

# REFUGEE LABOR IN NATURAL RESOURCE EXTRACTION: THE CASE OF HARNAI'S COAL MINING SECTOR IN BALOCHISTAN

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## ABSTRACT

*This study examines the critical yet overlooked role of Afghan refugee labor in the coal mining sector of Harnai, Balochistan. Based on qualitative field research from 2025, it finds that refugees constitute over 60% of the workforce, providing indispensable skills that have historically boosted production. However, their undocumented status has led to systemic exploitation. The recent policy of forced repatriation has triggered a severe socioeconomic collapse, drastically reduced coal output and destabilizing local livelihoods. The research reveals a governance failure that criminalizes this essential labor force. It concludes by advocating for pragmatic formalization, such as regulated work permits, to secure the industry's future and transform a cycle of precarity into a sustainable, mutually beneficial system.*

**Keywords:** *Afghan refugee labor, coal mining, repatriation impact*

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## 1. INTRODUCTION

The existence of Afghan refugees in Pakistan has always been looked at from a security lens. However, their contribution to the development of the local economy has been understudied. Majority of the Afghan refugees are hosted in Balochistan and Khyber Pakhtunkhwa for the last four decades. Over the time, Afghan refugees have contributed significantly not only to the development of agriculture, but they have also played a pivotal role in the mining sector especially in the Balochistan. Since one of the themes for the research grant was "Refugee labor contribution in natural resource extraction in Pakistan: A case Study of Mining Sector in Balochistan", therefore, focus point of this study was the coal mines of district Harnai and the role of Afghan refugees in sustaining and developing the mines of Harnai and how has their repatriation affected this sector. Furthermore, the study also highlighted policy inconsistencies and suggested pragmatic solutions to save this sector from the shock of repatriation.

Data from Harnai gained through field research from mine owners in 2025 showed that the workforce of 500 coal mines is made up of Afghan refugees which constitute more than 60 percent of their total labor force (APMA, 2024). This statistic stands out, they play a primal role in maintaining production, and their integration has still not been researched systematically in how their integration altered extraction methods, labor markets, and socio-economic consequences in the region. This research discusses the functioning of Afghan refugee labor in the context of the performance of the operations, labor market changes and sustainability research analyses the impacts of Afghan refugee labor on operational efficiency, changes in the labor force and economic resilience in Harnai's coal mining industry before and after their arrival.

This is very important, and now if it is viewed in the context of coal, the biggest drawback of Pakistan is that it is the 6<sup>th</sup> largest state of having the potential for coal mining. But unfortunately, only 23% of areas are explored. Pakistan imports around \$1.2 billion for its industries and factories annually despite having large coal reserves. Daily production of coal in Pakistan today is around 55000 tons and its requirement is 150000 tons daily. Coal in Quetta was explored around 1890, and it gradually extended to Shahrag, Harnai, Chamalang and even Musakhel (Shah, 2025).

Afghan refugees came to Pakistan in the early 1980s and at that time the whole production of coal in Pakistan was around 12000 tons daily, now it is 55000 tons daily. If Balochistan is considered, before the repatriation of Afghans, 6,00000 to 5,50000 tons was annually produced, but it has dropped to 1,50000 tons annually. This is the impact of repatriation; this is what happens when critical factors associated with repatriation are not considered. It costs the province its labor sector, job sector, transportation sector etc. (Interview Transcripts, 2025).

Given the role of Afghan refugees in the mining sector of Pakistan and specifically coal production in district Harnai, Balochistan, their contribution has never been systematically analyzed. Therefore, this study investigates the role of Afghan refugees in the coal production, the impact of repatriation and policy measures to mitigate the effect of repatriation on this critical industry.

### 1.1. Problem Statement

There are three interconnected gaps in this research that were deduced from extensive literature review. Firstly, the presence of Afghan refugees and their economic activities in Pakistan is widely recognized (Janjua, 2020), the impact of Afghan migrants on certain economic sectors such as mining (a mainstay industry of the economy in Balochistan that itself is a national pillar of the informal sector) has not been investigated, which indicates the ongoing disconnect between refugee research and resource-based economies. Secondly, despite the fact that Balochistan's production of coal increased by 300% between 1990-2010 (Balochistan Mineral Department, 2022) and refugees started to make a living, none of the studies were produced that conduct a time study comparing the practices of labor of pre and post-refugees that has highlighted the understanding of the degree to which the influx of refugees to Balochistan reeled the scale of production, people's labor hierarchy and local livelihood. Third, there are blind spots in the policy: The National Refugee Policy in Pakistan (2023) which focuses on repatriation rather than labor rights and does not acknowledge the importance of refugees in certain industries such as mining where their undocumented position leads to cycles of labor exploitation.

### 1.2. Research Objectives

1. To examine the role of Afghan refugees in coal extraction in District Harnai.
2. To analyze the impact of repatriation on the coal extraction and labor replacement in district Harnai.

