTDES1 argued that tycoons' violations are enabled by the way environmental laws were written, whereby their application is rather voluntary. An FTDES report noted that enacted laws are not compatible with Tunisia's signed commitment to international standards. For instance, the social responsibility of enterprises (Law 35 of 2018) was written in a vague way, and abiding by it is voluntary rather than mandatory. Furthermore, incentives or supportive measures were not identified (Al-Zayer, 2021). MINENV1 affirmed that even if legislations and regulations related to production wastes are mandatory, the application of environmental regulations and laws are voluntary in the parts related to industrial inputs and issues related to excessive resource use. While projects that are funded by the EU are usually required to submit environmental and social impact studies before starting operating, domestic projects are not. The Ministry of Environment is currently working on these issues, according to the interviewee; yet the fact remains that until now there is much room for major environmental mischiefs that are not criminalized.

Regardless of the voluntary or mandatory nature of environmental laws and regulations, significant violations exist. According to FTDES1 and ASF1, MNCs often violate HSH regulations. On the other hand, both interviewees agreed that SMEs missed resources that would enable them to effectively implement the regulations. Environmentally friendly activities, they suggested, should rather be subsidized by the state.

Standing on the other side of the equation, labor, as the main bearer of the consequences of environmental violations, is a candidate for presenting a balancing force. The UGTT strongly protects the social rights of labor, especially those of the public sector (Aliriza, 2020). It even managed to increase public sector employees' salaries despite post-revolution economic hardships (Vatthauer and Weipert-Fenner, 2017). As pointed out by RLS1, the restructuring of state-owned enterprises (SOEs) is often subject to wide discussions; yet nothing takes place. The UGTT resists the calls for downsizing SOEs or disposing of extra workers, according to FTDES1. The UGTT fights hard to preserve the jobs of public sector employees and obstruct the privatization of SOEs. The union's resistance to public-private partnerships and private investment projects in the renewable energy sector is interpreted by some as a defensive action out of fear of the ultimate privatization of STEG, the SOE responsible for energy provision in Tunisia (Ben Rouine and Roche, 2022).

The UGTT has various means of influencing the enactment and stricter implementation of environmental regulations and laws. According to UTICA1, there are regular meetings and

strong cooperation between the UGTT and the UTICA, the main and only accepted official representative of businesspeople in social and economic negotiations. Both sides settle most issues through mutual negotiations, and sometimes the government intervenes to settle the remaining issues of disagreement between both sides. There are sectoral agreements between the UGTT and UTICA, but there is also the recently established National Council for Social Dialogue that was created in 2018 on the national level by the government, UGTT, and UTICA. The interviewee attested that the UGTT is more powerful than UTICA in terms of connections with decision-makers. This opinion is supported by UGTT2 accounts that the state administration is represented in the UGTT and functionaries are allowed to be part of the union. Given such settings, one might anticipate that the UGTT had the means to compel businesspeople, tycoons, and entrepreneurs alike to follow regulations against HSH and the state to strictly implement these regulations.

Nevertheless, despite the effective interest representation of the UGTT for labor and especially for public sector employees, the support of the union for protection from HSH seemed in doubt. UGTT1 and UGTT2 asserted that the union is increasingly supporting environmental issues. UGTT2 affirmed the union's commitment to environmental issues, especially those stressed on by the ILO, international trade union movements, and the United Nations (UN) sustainable development goals (SDGs). Nevertheless, both UGTT interviewees asserted that the union is often faced with a dilemma between defending social rights, the right to have a secured job, and the environmental rights of labor.

CSOs seemed to have a clearer assessment of the priorities set by the UGTT and where the rank of the commitment to environmental issues was positioned. FTDES1 and ASF1, on the other hand, stressed that the UGTT doesn't seem to set protection from workplace environmental hazards as a welfare objective, attributing this to a lack of awareness. On the contrary, FES1 believed that the UGTT is aware of this but is rather incapable of doing anything. If the UGTT pushed for abiding to regulations, enterprise owners would threaten to close down. There was an incident where this indeed happened, and the people blamed the UGTT. Thus, as asserted by the ASF1 ranking, environmental rights were in third place among UGTT's priorities after employment and economic and social rights.

According to UGTT2, the union was also marginalized in policymaking on environmental issues. The state refrains from inviting them to policy consultancy meetings, and when it does, this is done for optics and in a less serious fashion, often to appease international development organizations that require the participation of the UGTT. The interviewee asserted that this is the case although the union has access to the administration, where public functionaries are members of the UGTT. Information asymmetry allows state officials to manipulate UGTT's participation in policy consultancy and render it ineffective, said UGTT2. Agreeing with his assessment, MINENV1 pointed out that the UGTT is not part of the steering committee for the project the interviewee is responsible for at the Ministry of Environment, despite having representatives of business associations and CSOs. The interviewee attributed this to administrative issues related to how the UGTT is structured.

Unlike the UGTT and other labor organizations, environmental CSOs seem to have a more focused mandate to promote the protection of labor from HSH at their workplace and in their local community. The Tunisian Forum for Economic and Social Rights (FTDES) is a CSO that emerged after the revolution. It is active in the field of environmental rights by mainly pursuing activities aiming at raising awareness but also by taking part in organizing social protests and encouraging litigation against violators (Mabrouki and Ben Othmane, 2022). Another CSO active in the field is the Tunisian branch of the international Lawyers Without Borders (ASF). The CSO is active in raising awareness on environmental issues; it targets judges and is working on raising awareness on these issues among a new generation of judges, as asserted by ASF1.

