

SUPPLY CHAIN ANALYSIS: POWER PLANT CONSTRUCTION PROJECT IN SOUTHERN JORDAN

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I. STUDY OVERVIEW

1. Introduction

A supply chain may be best described as the network of relationships connecting a given company or other entity responsible for spearheading a project with its suppliers and service providers at all stages of the process necessary for the production and distribution of any given goods or services. In other words, supply chains illustrate the several steps necessary to achieving a given final deliverable outcome, whilst describing all actors involved as well as the relationships nurtured between them. Most recently, supply chains have been at the fore of global discussions on sustainable development and social justice, demanding the examination of large-scale projects employing large numbers of workers and involving a wide variety of subcontractors, or employers.

Despite their great variety and diversity, all supply chains fundamentally depend, at all levels, on manpower. Over the past decades, labour issues have remained at the centre of discussions and literature on the topic of supply chains, as globalisation has been followed by increases in the number of workers' rights and even human rights violations, particularly in private sector – one which, in Jordan, relies quite heavily on foreign labour. As is often the case, migrant and refugee workers continue to be among those most vulnerable to such forms of abuse and exploitation as forced labour, human trafficking and modern slavery.

The construction sector is among those most reliant on supply chains, as such projects are often quite complex and require technical input from an often broad variety of specialised suppliers. The fragmentation of industrial and commercial processes into a multiplicity of increasingly specialised fields has given rise to ever more intricate supply chains, involving growing numbers of contractors and subcontractors – whose policies, standards and methodologies for implementation and oversight vary greatly – as well as larger numbers of workers, very often migrants. In Jordan, the construction

sector plays an important role in the economy and it currently has the capacity to expand significantly.

2. Background

Before delving into the background of the construction project which will be the object of this case study, it will be pertinent to first provide a brief overview of the construction sector in Jordan. It is one of the key sectors of the country's economy, characterised by a broad array of sub-sectors and its close rapport with other economic sectors. The construction sector has steadily grown and developed over the past decade, nourished by the general political climate, safety of investment, and good infrastructure. In 2017, it accounted for approximately 18% of national GDP, included 142 occupations, and employed an estimated 200,000 workers (cf. Al Ghad, 2016), or 8% of the country's labour force – the vast majority of which being migrant workers, most commonly Egyptian or Syrian. Currently, the construction sector covers the following sub-sectors: bricks, stone-cutting, marble, granite, basalt and other building materials, cement products, concrete, gypsum, tiles, slabs, piping, prefabricated construction products, insulation, asphalt products, prefabricated structures, glass products, ceramic products and non-metallic insulation, decoration and construction services, and others.

The project under study is the construction of a power plant roughly 75 kilometres south of Jordan's capital city of Amman. It was launched in 2016, is expected to be completed by the end of 2018, and has an estimated cost of 75 million US\$ (according to the Parent Company's official website). The purpose of the plant shall be to supply electrical power to a cement factory, at a capacity of 30 Megawatts. It is designed to generate electrical power through a steam cycle system consisting in the combustion of coal and petroleum coke, with the possibility of mixing in other fuel sources in certain amounts, through a process termed Fluidized Bed Combustion (FBC). The combustibles (particularly the coal) will be imported from the United States, Russia, African countries, and other international trade partners.

Despite protests from environmentalist groups and other concerned observers, the project's sponsor/parent company ensures that the plant will operate in accordance with the highest environmental standards, namely those applied in the European Union,

claiming that specialised equipment and devices will be put in place to reduce the emissions of greenhouse and toxic gases such as nitrogen oxide and sulphur.

According to the Parent Company, the plant's electricity generation process shall be divided into five stages, as described below:

- First, coal and/or petroleum coke crushing;
- The coal or coke is then mixed together with specific amounts of limestone, to reduce sulphur oxide emissions;
- The mixture is fed into the boiler to carry out the combustion process;
- The system, fed by a turbine, transforms water into high-pressure, superheated steam in the pipes (350°C; 130 bar);
- in turn powers the generator which produces a magnetic field in addition to electrical energy.

The choice of this project for the present case study was made based on several factors, the most important being that its characteristics make it easier to establish comparisons with the Jordanian construction sector as a whole. Additionally, it involves a considerably broad network of supply lines which can be easily examined and analysed, and the workers are employed by several different entities. Nevertheless, this choice of example leaves a narrow time window – no more than 20 days – within which to complete the study.