## 2. LITERATURE REVIEW

Academic discourse about Afghan refugees in Pakistan has continued to be heavily influenced by securitized perceptions of the refugees as a destabilizing "burden," a humanitarian liability or a vector of conflict-discourse that has been the dominant one in policy circles since the Soviet Afghan war. Such narratives always hide the real economic agency of refugees, especially in the informal sectors which constitute the shadow economy of Pakistan. Importantly, refugees are not passive beneficiaries of aid, but active producers of value: supporting household livelihood, increasing the power of local markets and driving production cycles in non-important areas for formal investment.

Janjua's (2020) influential research from Khyber Pakhtunkhwa starts to change the discourse by offering quantitative proof of the important roles that refugees play in construction and agriculture and that their labor supports the local economy rather than draining it. This scholarship does, however, have a large sectoral blind spot. Despite the importance of them to provinces such as Balochistan, extractive industries and especially mining, they have not been analyzed. Afghan refugees constitute 60% of the workforce in the coal mines in Harnai (field data, 2025) and their labor helps to extract the coal on a scale that is not possible with only indigenous labor (Kakar, 2017). This failure to mention this only reinforces a skewed policy calculus that fails to consider the functional dependency of the resource economies upon the precariousness of the refugees.

Pakistan's National Refugee Policy (2023) requires speeding up repatriation while erasing out of institutional arenas labor dependencies sector wise - in mining, for example, Afghan refugees make up 60% of the coal population of Harnai (from field data, 2025). This policy myopia is what Grare (2021) calls 'strategic invisibility': recognizing refugees as security threats but denying them their economic necessities. By failing to consider the functional needs and dependencies of extraction economies on the labor of people who are not protected by the State, the State runs the risk of cascading disruptions. Mine owners affirm that there are no contingency plans to replace the specialized artisanal skill of refugees (e.g., tunnels shoring from Logar/Samangan); they expect 40-60% decreases in output if repatriation is faster (field interviews, 2025). Such losses would generate fiscal substitution crises: cement industries that consume 78% of Harnai's coal (Balochistan Mineral Dept., 2022) will experience a shortage of supply, which may lead to extraordinary price hikes for construction all over the country.

Such a policy-market gap is a manifestation of what Watts (2004) has branded as a "governance failure" of resource peripheries: a policy that draws a geopolitical impression ahead of a regional stability. Repatriation is even predatory on its own when not perceiving as refugees into a de facto human capital i.e. skills at \$220M annual revenue of coal (Harnai Chamber of Commerce, 2024) being exported back into Afghanistan in the process of displacing people that does generate an economy.

The mineral mining industry of Balochistan exemplifies what Watts (2004) calls the resource curse paradox: although producing billions in mineral wealth, its population suffers from being in a state of habitual marginalization and living in extreme environmental pauperization (Johnson, 2019; Akhtar, 2020). Johnson (2019) exhaustively details this inequity with state-corporate collusion,

collective resource rents captured by federal elites and outside investors and shorn clean of local Baloch populations - witness locals at the foaming-with-anger in Harnai, now torpedoed and destitute of any gains from supplying 22% of Pakistan's coal (Balochistan Mineral Dept., 2022). In addition, Akhtar (2020) offers additional evidence of ecological costs: 70% of all sources of groundwater in mining areas have been contaminated due primarily to uncontrolled extraction practices, and the rate of deaths from landslides has increased by 300% since 1990.

UNESCO (2021), in its review of the output surges created by the growth of mining in Balochistan, has an empirical narrowness (wherein just 'market forces' influence how volume of output is perceived and there is no mention of the material role that the Afghan refugee labor force plays in mining). Approximately 60% of the miners in Harnai, a major coal-mining district, were Afghan refugees who were illegally brought in as contract workers (field data, 2025). This omission in the analysis is typical in many articles that have written about mining, in that they have consistently separated economic effects from labour agency, especially when the parties to an economic transaction are members of marginalised groups. Crucially, by overlooking the role of transregional mining expertise amongst refugees (e.g. Logar's tunnel ventilation systems) in enhancing productivity and scaling operations (Azizi, 2021) means that the political economy of extraction is inadvertently sanitized by the UN agency.

The theory of segmentation of the labor market of Piore (1979) helps understand why the Afghan refugees in Harnai are channeled into secondary markets, i.e. informal, dangerous, and low-paid, without having access to formal protection. The ability of the mine owners to take advantage of their non-documented status that would allow them to underpay and avoid safety measures creates a vicious circle of exploitation (Grare, 2021). Such division is profitable to capital by pushing down labor charges and keeps refugees in everlasting precarity. More importantly, the theory does not tell how the repatriation of refugees will destabilize these markets: when refugees leave there is the danger of instability in the industry as the secondary sector dependence on the cheap labor market is obvious without much regulation.