Despite the acknowledged support that international organizations promoting environmental issues provide for CSOs, there are often complaints that it is rather insufficient. FTDES1 complained that the recommendations given by big international organizations do not often come with the needed enforcement capacity to ensure continuity. The developmental projects that these organizations sponsor last only for a few years and then reach their conclusion. The funding provided by these projects is temporary or limited in comparison to challenges. As suggested by ASF1, the effect is rather limited to creating exemplary cases (e.g., enterprises), and then the state is expected to put environmental policies in place.

What further complicates the task of environmental CSOs is the mutual distrust between the UGTT and some of these CSOs. UGTT2 expressed his doubts about some of the foreign-funded and politically-motivated CSOs, asserting that UGTT was pleased to collaborate with what the interviewee referred to as national CSOs. FTDES1, on the other hand, believed that environmental issues are not the first on the list of priorities of the UGTT. HBS1 assessed UGTT's commitment to environmental issues as insufficient, despite its participation in different events on the environment.

There are two means by which environmental CSOs try to influence the state and policymaking. The first is through direct or indirect communication with the state. The Ministry of Environment is one of the most likely targets for environmental CSOs. MINENV1 pointed out how the Ministry of Environment invites environmental CSOs to the steering committee of one of the projects – the structure of which was similar to other ministry projects – with other candidates such as UTICA and CONECT also invited. Environmental CSOs have, however, only one vote out of 19 votes. HBS1 affirmed that the state often invites environmental CSOs to different events and listens to their recommendations. The process, however, is less institutionalized, depends on the minister in office, and is likely to be more informal. Moreover, discussions with environmental CSOs often fit optics purposes to appease donors. CSOs also used to communicate with parliamentarians. Yet, this route was no longer possible after the disbandment of the parliament and the suspension of constitutional political mechanisms after 25 July 2021. Another possible but indirect route of communication is through international donors who often listen to the assessment of environmental CSOs. This indirect route also

became less possible with the rise of the nationalist (populist) rhetoric in the post-2 July 2021 political scene. Together with claims of defending national sovereignty from foreign influence, CSOs are increasingly facing repressive laws against their activities. In any case, the interviewee's account suggests that environmental CSOs' influence on policymaking is rather limited, either because the state functionaries lack the capacity to effectively conduct a real partnership in policymaking with civil society, or due to their willingness to formulate policies more independently from CSOs while at the same time maintaining CSO participation to appease international development cooperation partners and donors.

The second route for environmental CSOs to influence the state is more confrontational through social protest and litigation. An FTDES report pointed out that social protest because of environmental issues was insignificant before the revolution and grew exponentially thereafter. Before 2011, social protests had focused mainly on social welfarist agendas. In post-revolution Tunisia, police repression was no longer used against such protest as it had been the case under Ben Ali. Environmental social protests have also coincided with rising awareness of environmental issues. They also took different forms, such as demonstrations, sit-ins, and litigation that protestors sometimes won against violating industries, even when the rulings were not always implemented (e.g., the *Menich Msab* campaign) (Labiadh and Gaaloul, 2022).

On the other hand, the state also seemed incapable of enforcing environmental regulations, especially at the peripheries. According to FTDES1, local governments (*baladyat*) have limited power. The law gives them rights and obligations, but they do not get enough funding. They also show little concern for environmental issues in their implemented projects. The irony is that even green technologies seem to be responsible for some of the HSH in local communities. FTDES1 pointed to the Bourg Salhi project, where windmills were placed too near to homes and damaged the agricultural activity of the local community.

The second factor indirectly affecting sustainability in Tunisia is the overall problematic conditions facing innovation and technology upgrading, including green technology, in the country. International and EU organizations channeled and provided much assistance to realize a better business climate that should have encouraged innovation and technological upgrading, including the adoption of more environmentally friendly technologies. Nevertheless, the market remained restrictive for the growth of SMEs in many industrial sectors (Mouelhi and Ferchichi, 2017).

This is attributed to various reasons. The Tunisian economy had deep structural problems that supported such an outcome. The country is strongly integrated into global value chains (GVCs), especially European-led value chains thanks to geographical proximity and historical factors. However, Tunisian involvement is largely confined to what is referred to as the "offshore sector," which is dominated by multinational corporations (MNCs), the activities of which are directed at exporting. The "onshore sector" is, on the contrary, controlled by domestic tycoons who used to benefit from various privileges under Ben Ali. The offshore sector is relatively more productive, but it still specializes in mainly assembly and low value-added activities that

characterize the country's participation in European GVCs (Nucifora et al., 2015). The specialization of low value-added and exploiting the benefit of having cheap labor makes it hard to anticipate the interest of FDI in digitalization and technologically upgrading the Tunisian industrial sector, as suggested by FES2. Furthermore, the link between the offshore and onshore sectors is marginal. The investment in physical capital is also limited (Nucifora et al., 2015). All of this means that the prospects for upgrading in the value chain are rather minimal. Big incentives for innovation and policies that foster backward or forward integration seem to be missing or ineffective. This expectedly impacts the capability of developing local green technologies for the offshore sector.