3. Methodology

Most of the qualitative and quantitative data contemplated in this study were gathered by a team of field researchers in the course of semi-structured interviews guides tailored to each of the three mains groups of stakeholders. *It is useful to note here that those who made statements and information about the course of the project did not want to disclose their names for reasons of their own.*

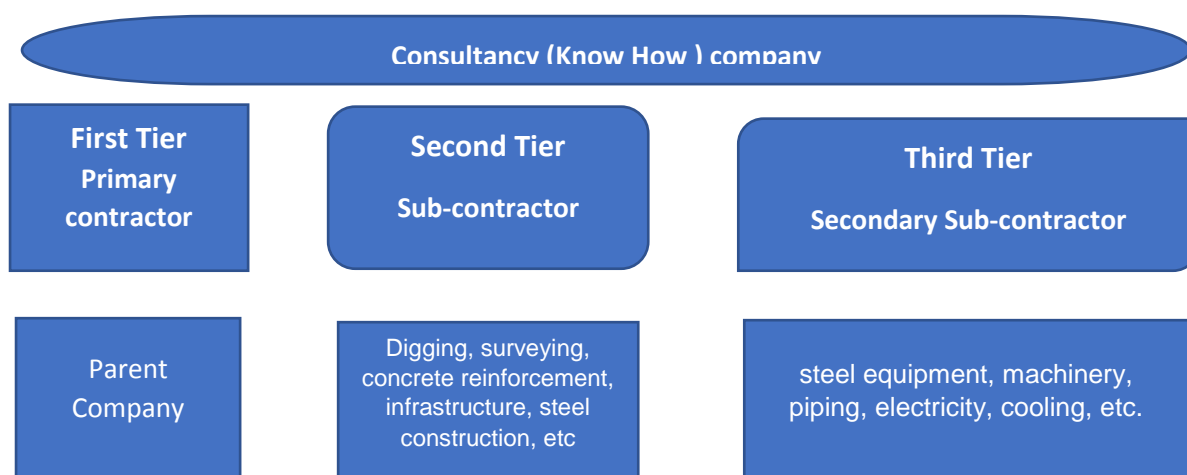
- a) Senior managers at the Parent Company and main contractors;
- b) Subcontractors;
- c) Workers.

All data was gathered and processed with the goal of providing an overview of the project's supply chains, with particular focus on its workforce, namely its composition and the degree to which workers' rights, decent work standards and national laws are respected throughout the various tiers, underlining any gaps and differences between them and identifying any existing risks or insufficiencies concerning the human rights environment at the workplace throughout the supply chain.

Additional information has been gathered through revising relevant documentation, including national legislative documents, news pieces, available statistical figures, similar studies, and other such means. Taking into consideration that the consulting company is Indian, while the contracting company and subcontractors are all Jordanian enterprises.

II. SCOPE AND NATURE OF OPERATIONS

As stated before, the project's supply chains are particularly stratified. For the purpose of this analysis, participating entities will be divided into three tiers. Tier 1 comprises the Parent Company (and primary contractor), which is monitored and advised by a foreign Know-How Consulting Company (Indian Company), while primary subcontractors compose Tier 2 (digging, surveying, concrete reinforcement, infrastructure, steel construction, etc.); and secondary subcontractors make up Tier 3 (steel equipment, machinery, piping, electricity, cooling, etc.). This stratification is important to keep in mind given the discrepancies between the working conditions and assurances provided at the several levels.



At the time of the project's inception, more than one source in the project has stated that, the project employed approximately 700 workers – a virtually even mix of national and foreign labour. Most foreign workers are of Egyptian, Indian and Pakistani origin, and most are employed by the lower tiers of subcontractors, in low-skill or unskilled occupations, with the conspicuous exception of the staff members employed by the Indian Know-How Consultant, the company responsible for monitoring the activity of the Parent Company and providing advice and input. Jordanian workers are almost exclusively employed in higher-tier technical occupations.

The Parent Company possesses no policies of its own concerning labour standards and social security inclusion, instead focusing on the application of provisions of the Jordanian Labour Code and social security laws. In other words, it depends on the national legislative framework for guidance on all issues, from recruitment and dismissals to social security, wages, annual leaves, medical leaves, environmental and social impact, migrants and refugees, and others. As such, the Parent Company has assumed responsibility for ensuring that national standards and laws are observed throughout the project's supply chains – i.e., being watchful of the activities of subcontractors to ensure compliance. This dimension encompasses the issue of child labour, and according to [who], none of the entities involved in the project employ any children under the age of 18, in compliance with the standards set forth in the Jordanian Labour Code, both because the construction site is deemed a hazardous work environment and due to the fact that work positions at the site require a high level of technical and professional know-how and experience. For the sake of comparison, it's worth mentioning that children within that age range are permitted by law to seek employment in other occupations, deemed to pose fewer health risks than those at the plant.