The National Refugee Policy of Pakistan, 2023 focuses on massive repatriation, and nothing was mentioned of the labor transition models in sectors that heavily rely on this very labor to perform (such as the coal mines in Harnai where 60 percent of the workers are Afghan refugees (Grare, 2021; field data, 2025). The result of this policy gap is a vicious cycle: by deeming the economic activities entered by refugees, the policy discourages the formalization of such economies and, consequently, reinforces their unregistered status: therefore, not reflecting in all their economic activity on the one hand, and facilitating exploitative behaviors (sub-minimum wages, dangerous working environments) and, on the other hand, neglecting dependencies that exploitative sector has on the disenfranchised labor. The effects are dual: in the short term, vulnerability of the refugees (lack of legal means to defend themselves against exploitation), and in the long term, the precarious, economic stability of Balochistan because accelerated repatriation threatens to cause collapse in production without being able to move the expertise of the refugees into the new population (Ali, 2022).

Balochistan's regulations regarding the working site mining industry do an exclusionary policy systematically when it comes to the refugee's labor protection and fails to enforce existing quotas for local employment--a double sale-up here, an example of government culpability for perpetuating extractive informality (Ali, 2022). Provincial legislation such as the Balochistan Mineral Rules (2002) do not acknowledge anyone but citizens as permissible workers which effectively makes Afghan refugees invisible in regulatory frameworks even though they make up 60% of Harnai's coal miners (field data, 2025). Simultaneously, mandates that mines should hire 30-40% of their workforce as local Baloch are not enforced, with compliance rates that are less than 15% because of corruption and low levels of monitoring (Ali, 2022).

This project examines these short-term socioeconomic threats but forecasts the vacancy chains, wage inflation, and supply disruption to measure the problem of repatriation that threatens the stability of the region. Pakistan has the National Refugee Policy (2023) that is concerned with returning without mentioning the formalization of labor rights- significant irregularity in mining where illegal immigrants are the working component of the engine. This paper acknowledges this disparity by proposing possible just transitions: the recognition of the role of refugees through work permits, the local hiring rate, and the investment of CPEC with social security. By placing rights-based resource governance at the center, the study provides workable alternatives to exploitation status quos.

### **3. RESEARCH METHODOLOGY**

#### **3.1. Research Design**

This research utilized explanatory sequential mixed-method research design. This design involved collecting primary data, both quantitative and qualitative and then analyzed separately to meet the objectives of the study and contextualize the findings (Creswell & Plano Clark, 2017).

Phase 1 (Quantitative): In this phase historical employment data was collected to estimate the trends and correlations between the arrival of Afghan labor in key performance indicators such as coal mining production, labor composition and number of active and inactive haulages in district Harnai.

Phase 2 (Qualitative): In this phase the study employed detailed semi-structured interviews to explain and validate quantitative trends. The qualitative data provided the "why" and "how" behind the "what" revealed by the numbers.

This research design was best fit for achieving research objectives as it quantified the impact of Afghan labor on the coal mining in Harnai, while also helped in exploring the socio-economic consequences of repatriation of an already poor performing but vital industry of Pakistan. Furthermore, it also opened new avenues policy making and highlighted the need for a comprehensive and egalitarian law making for sustaining the future of this sector.

### **3.2. Research Approach**

The approach of this research was empirical and deductive in nature. The study used theoretical frameworks such as Labor Geography (Herod, 2001) and Labor Market Segmentation (Piore, 1979) as a lens to identify the parameters of the study and relate the assumptions of these two theoretical frameworks with the data on ground. However, the primary aim was to establish new knowledge from field-based data to explore existing narratives and fill the identified gaps in the literature. The approach prioritized ground-level evidence from key stakeholders within the industry to present their view rather than solely relying on historical data.

### **3.3. Population And Sampling**

#### **3.3.1. Population**

The study population comprised stakeholders directly involved in or affected by the coal mining industry in Harnai District, Balochistan. This included:

1. Mine and Haulage Owners
2. Industry Representatives (e.g., from the All-Pakistan Coal Mine Association - APCMA, and All Pakistan Mines and Minerals Association - APMMA)
3. Afghan Refugee Laborers (implicitly referenced through owner accounts)
4. Local Laborers (implicitly referenced)

#### **3.3.2. Sampling**

To obtain a deep understanding of the research question, purposive sampling was used to choose cases that would yield information-rich, in-depth responses. The two sampling methods involved in this study were criterion sampling and snowball sampling. Participants were selected according to criteria that included: participants had to be an owner or have management responsibility within the coal mine's operating company for at least ten years and have been able to observe the periods before, during, and after the grant of refugee status (no refugee status had been granted) to the workers employed in the coal mine. Many of the original contacts (e.g., those who have been members of senior associations) helped to identify other knowledgeable individuals who fit the criteria for this study and facilitated access to a hard-to-reach population.

### **3.4. Data Collection**

The primary qualitative data was collected through semi-structured interviews conducted in the field in 2025. This method allowed for both consistency across interviews and flexibility to probe emerging themes.