Another reason is that tycoons maintained strong relations with the administration and therefore reduced the effect of the enacted laws on their market dominance in different sectors, as pointed out by RLS1. According to Startup1, tycoons dominated private banks and channeled resources to their own businesses. Even international and EU funds that were originally directed to SMEs ended in tycoons' owned SMEs that were part of their larger holding groups. Consequently, innovative SMEs that had sound models did not receive enough bank funding (Stölting, 2015); and, according to SME1, funding chances for SMEs were limited and/or not much information on them was available. Both venture capital and business angels in Tunisia remained insignificant, as assessed by RLS1 and Startup1; and private equity investments generally remained insufficient despite the creation of many private equity investment vehicles (e.g., SICARs investment companies, FA funds for startups, and FCPR mutual funds) (Stölting, 2015). HIVOS1 wondered about the insufficiency of venture capital funding despite the availability of funds, together with their refrain from taking risks, despite the nature of this financial vehicle.

Finally, there were various obstacles that prevented the realization of the great innovation potential held by startups. The implementation of laws that would have encouraged the mushrooming of innovative startups was rather low. Startup1, for instance, asserted that there was a slow implementation of the Startup Act of 2019 regulations and laws that targeted startups, despite the backing of international organizations. CONECT-GIZ1 spoke about different developmental projects targeting SMEs and innovation that the GIZ supports. In one of the projects, enterprises and startups were brought together with experts with the purpose of supporting innovation and its application by domestic enterprises. The success of the project was very limited, given that enterprises complained about the lack of financial resources to support their adoption of startup innovation. This made it necessary to think of providing funding for innovation. In any case, international development organizations generally aim to create pilot success stories under the presumption that these would be emulated by other enterprises. Arguably, this brings some doubts on the scale and pace of the success of this strategy.

In short, a combination of tycoons' dominance and the state's incapability and inefficiency led to low innovation, at a time when international developmental assistance was insufficient or

disoriented. The likely outcome was the hindrance of the development of new local green technologies and business models that would have fostered sustainability.

7. The textile and apparel sector

The textile and apparel industry is one of the most important sectors in the Tunisian economy, contributing by about 23 percent of industrial exports and employing more than 174 thousand individuals (Gaaloul, 2022, p. 11). As Table 2 and Figure 2 reveal, the industry was responsible for more than 32 percent of the value-added of the manufacturing sector in Tunisia in 2001-05, although this figure has continuously fallen through time and was lower by about 45 percent of the stated figure in 2015-20. The sector is also one of the major sectors where MNCs are active, and it is strongly connected to global (and especially European) supply chains. It is estimated that about 50 percent of the sector is fully or partially owned by MNCs, mainly from the EU. Furthermore, most of the exports of the industry flow to the EU, especially France and Italy (Grumiller et al., 2018).

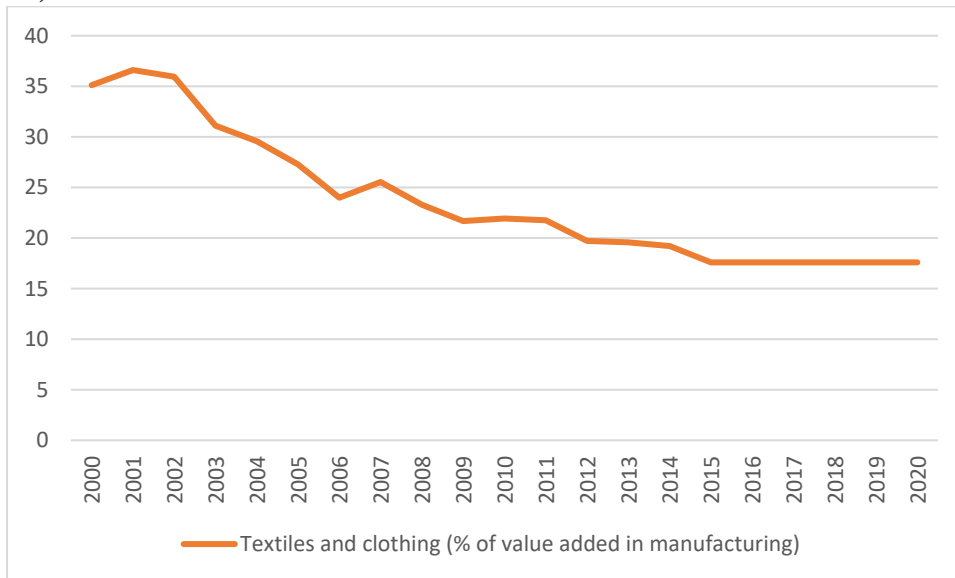
Despite the active presence of European foreign direct investment in this manufacturing sector, Tunisia's engagement in the EU value chain is mainly focused on low value-added assembly activities (Nucifora et al., 2015). While the production of textiles is more capital-intensive, apparel tends to be more labor-intensive. Tunisia's capacity to produce textiles is rather limited; it focuses on the production of apparel that targets foreign markets but fails to establish strong linkages with domestic industries and markets. SMEs mainly produce according to the cut-make-trim (CMT), which constitutes 80 percent of the sector's production in Tunisia. Larger firms operate according to free-on-board (FOB) and are responsible for the remaining 80 percent, while a few firms apply the original-design-manufacturing (ODM). While FOB allows firms to purchase inputs and develop their own supply network and linkages and ODM allows further creation of value added through design and product development, CMT renders manufacturing SMEs into a contracted factory where cheaper labor is at the disposal of larger firms that provide inputs and buy output (Grumiller et al., 2018). Fewer linkages could possibly be created by this model, and incentives to innovate are likely non-existent. The pressure for cost reduction produces further incentives to use less socially sensitive and environmentally friendly production techniques.