The Parent Company is ranked 'A' in the national contractor classification¹ (cf. JMPWH, 2010), meaning that it's considered an elite company, committed to the highest standards from management to staff and materials, as well as compliance. To elaborate, only A-grade companies are eligible to undertake projects of this size and

¹ According to the Contractors Classification Regulations of 2007 issued by the Jordanian Ministry of Works, a set of criteria are used for the classification of construction companies based on their various standards such as: capital of the company, number of employees and their characteristics in terms of experience, availability of equipment, years of work in the sector, quality management systems used in the company and other standards.

nature.² One important factor in this regard is the application of the standards and principles set forth by the International Federation of Consulting Engineers (FIDIC), which include “[accepting] the responsibility of the consulting industry to society,” “[seeking] solutions that are compatible with the principles of sustainable development” and remaining “impartial in the provision of professional advice judgement and decision” – to mention only a few. More importantly, FIDIC’s Code of Ethics also includes a section on “Fairness to Others,” which includes several provisions against unfair recruitment practices.

In this regard, several interviewees stressed that both the Parent Company and several of its subcontractors have fallen short of meeting the standards set forth in the FIDIC – either in their administrative processes, technical expertise, or in their compliance with labour standards. Where practice on the ground with regard to the obligations and responsibilities of companies operating in the project to the various parties including the workers lack high standards in different supply chains.

It’s also worth pointing out that a large part of the recruitment and selection processes for this construction project (at all levels an supply chains) haven’t reflected best practices:³ several positions were not publicly advertised, meaning that there was a lack of fair competition insofar as there was widespread recruitment on the basis of personal connections as opposed to the principle of “Quality-Based Selection” (QBS). In fact, there was found to be a conflict of interest in the choice of subcontractors, in that senior members of the Parent Company are shareholders of Tier 2 subcontracting companies. In other words, the Parent Company’s rating has remained at ‘A’ despite its failure to fully abide by best practices and standards.

III. SUBCONTRACTING

As mentioned above, the Parent Company has claimed to constantly monitor the activities of Tier 2 and Tier 3 subcontractors, so as to ensure compliance with national and sectoral standards and laws. However, analysis has revealed a downward trend

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http://www.mpwh.gov.jo/%D8%A7%D9%84%D8%AA%D8%B9%D9%84%D9%8A%D9%85%D8%A7%D8%AA/_la youts/mobile/dispform.aspx?List=acf3e934-4e79-44df-9b44-4aadc3c15b96&View=1572ffb1-661f-4b77-a858-719f732bfb7b&ID=4

³ Stated by more than one source working on the project.

in compliance the lower the tier of subcontractor; in other words, lower-tier subcontracting companies are becoming less respectful of labour standards, or less observant of the applicable legislation.

For instance, concerning the payment of migrant workers' permit fees (which, by law, is a cost to be borne the contracting company), compliance varied among subcontractors, with some charging workers for their own work permits. In these cases, the Parent Company claims to be receptive to complains issued by workers, and that in such cases correction policies are applied – i.e., the workers are reimbursed and the amount deducted from the subcontractor's budget lines.

Concerning the enjoyment of employment contracts, the Parent Company's management admitted to the possibility of being unaware of whether Tier 3 subcontractors provide workers with written contracts – especially whether they provide workers with written contracts in their native languages, as Jordanian law requires that migrant workers be entitled to a copy of their work contract in their native tongue. It was found that some subcontractors do abide by this requirement, though, once again, this is estimated to be a less common practice among the lower-tier contractors.

IV. PAYMENT AND WAGES

Concerning wages, all interviewees (at all levels) claim that wages earned by workers at the site are much higher than the figure stipulated as the national minimum wage. This is explained by the fact that most positions require high levels of skills and experience. Therefore, workers earn a minimum of 350 JOD/month, while those in senior positions commonly earn 5,000 JOD/month or more.

On the issue of late wage payments – “late” referring to any payments made after the 7th day of the month, as per Jordanian law – figures from the Parent Company have insisted that they are watchful of their subcontractors' practices and receptive to reports and complaints issued by workers. Alas, restrictions civil society environment in Jordan, the government's attitude towards workers' organisations and movements not associated with the General Federation of Jordanian Trade Unions (GFJTU), and the large numbers of foreign workers at the site, among other factors, continue to

discourage workers from exercising their right to organise and conduct collective bargaining for the protection of their rights and interests. As we'll see in the next section, this situation is both owed to and helps to preserve the *kafala*, or 'sponsorship' system, which remains the source of multiple instances of human rights' abuses and a main factor contributing to the deteriorated condition of working conditions in Jordan, as well as large parts of the Arab world.