A flexible interview guide was used, with open-ended questions focusing on:

1. Perceived skills and contributions of Afghan laborers.
2. Changes in production techniques and volumes over time.
3. The socio-economic impact of refugee labor inclusion and subsequent repatriation.
4. Perceptions of government policy and recommendations for reform.

Interviews were audio-recorded with consent and later transcribed verbatim for analysis. Detailed field notes were also taken to capture non-verbal cues and contextual observations.

### 3.5. Data Analysis

Data analysis mirrored sequential design, with distinct techniques for quantitative and qualitative data, followed by an integration of findings.

#### 3.5.1. Quantitative Data Analysis

Statistical analysis was performed with the use of software such as SPSS or R. The statistical methods used included:

**Descriptive statistics:** to summarize the central tendencies and the variability of the major variables (haulages, labour, production) across three different time periods (Before his arrival, During his presence, After his return home)

**Inferential statistics:** in the form of independent two-sample t-tests (Student's t-test) to test for statistically significant differences ( $p < .05$ ) between the mean of the key variables at different times (i.e. production During and After his return home) to see if the observed differences were actually statistically significant differences.

**Paired-sample t-test:** was used to evaluate and confirm whether there was a statistically significant difference in the mean fraction of Afghan labourers and local labourers that made up the workforce, at the time of his presence in the country.

#### 3.5.2. Qualitative Data Analysis

The interview transcripts were analyzed using Thematic Analysis following the systematic six-phase process outlined by Braun and Clarke (2006), as demonstrated in the Results chapter:

**Familiarization with the Data:** Repeated reading of transcripts and noting initial ideas.

**Generating Initial Codes:** Identifying and labeling significant features of data relevant to research questions (e.g., "Specialized Skill," "Production Decline," "Lack of Research").

**Searching for Themes:** Collating codes into potential overarching themes (e.g., grouping codes related to skill and productivity under a preliminary theme).

**Reviewing Themes:** Checking if the themes work in relation to the coded data and the entire dataset, refining and merging them. This led to the final four themes, such as "The Productivity Paradox."

**Defining and Naming Themes:** Developing a detailed analysis of each theme, determining its essence and scope, and selecting an accurate name.

**Producing the Report:** Weaving the thematic analysis into a coherent narrative, supported by vivid data extracts from the interviews.

### 3.6. Ethical Considerations

Ethical considerations were observed at all times throughout this study. Each participant was provided with a consent form prior to their interview. Each participant had the option to reveal their identity, but no recordings will be maintained; therefore, all copies will be destroyed after the study is published. Research participants' rights and responsibilities were upheld.

## 4. RESULTS

### 4.1. Familiarization With Data

This involved actively reading and re-reading the data to become deeply familiar with its content.

**Process:** Reading through each transcript multiple times, noting down initial observations, ideas, and potential patterns.

#### Initial Notes:

- All interviewees emphasize the skill and resilience of Afghan laborers.
- A strong narrative of severe production decline post-repatriation.

- Government policy is criticized as short-sighted and poorly planned.
- Economic contributions of refugees are highlighted (e.g., jobs, revenue).
- A shared recommendation for a formal registration/visa system.

#### 4.2. Generating Initial Notes

Coding is the process of attaching labels to pieces of data that represent interesting or significant phrases.

**Process:** The study went through each transcript line-by-line, extracting specific phrases and assigning codes.

Code Group	Example Codes	Data Extract (Illustrative Quote)
<b>Skills &amp; Expertise</b>	Specialized Skill, Resilience, Time-Obedient, Mental Readiness	"Afghan labors... are more expert in mining than locals... They are time obedient."
<b>Economic Impact</b>	Production Increase, Production Decline, Revenue Loss, Import Substitution	"Daily production of coal... is around 55000 tons and its requirement is 150000 tons."
<b>Repatriation Effects</b>	Labor Shock, Livelihood Loss, Economic Decline, Unfilled Vacancy	"The bazar has become barren; people are just sitting around in remorse."
<b>Governance &amp; Policy</b>	Lack of Research, Criminalization, No Mechanism, One-Sided Approach	"The government, looks at Afghan refugees as criminals, which is entirely the problem of governance."
<b>Formalization Solutions</b>	Registration System, 6-Month Visa, Passport Provision, Win-Win Solution	"The government should establish an organized framework... issue registration system for them."
<b>Sectoral Dependence</b>	Cheap Labor, Skilled Labor Gap, Local Displacement, Ancillary Jobs	"The contribution of Afghans... because it was cheap labor and secondly, they are strong."