Table 2. Industrial sectoral indicators of Tunisia (2001-20)

Year Range	Textiles and clothing (% of value added in manufacturing)	Manufacturing, value added (% of GDP)	Medium and high- tech manufacturing value added (% manufacturing value added)	Mineral rents (% of GDP)
2001-05	32.10	16.12	14.10	0.02
2006-10	23.29	16.76	11.50	1.64
2011-15	19.57	14.99	25.45	0.60
2016-20	17.59	14.13	27.57	0.22

Source: Author's calculation using data from the WDI (World Bank, n.d.).

Figure 2. Textiles and clothing (% of value added in manufacturing) in Tunisia (2000-20)



Depending on Data from the WDI (World Bank, n.d.).

The sector is causing alarming pollution levels. The ecological hazards caused by the textile sector in Tunisia could be attributed to different reasons. The first is the nature of the industry itself. The industry is well known for its heavy ecological burden, where it is considered the most ecologically harmful industry on a global scale (Choudhury and Kumar, 2013). The production processes use water extensively. It is estimated that the textiles industry is responsible for wasting four trillion liters of water annually, where a single shirt wastes around 25 liters and a pair of trousers more than double that much; and most of this wasted water is not reused (Gaaloul, 2022, pp. 11-15). Another major concern is wet processing while intensively using different dangerous chemicals (e.g., in bleaching, dyeing, printing), utilizing heavy metals in items such as binders and auxiliaries, and wastewater issues – especially with regard to the used dyes (Choudhury and Kumar, 2013). Due to the wastewater resulting from the industry, it is responsible for about 17 and 20 percent of global water pollution (Gaaloul, 2022, pp. 11-15). The carbon emissions of the industry are further added to the aforementioned factors (Tsai, 2018).

What aggravates the environmental hazards for Tunisia is the country's specialization in the low value-added and most polluting activities in the value chain, where dyeing and printing activities are generally among the highest polluting processes of the industry (Mia et al., 2019). Tunisia's inability to upgrade its involvement in higher value-added activities with less ecological impact corresponds well with the obstacles hindering innovation and technological upgrading in the country. The incapability to innovate or technologically upgrade hinders the development or adoption of more green technologies that would reduce the ecological hazards of the existing activities, even without upgrading the value chain. Green chemistry is an example of technology that substantially reduces the environmental hazards and waste of the industry. It could decrease the costs of solvents, reagents, waste disposal, and energy (Choudhury and Kumar, 2013). There is also an increasing use of "eco-friendly" textiles among

clothing and fashion brands (Nabil, 2021). Automation is another example of a technology that could reduce waste at the stages of dyeing and printing (Choudhury and Kumar, 2013). Industry 4.0 technologies – entailing the digitalization of manufacturing and service processes and the integration of system components – could also reduce pollution, along with making production more efficient and allowing customized production (Tsai, 2018). The “green textile industry” is expected to be less costly than the non-green one for the production of garments, although it initially necessitates substantial investment (Nabil, 2021).

Tunisia has an industrial cluster in the field of textiles, the Monastir-El Fejja (Mfcpole), which is more technologically and ecologically oriented (Mfcpole, n.d.). Yet, innovation and technology upgrading in the sector was still problematic. A policy paper submitted to the Tunisian government pointed to the underdeveloped use of different technologies in the textile sector and how Industry 4.0 technologies, especially artificial intelligence (AI), would significantly boost the sector. For instance, only a few large firms used automated quality inspection, and only in some aspects. The firm managers of the sector have little understanding of AI, and the collaboration of these firms with AI firms and startups as well as academic institutions is rather absent (Chatbri et al., 2019). This is in addition to the aforementioned difficulties faced by startups. This negatively impacts the innovation and technological upgrading of the sector and applies as well to the greening of the sector with the help of Industry 4.0 technologies.

The final and widely acknowledged reason for the acute environmental hazards caused by the sector is the existence of major violations of laws and regulations. The FTDES reported a number of violations for which the sector is responsible, especially the washing and dyeing processes that use huge amounts of water and various toxic chemicals (Gaaloul, 2022, pp. 11-15).

The situation is especially critical in the Monastir province. According to ASF1, the textiles sector is responsible for major pollution to the Gulf of Monastir and its fish resources because of dumping industrial wastes. Those in the area also complain of the exaggerated use of water, mostly freshwater. The companies working in the sector usually dig deep wells to extract freshwater without obtaining licenses or permissions; this then limits the share of freshwater extracted by water-extracting and distributing companies. The interviewee’s account is supported by an FTDES report. Textile companies in the province, which already has meager potable water resources, use underground water resources in their industrial activities, thereby aggravating the water shortage problem for the local population. This was happening at a time when the state failed to play its regulatory role and implement environmental laws and regulations that prohibit these activities (Gaaloul, 2022, pp. 11-15).