Payment dates and methods were shown to vary between the three tiers – for instance, Tier 1 staff are paid on a monthly basis, while other workers are paid on a weekly basis. According to interviewees, this is often the case in the construction sector in Jordan.

IV. FREEDOM OF MOVEMENT

As stated before, Jordan is one of several MENA countries where the *kafala* sponsorship system is in place. It is by virtue of this system that subcontractors are required, by law, to cover their foreign workers' permits. It follows that most, if not all subcontractors who do comply and cover such charges resist allowing workers to leave their posts unless they reimburse their employer for the work permit fees – only then are they released from their contract (verbal or written). This description fits within the definition of forced labour, and such practices should be abolished throughout the country.

As in most countries relying on the *kafala* system for the recruitment of (most often, cheaper) foreign labour, migrant workers' passports and identification documents are confiscated – a practice which is common throughout all tiers. Although common, this represents a blatant human rights' violation, and the practice must be eradicated if Jordan seeks to implement a sustainable development model.

V. OCCUPATIONAL SAFETY AND HEALTH

The area of occupational safety and health yielded interesting results. Neither the Parent Company nor any subcontractors possess written occupational safety and health policies, instead claiming to be guided by national workplace health and safety

standards and social security laws and to provide workers with the necessary equipment. However, large numbers of workers themselves fail to comply with its requirements, mostly because no training is provided on health and safety measures. The fact that this issue has remained, to date, unaddressed, seems to suggest that occupational safety and health policies are being implemented with the intent of preserving the Parent Company's 'A' rating by Jordanian standards, as opposed to being rooted in a genuine concern with maintaining safe and secure healthy conditions for workers.

It serves to point out that, during the data collection phase, several respondents expressed concern with both the Parent Company and the subcontractors' lack of observance of standard recognised occupational safety and health practices, as several such policies and mechanisms are often simply glossed over or outright ignored.

Concerning workplace accidents that result in the hospitalisation of workers, these are commonly covered by the subcontractors themselves, who cover such expenses out of their own budget. In such cases, if the worker in question is registered with the Social Security Corporation (SSC), the subcontracting entity is entitled to compensation from the SCC.

In addition to the above, it's important to underline that, a) not all workers are covered by social security, for various reasons, and b) most job positions at the construction site are classified as hazardous work environments, and should therefore be subject to closer inspection by both public institutions and the Parent Company's administrative branches.

VI. CONCLUSIONS AND RECOMMENDATIONS

In light of the above, it's clear that, while the Parent Company and its key consultant are quite adamant on complying with both national and international labour standards, the latter's application among the lower tiers of the supply chain is somewhat lacking. The fact that the project is bereft of any labour standards and best practices of its own suggests that the well-being of workers and their fair treatment is an after-thought for

the project's managers – conditions to be satisfied, in whichever way, so as to ensure continued support for the Parent Company's projects.

Oversight mechanisms are few and poorly defined, and although the Parent Company insists that its focused on ensuring compliance with national legislation and international standards across its supply chains, it remains quite evident that the existing devices, mechanisms and protocols are inadequate to ensuring that the rights and interests of workers are being consistently and effectively taken into account – even though no workers' unions exist to serve as a mouthpiece for the latter's claims.

In light of everything detailed above, the research team has developed the following recommendations:

1. Put in place project-wide policies for the treatment of workers at every tier, drawing from national legislation as well as international standards, while aiming to go beyond and set an example at the national level. These should be supported by adequate oversight mechanisms, to be put in place by the Parent Company.
2. In line with the previous recommendation, stakeholders must work towards the provision of work contracts to all employees, at every level of the supply chain, including copies of employment contracts in foreign languages according to the provenance of each worker – according to available data, contracts should be made available in Hindi, Urdu and English, in addition to Arabic.
3. The *kafala* system is unfair and violates a broad variety of principles and standards enshrined in both national legislation and international covenants ratified by Jordan. The confiscation of passports and other forms of personal documentation must be thoroughly banned, though this must be accompanied by measures aiming to prevent arbitrary cancellation of contracts and other practices which jeopardise the proper functioning of subcontracting entities.
4. Allow for the establishment of trade unions at the company, project, and sectoral level, while simultaneously enabling migrant workers to partake in the activities of such institutions, in line with their representation across all cadres.
5. Provide workers with in-depth training on occupational safety and health standards and protocols, so as to minimise workplace accidents as well as the need for prolonged medical leaves.

VII. SOURCES

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