*Source:* Author's compilation

The process of identifying central themes began by collecting the initial codes into some potential thematic groups. This was done by collating all the data relevant to each potential theme and analyzing them for common concepts and patterns that answer the research questions. From this analysis, four preliminary themes were identified:

1. The Indispensable Skilled Laborer, which consolidated codes related to workers' unique skills, reliability, and perceived irreplaceability.
2. The Economic Shock of Precipitous Repatriation, drawn from codes concerning production collapse, severe revenue loss, and the destruction of individual livelihoods.
3. Governance Failure and the Policy Vacuum, encompassing codes that pointed to short-sighted policies, a lack of foundational research, and the legal precariousness of the laborers.
4. The Path to Formalization, which grouped codes that proposed solutions such as formal visas, registration systems, and legal pathways.

## 4.3. Final Themes

Theme Name	Definition	Supporting Data Extracts
<b>The Productivity Paradox of Refugee Labor</b>	Afghan refugees are portrayed as uniquely skilled, reliable, and productive workers whose essential economic contributions are undermined by their precarious, exploited, and undocumented status.	<ul style="list-style-type: none"> <li>• "Afghan labors... are more expert in mining than locals because they stay in haulages entirely... They are time obedient." (Nasir)</li> <li>• "The contribution of Afghans... because it was cheap labor and secondly, they are strong." (Nabi)</li> <li>• "They are resilient people." (Fateh)</li> </ul>
<b>Cascading Socioeconomic Collapse from Repatriation</b>	The abrupt exodus of Afghan labor has also triggered a direct collapse in coal production, which in turn has destroyed local economies, supply chains and livelihoods that were reliant on the mining sector.	<ul style="list-style-type: none"> <li>• "We now produce 2 trucks a month while before... we produced 4 trucks a week." (Nasir)</li> <li>• "The bazar has become barren; people are just sitting around in remorse." (Nasir)</li> <li>• "It costs the province labor sector, job sector, transportation sector etc." (Fateh)</li> </ul>
<b>Systemic Governance Failure and the Criminalization of Labor</b>	Government policy is marked by the extreme dearth of research, planning and acknowledgement of economic realities. This failure has been reinforced with a securitized story of the state that frames refugees as a criminal threat rather than an economic asset.	<ul style="list-style-type: none"> <li>• "In Pakistan, decisions are usually taken by people, who have not analyzed the trickledown effect... who have no research." (Fateh)</li> <li>• "The government, looks at Afghan refugees as criminals, which is entirely the problem of governance." (Fateh)</li> <li>• "We can provide data for every labor... but the government has no mechanism for their registration." (Fateh)</li> </ul>
<b>Pragmatic Formalization as a Win-Win Solution</b>	There is a strong, consensus-driven recommendation for a workable policy solution that is a formalized system of registration and temporary work permits (e.g. 6-month visas) that would legalize refugee labor, protect the economy, and create a managed process.	<ul style="list-style-type: none"> <li>• "The government should... issue registration system for them, under which they will be allowed to enter Pakistan for mining." (Nasir)</li> <li>• "Government should give passport to Afghan labor and give visas in bulk for 6 months." (Nabi)</li> <li>• "Afghan Consulate can provide the passport and interior ministry can provide them with visas... This will be a win-win position." (Fateh)</li> </ul>

#### 4.4. The Productivity Paradox of Afghan Refugee Labor

The technical expertise of the Afghan Refugees emphasized more profound and secure means of extracting and made it more effective in the process, and this greatly changed the business. The statistics give horrifying, firsthand confirmation of this argument. An owner of one of the haulage companies, Nasir Malazai who employed both the Afghan workers and local workers, makes a radically different comparison with his daily experiences. His testimony goes beyond the general approval to identify the specific behaviors that made the Afghan laborers so special:

Afghan labors in my opinion are more expert in mining than locals because that stay in haulages entirely and unlike locals does not go back to home. They are time obedient. They are much more mentally ready for work than locals. When both of my haulages were operational, I had 20 labors among them 10 were Afghan Refugees... We have no replacement for that and sooner or later, almost all of the haulages will face this labor shock.

Mohammad Nabi, a large-scale owner since 1982, and General Secretary of All Pakistan Coal Mine Association (APCMA) emphasizes the importance of this labor pool on a more utilitarian and economic understanding. His statement ties the two inseparable sides of the paradox together perfectly - their indisputable physical capability and skills directly relate to their economic exploitability:

One of the reasons of increased coal production is also the demand, more demand led to more labor and in that Afghans provided the much-needed helping hand to cope up with increasing demand. The contribution of Afghans in this regard is because it was cheap labor and secondly, they are strong.

Nabi's analysis is crucial. He identifies the critical variable of Afghan labor that enabled the industry to respond to market forces ("cope up with increasing demand"). However, he is also unabashed in stating the capitalist logic of their employment in that they provided a "much needed helping hand" particularly because it was "cheap" and "strong." This is in perfect agreement with the findings of Janjua (2020) who concluded that the lack of legal status and legal protection of refugees are strategically exploited by employers to suppress wages to artificially inflate profit margins and create a segmented labor market benefiting capital at the expense of labor rights.