ASF1 suggested that MNCs working in this sector violate environmental laws more since they have more financial resources. The Tunisian companies in the sector are mostly SMEs, while multinationals employ and produce more and cause higher pollution, failing to respect environmental laws the same way they do in their countries of origin.

The growing commitment to environmental regulations among GVCs provides a puzzling situation. According to GIZE1, there is a growing concern among enterprises in the sector regarding the ISO certification required by the EU for exporting textiles, since failing to meet the requirement would subject violators to higher taxes. Nevertheless, the implementation of pollution-related environmental requirements in the sector is less pressing than the more urgent energy-saving ISO requirements, and the mechanism for the implementation of the former retains much ambiguity, leaving more room for continued violations of environmental regulations in the sector. According to the interviewees' assessment, only a few firms in the sector apply the pollution-related ISO requirements, induced by the demand of their main clients in the value chain.

Social protests against the environmental violations of the sector in the Gulf of Monastir had started even a few years before the revolution, in 2006, but increased after the revolution. At times, these protests were violent, where equipment was burnt and roads were cut in 2013 (Labiadh and Gaaloul, 2022, pp. 25-29). Nevertheless, the sector continues to operate without major disruption from social protests.

Figure 2 shows that the share of the value-added of the industry as a percentage of the whole manufacturing sector was falling over time, but this fall was rather mild in the post-2011 period. Table 2 offers some possible explanations as it shows that the share of medium and high technology grew significantly in the post-2011 period. Regardless of being a sign of industrial structural transformation, there is little evidence that environmental concerns led to a drastic fall in the activities of the sector. Furthermore, as pointed out by Grumiller et al. (2018), the phasing out of the Multi-Fiber Agreement (MFA) in 2004, which provided Tunisia and other countries with preferential access to EU markets, has significantly reduced the share of Tunisian exports in the EU market to the advantage of Asian producers. This is in addition to the effect of the financial crisis of 2008 and the rising labor costs in the aftermath of the 2011 revolution. Figure 2 suggests that the latter factor played a limited role, given that most of the fall in the sector's share of value-added happened before 2011.

Hence, the textile sector in which MNCs have significant power witnesses major violations in environmental regulations due to the general power enjoyed by tycoons in the country and in the sector. This confirms the first and fourth hypotheses, respectively. The low value-added characterizing Tunisia's participation in the global textile value chain makes violations more common, given the focus on cost-saving rather than investment in better and greener technologies that are likely to need heavy (at least initially) investment. This provides evidence in support of the second hypothesis. As for the third hypothesis, despite the openness to developmental aid to the EU, which has an ardent environmental policy, environmental CSOs are not powerful enough to offer the resistance that would force a stricter implementation of environmental regulations in the textile sector. This is likely partly attributed to the lack of sufficient support to international and EU organizations for ecological issues other than the ones responsible for CO₂ emissions and climate change, such as the energy transition. Despite

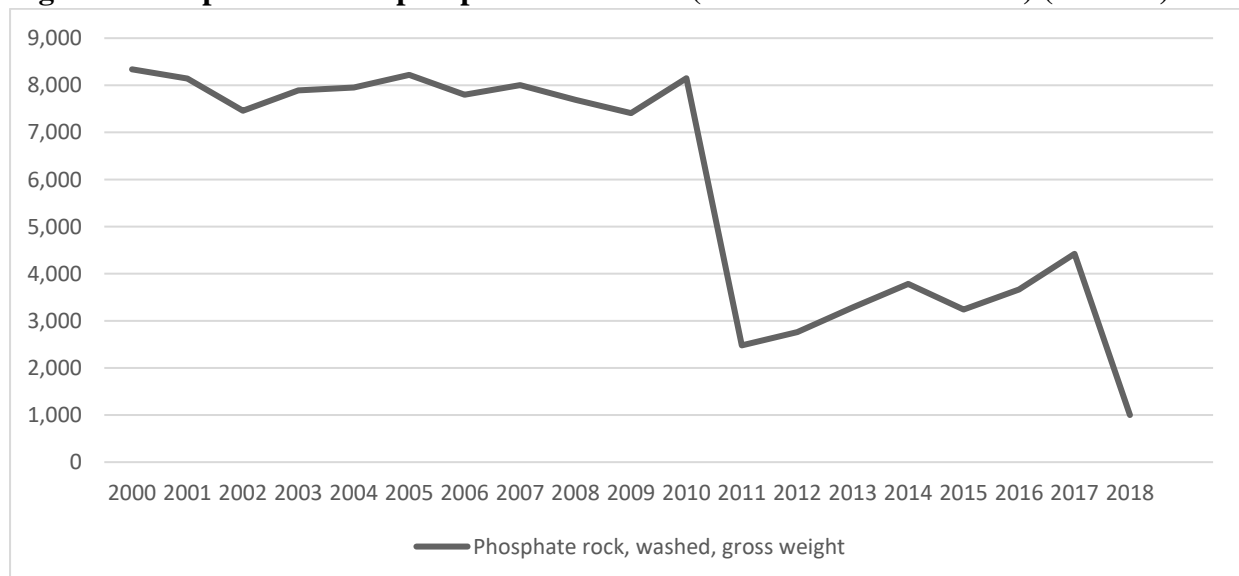
the overall low competition in many markets in Tunisia, the country’s textile sector is characterized by the presence of many producers and SMEs, suggesting a more competitive setting. Thus, there is no evidence supporting the fifth hypothesis. Finally, there is no evidence that Industry 4.0 technologies, which are more labor-saving, are resisted by labor and the UGTT. Yet, it is likely that although these technologies could help foster a greener textile sector, their implications on employment could provide a disincentive for their adoption. This is especially the case given the labor-intensive nature of the industry in Tunisia and the fact that it is a major employer of Tunisian workers. This could be in partial and indirect agreement with the sixth hypothesis.

8. The phosphate extraction industry

The phosphate extraction industry is another important industry in Tunisia; the country is one of the global leaders in its extraction, at least before the 2011 revolution. Phosphate extraction, however, drastically fell in the post-2011 period (see Figure 3).

Phosphate extraction dates back to the late 1890s and early 1900s during the French colonial period. Four new cities were built to serve the phosphate mining activity in the area: Redeyef, Moulares, Metlaoui, and Mdhilla (Irouche et al., 2021). The industry is dominated by the public sector, represented mainly by two big companies: the Gafsa Phosphate Company (CPG) and the Tunisian Chemical Group (GCT) in Gerbs. While the former mainly extracts phosphate, the latter uses this phosphate to produce phosphoric acid and different fertilizers. The CPG plays a major role in the economic and social activities of the region, providing services such as water and electricity provision as well as investing in education, transportation, and cultural activities (Irouche et al., 2021; Issaoui, 2022, p. 63).

Figure 3. The production of phosphate in Tunisia (in thousand metric tons) (2001-18)



Depending on data from the United States Geological Surveys (USGS) data (Mobbs, 2003; Taib, 2008, 2013, and 2018).

Acute violations of environmental laws and regulations are witnessed in the two main SOEs operating in this industry. Environmental issues of concern are numerous. More direct risks are also faced by workers, where their health and safety face the highest risks because of the high levels of fatal and non-fatal accidents in the workplace attributed to the lack of safety measures (Issaoui, 2022, p. 124). Workers do not wear protective suits and are subject to very hazardous working conditions (Irouche et al., 2021, pp. 116-120). Other risks facing workers as part of their local communities include dangerous emissions from drilling and blasting, material processing, internal transport, material handling operation; the wind erosion of stockpiles; wastewater mismanagement; and water resource depletion (Issaoui, 2022, pp. 78-79).

According to ASF1, CPG and GCT workers are exposed to dangerous vapors both at the workplace and in their nearby residential areas, where wastes are dumped into potable water. This is supported by different FTDES studies pointing to how both companies are responsible for the spread of dangerous diseases among local communities because of pollution (Ben Othman and Mabrouki, 2021). For instance, the industrial activities of the GCT in Gabes are blamed for the widespread respiratory, skin, and cancer diseases among the city inhabitants (Irouche et al., 2021, pp. 116-120). According to another study, the CPG improperly stored its extracted phosphate in the open air, resulting in polluting the air of the Redeyef. The volume of the millions of tons of extracted stored phosphate has increased since 2017 as a result of frequent work stoppages due to social protests (Irouche et al., 2021, pp. 114-115).

Both companies are also responsible for polluting water and soil (Ben Othman and Mabrouki, 2021). For instance, it was found that the content of the toxic fluorine in the discharged water from the phosphate plant at Mdhilla is significantly higher than the limit set by Tunisian regulations, which ultimately affected the quality of groundwater used for drinking by the local community (Issaoui, 2022, p. 143). In the city of Gabes, the GCT is responsible for annually dumping five million tons of the highly hazardous and radioactive byproduct of the production of fertilizers, phosphogypsum, directly into the sea, which had a drastic effect on fishery activity in the area (Irouche et al., 2021, pp. 116-120).

Furthermore, the CPG's activities cause major water shortages in the area. FTDES reports discussed how the CPG uses the region's potable water resources instead of seawater to wash phosphates, which aggravated the water shortage situation for the locals. This violates Tunisian law, which prohibits the unjustifiable use of potable water if other sources could be used. In fact, the company controls more water resources extracted from wells than those at the disposal of the Tunisian public company responsible for using and distributing potable water to the local inhabitants. Similarly, the GCT uses potable water in its production processes instead of seawater and deprives the local community of valued water resources (Irouche et al., 2021, pp. 113-120).

The pollution from phosphate is not confined to the activities of the two SOEs. Of the various activities leading to toxic emissions, the internal transport of phosphate was particularly highlighted as being responsible for the huge release of dust because of the use of

predominantly unpaved roads (Issaoui, 2022, p. 80). The latter is suggested to be caused by tycoons' exercise of influence on state officials. According to ASF1, a notable businessman, politician, and parliamentarian who comes from a big family and a former member of a former ruling party, used his connections to secure the right to transfer phosphates by trucks rather than the less polluting and cheaper option of using the railway. The trucks were overloaded and driven at higher speeds, and the roads were in poor conditions and sometimes passing by hilly topographies. All of this produced dust that harmed local communities. An FTDES report discussed violations made by the vehicles that transport phosphate through the main road, exposing the locals in Mdhilla to various hazards (Mejbri and Attar, 2022).