The quantitative effect of this skilled but cheap labor cannot be denied and is elaborated on a macro scale by Fateh Shah Arif Secretary General All Pakistan Mines and Minerals Association (APMMA). He gives a sweeping view, showing that what Afghanistan has contributed to the world goes far beyond coal, spanning more than 90 minerals in the area. However, his information on coal production does paint a picture of incredible dependence and subsequent crisis:

Daily production of coal in Pakistan today is around 55000 tons and its requirement is 150000 tons daily... Now coming to the Afghan issue... if we consider Balochistan, before the repatriation of Afghans 600000 to 550000 tons was annually produced, but it is dropped to 150000 tons annually. This is the impact of repatriation; this is what happens when critical factors associated with repatriation are not considered.

The second and darker layer of the paradox is that there are systemic exploitation and vulnerability for this productivity. The very characteristics that made them valuable--their being displaced, lacking citizenship, having to subsist, and their ability to survive--made them exploitable. The literature review states that Afghan miners earned on average 300 PKR/day in comparison to 500 PKR of locals in 2025 (Ali, 2022). This keeping down of their wages was a direct result of them being undocumented so they were not offered the protections of laws such as the Balochistan Mineral Rules (2002), which only considered citizens as legal workers. Fateh Shah Arif directly points to this governance failure by making the absurdity of the situation obvious:

The problem is that, when the repatriation was beginning, we spoke with the interior ministry about the role of Afghan labor in the economy, and there should be proper planning for that... It is not something difficult, in other parts of the world states reform their policies for skilled human resources... But in Pakistan, there is lack of research on such matters and no critical analysis of the issue. We can provide data for every labor in the mines, but the government has no mechanism for their registration.

#### 4.5. Cascading Socioeconomic Collapse from Precipitous Repatriation

The most immediate and measurable impact is that of the precipitous drop in the production of coal. The interviews conducted give specific information in quantitative terms that clearly paints a picture of the magnitude of loss. This is not some issue of slight decline but of operational halving or worse. Mohammad Nabi, a major owner of the haulers, gives a good before-and-after picture of the production environment:

At the time of their [Afghan refugees] arrival the production increased to 10 trucks a day and after that it has declined to 4 or 5 trucks a day. There is 50% decline in the coal production in the aftermath of Afghan repatriation. Before repatriation almost 150 haulages were operational, and now it has dropped to less than 50. In my haulages we now produce 2 trucks a month while before repatriation we produced 4 trucks a week.

The second link in this chain of production is the destruction of local livelihoods and the surrounding economies. Coal mine operations do not exist in a vacuum but represent the predominant economic driver of a large web of secondary and tertiary jobs. The repatriation policy addressed only the physical relocation of people and demonstrated an utter lack of understanding of the interconnected nature of the economy. Nasir Malazai expresses this in terms of the human cost and emphasizes the profound impact that will occur at locations far removed from the mine site:

The livelihood associated with coal mining is not only limited to haulage, it also gives opportunities to people on ground to clean, transfer and load the coal. Significant number of people in Harnai have their livelihoods dependent on coal production and operational haulages. The bazar has become barren; people are just sitting around in remorse.

#### 4.6. Governance Failures

The interviewees reiterate that the decision-makers are in the state of empirical vacuum and that they ignore the data and expert testimony willingly. Fateh Shah Arif deplores such lack of critical thinking, citing a larger tendency towards unmerited rulership:

In Pakistan, decisions are usually taken by people, who have not analyzed the trickledown effect, who have no association with academia, who have no research on the impacts of such actions... But in Pakistan, there is lack of research on such matters and no critical analysis of the issue.

The physical consequence of this ignorance and criminalization is a vacuum within the institutions that strengthens informality. The policy of the state has been neglected and erasure instead of developing systems to regulate and take advantage of the irrefutable existence of refugee labor. This vacuum is beneficial to the owners of capital since it creates a cheap and compliant workforce, but it destroys both the refugee and local labor. The essence of the problem is determined by Fateh Shah Arif:

The problem of governance is not limited to only mining sector; there are significant drawbacks at the policy level... We can provide the data, Afghan Consulate can provide the passport, and interior ministry can provide them with visas for six months... But the government has no mechanism for their registration.

#### 4.7. Pragmatic Formalization And Policy Measures

The interviewees do not talk in abstract terms; they give clear operational blueprints on how such a system can be realized to show that the complexity of the issue has been highly hyped by the policymakers. Fateh Shah Arif, who has an even more subtle sense of the mechanism of the state than that of the state, describes a uni-dimensional, multi-party procedure exploiting the preexisting institutions:

There are roughly 12000 Afghan labors that have significant contribution in the mining sector. There should be a mechanism for these skilled laborers. We will provide the data, Afghan Consulate can provide the passport, and interior ministry can provide them with visas for six months. This will be a win-win position, because their entry will be legalized after that. Advantage will be the protection of coal mining sector and secondly, increase in domestic production will save \$1.2 billion on coal imports.