As part of the post-revolution surge in social protests because of environmental issues, several social protests took place in the city of Redeyef, where the locals locked down a company's facility in June 2018 and induced the company to pledge to contribute to supplying fresh water for the locals. The locals of another city, Mdhilla, where both CPG and GCT have facilities, blocked the road in front of trucks transferring phosphates (Ben Othmane, 2022a, 2022b). In at least one case, social protests backed by environmental CSOs acquired the support of local government officials. The local government in Mdhilla prohibited the transportation of phosphate through the city's main road (Mejbri and Attar, 2022). Furthermore, the StopPollution movement was active in defending environmental rights and organizing various protesting activities. The movement, for instance, was active in protests against the GCT in Gabes and forced its lockout for a whole month in late 2020 (Irouche et al., 2021, p. 120). The frequent stoppages of operation explain why phosphate production fell drastically in the post-2011 period (see Figure 3) and why rents obtained from the mining sector drastically dropped by almost 87 percent between 2005-10 and 2015-20 (see Table 2).

Under these conditions, the UGTT's commitment to defending the environmental rights of labor and their local communities was brought into question. ASF1 referred to how the GCT appealed to UGTT, saying that the pressure on environmental issues on the company would lead to the closure of the enterprise and the loss of labor jobs. Fearing this, the UGTT refrained from engaging in major efforts on environmental issues, although there is support from syndicates and workers at times. UGTT2 affirmed the dilemma that the UGTT faced between the preservation of jobs and protection from HSH. The interviewee discussed how the union stressed the urgent need to adopt more advanced and environmentally friendly technologies and techniques instead of the outdated ones used in the sector but was instead met with the SOEs' assertion that resources are limited and the prospect of resorting to the easier alternative of privatization, which is generally much resisted by the UGTT. The UGTT is not against using more capital-intensive or labor-saving technologies to upgrade the sector and reduce its HSH, according to UGTT2. Yet, the SOEs' management or the state should provide proper compensation for workers who would lose their jobs, something that the interviewee doubted would be rightly done based on previous experiences. Putting this together, one would reach the conclusion that there is a sort of implicit, likely reluctant, acceptance of the status quo by the UGTT.

The lack of trust between the UGTT and environmental CSOs was seemingly manifested in the lack of coordination between the two parties in environmental-induced protests. UGTT1 asserted that the union understands the just case that motivated workers to protest against SOEs working in the phosphate industry, but it has never called for such protests. The interviewee had some doubts about who encouraged the protests, pointing to the ultimate benefits that accrued to tycoons such as the arrangement to transport phosphate by trucks. Regardless of the validity of the doubts, they reveal the distrust toward some environmental CSOs that was pointed out earlier in this paper.

The case of the phosphate industry in Tunisia provides evidence supporting some of the presented hypotheses. The low value-added of the extractive industry and its less competitive (monopolist) nature seemingly provide a disincentive for adopting greener technology or following environmental regulations, agreeing with the second and fifth hypotheses. The post-2011 democratic setting empowered environmental CSOs and enabled them to spread awareness and rally support for the environmental cause and against the violations happening in this sector, as suggested by the third hypothesis. The sector is not controlled by tycoons and is almost exclusively controlled by the state through SOEs. This coincides with the presence of fierce environmental protests supported by environmental-oriented CSOs, which often managed to even block SOEs from operating and forced their management to pledge to take action to address environmental issues. This seems to support the fourth hypothesis. Even when the sector is not controlled by tycoons, their interests were manifested in the way they benefited from social protest, enabling them to engage in polluting activities such as transporting phosphates by trucks. Finally, the seemingly reluctant acceptance of the UGTT of the status quo and its refrain from more persistently pressing for the adoption of more green technologies and techniques that could possibly be more labor-saving provide evidence that partially supports the sixth hypothesis.

9. Conclusion

Political instability resulting from the Islamist-Secular ideological polarization, the lack of administrative capacity, and an interest in maintaining the status quo or even hindering reform to safeguard the favored allocation of resources to tycoons all contributed to the poor implementation of policies that should have otherwise fostered sustainability. The resulting conditions reflecting state capture were detrimental to innovation and to SMEs' financial capability to adopt environmentally friendly technologies, especially since the lack of actual support tempts many entrepreneurs to join the informal sector.

As investigating the textiles sector has revealed, the comparative power of tycoons and MNCs allows them to neglect the implementation of regulatory techniques that would save the labor from environmental hazards, whether at the factory or in their local communities. Tycoons were under little pressure to use more environmentally friendly technologies, especially given the low value-added of the industry. The relatively lower commitment of international donors and developmental organizations toward HSH in comparison to climate change-related issues

reduced the power of environmental-CSOs' resistance in the sector. The more labor-saving nature of suggested green technologies, such as Industry 4.0 technologies, could have reduced the enthusiasm for these technologies.

On the other hand, the phosphate extraction industry has shown how the low presence of tycoons in the sector has enabled environmental CSOs and environmental protest movements to be more effective in facing environmental violations. Environmental CSOs were aided by the democratic settings and the support of international donors having green agendas, without being much resisted by tycoons' interests. A less dominant and incapable state was unable to neither repress nor adequately meet the demands of the protesters. At times, the state even gave in to tycoons' interests in activities related to the sector. Furthermore, the lack of trust and different ranking of priorities – among employment preservation and environmental rights – between the UGTT and some environmental CSOs prevented the realization of a more productive outcome that would have led to a more sustainable operation of the sector.

Strengthening the capabilities and the autonomy of the state while guaranteeing that the checks and balances are in place would enable better enactment, and, more importantly, implementation of environmental policies. These checks and balances could not be effectively established without a powerful and independent civil society determined to pursue non-exclusive, more balanced, and cooperative SSRs. Mutual trust should be built among different civil society actors. In Tunisia, higher trust would have facilitated cooperation between the UGTT and environmental CSOs, and it would have helped the state implement environmental regulations by providing a sharper and more consensus-based policy consultancy. Further, it would have obliged the state to take civil society more seriously as a policymaking partner. International development organizations could play a role in creating such cooperation between civil society actors, given that they have their separate links to each of them. The UGTT should be encouraged to be a part of steering committees of government decision-making bodies, and environmental CSOs should be more integrated into social and economic state-society dialogues and given more voting share in different decision-making bodies.

The increasing relevance of ISO certification for GVCs and the development of Industry 4.0 technologies both offer considerable chances for more sustainable development in Tunisia. However, such potential could be sufficiently exploited through policies that foster innovation, technology transfer, and professional training. More effort should be placed to ensure that the regulations and laws that facilitate the emergence of startups and venture capital financing, which are already in place, are effectively implemented and reinforced by further measures. Professional training programs should be the product of state-society dialogues that strongly involve UGTT as well as businesspeople – whether tycoons or entrepreneurs – through their various business associations, such as UTICA, CONECT, or other smaller associations. This should be matched by compensation schemes that would enable structural transformation and technological upgrading in different sectors, at the forefront of which are the textiles and mining sectors.

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Appendix

List of interviewees

ASF1: Member of the *Avocats Sans Frontières* (Lawyers without Borders) in Tunisia.

CONNECT-GIZ1: Former member of the CONECT business association

FES1: Member of the German *Friedrich Ebert Stiftung* (Friedrich Ebert Foundation) in Tunisia.

FES2: Member of the German *Friedrich Ebert Stiftung* (Friedrich Ebert Foundation) in Tunisia responsible for environmental issues.

FTDES1: Member of the Forum *Tunisien pour les Droits Economiques et Sociaux* (Tunisian Forum for Economic and Social Rights, FTDES).

GIZE1: Member of the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (German Society for International Cooperation, GIZ), working in one of the environmentally-related projects in Tunisia.

HBS1: Member of the German *Heinrich Böll Stiftung* in Tunisia.

HIVOS: Member of the MENA team of the Dutch *Hivos*.

MINENV1: Member of the Ministry of the Environment in Tunisia

RLS1: Member of the German *Rosa Luxembourg Stiftung Nordafrika* (Rosa Luxembourg Foundation North Africa) in Tunisia.

SME1: Owner/manager of an SME and member of one of UTICA's chambers.

Startup1: Member of the Startups Association in Tunisia.

UGTT1: Member of the UGTT

UGGT2: Member of the UGTT involved in representing the union in environmental issues.

UTICA1: Member of the UTICA business association and head of one of the chambers in the association.

Table A.1. Definition of the different Indicators used in the paper

Indicator Name	Definition from the WDI Dataset
Textiles and clothing (% of value added in manufacturing)	Value-added in manufacturing is the sum of gross output less the value of intermediate inputs used in production for industries classified in ISIC major division D. Textiles and clothing correspond to ISIC divisions 17-19.
Manufacturing, value added (% of GDP)	Manufacturing refers to industries belonging to International Standard Industrial Classification (ISIC) divisions 15-37. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources.
Medium and high-tech manufacturing value added (% manufacturing value added)	The proportion of medium and high-tech industry value-added in total value-added of manufacturing
PM2.5 air pollution, population exposed to levels exceeding WHO guideline value (% of total)	Percent of population exposed to ambient concentrations of PM2.5 that exceed the WHO guideline value is defined as the portion of a country's population living in places where mean annual concentrations of PM2.5 are greater than 10 micrograms per cubic meter, the guideline value recommended by WHO as the lower end of the range of concentrations over which adverse health effects due to PM2.5 exposure have been observed.
PM2.5 pollution, population exposed to levels exceeding WHO Interim Target-1 value (% of total)	Percent of population exposed to ambient concentrations of PM2.5 that exceed the WHO Interim Target 1 (IT-1) is defined as the portion of a country's population living in places where mean annual concentrations of PM2.5 are greater than 35 micrograms per cubic meter.
Mineral rents (% of GDP)	Mineral rents are the difference between the value of production for a stock of minerals at world prices and their total costs of production. Minerals included in the calculation are tin, gold, lead, zinc, iron, copper, nickel, silver, bauxite, and phosphate.
Ores and metals exports (% of merchandise exports)	Ores and metals comprise the commodities in SITC sections 27 (crude fertilizer, minerals); 28 (metalliferous ores, scrap); and 68 (non-ferrous metals).