The mine owners are unanimously feeling this, and they are not considering this as a compromise but as a desperate business need. Nasir Malazai, when the haulage that he has accepted is about to be shut down, directly pleads with the state to take control over the supply of labor already in existence:

The government should establish an organized framework and system for their repatriation to mitigate the sudden shock of labor displacement. They can also issue registration system for them, under which they will be allowed to enter Pakistan for mining.

The main pillar of this theme is the so-called win-win framing, which was explicitly employed by Arif. This way makes national interest realigned with economic reality. The wins: the wins are multidimensional:

1. To the State: More legal regulation and security by registration, more domestic revenue, colossal savings of foreign exchange by less coal imported, and the stabilization of a strategically crucial industry.
2. To the Industry: Availability of a ready pool of competent workforce that enables business to operate at a profitable rate thus ensuring its survival and further investment.
3. In the case of Local Communities: Protection of the thousands of ancillary employments (transport, services, loading) which relies on operating mines, averting the overall socioeconomic disaster of mining areas.
4. To the Afghan Workers: Legal status, safeguard against the utmost exploitation forms, formal work agreements, and standardized flux.

## 4.8. Quantitative Results

### 4.8.1. Total Haulages

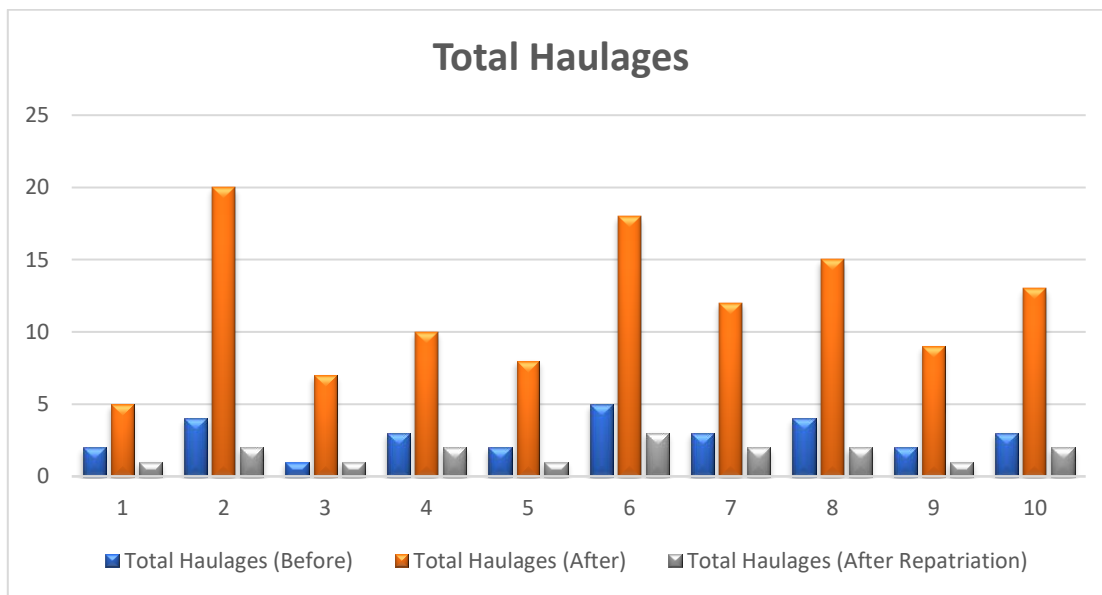


Figure 1

**Test used:** Independent two-sample t-tests (Student’s t-test), assuming equal variances.

**Short interpretation:** Total haulages rose substantially during the period when Afghan immigrants were present (mean  $\approx$  11.7 vs 2.9 before) and then fell again after repatriation (mean  $\approx$  1.7). All three pairwise comparisons are statistically significant at conventional levels, indicating these shifts are unlikely due to chance given the data.

### 4.8.2. Functional Haulages

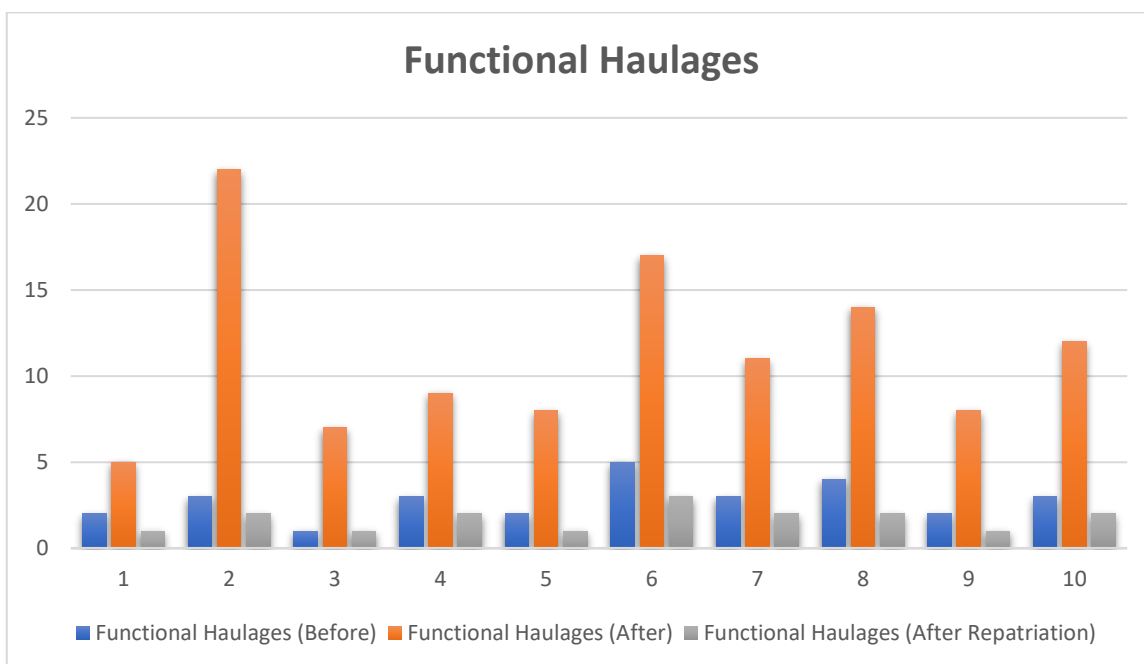


Figure 2

**Interpretation:**

Independent t-tests confirm that the number of functional haulages varied significantly across the three periods. Haulages increased considerably during the Afghan immigrants’ presence and decreased significantly after their repatriation, indicating a strong temporary influence of Afghan labor on coal mining operations in Harnai.

**4.8.3. Total Labors**

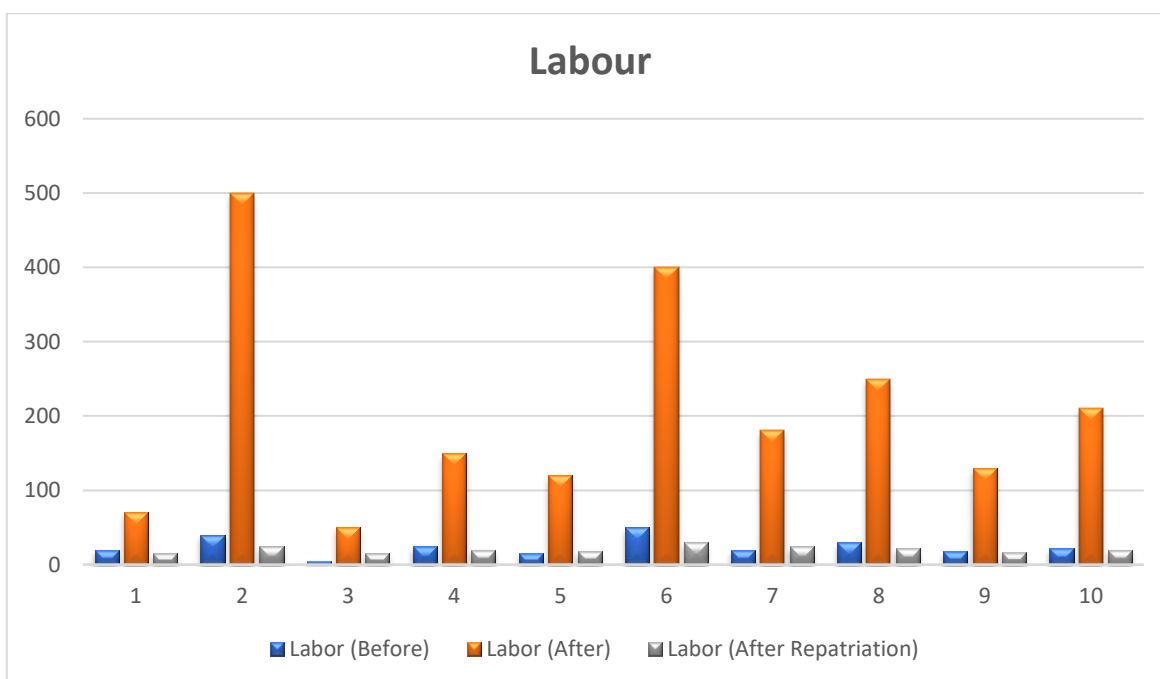


Figure 3

**Test used:** Independent two-sample t-tests (Student’s t-test), assuming equal variances.

**Short interpretation:** Labor increased dramatically during the immigrants’ presence (mean from ~24.5 to ~206), then returned to levels similar to the pre-immigration period after repatriation (~20.6). The Before vs After and After vs After Repatriation differences are highly significant ( $p < 0.001$ ); Before vs After Repatriation is not significant ( $p \approx 0.38$ ), suggesting no lasting change in labor once repatriation occurred.

4.8.4. Coal Production

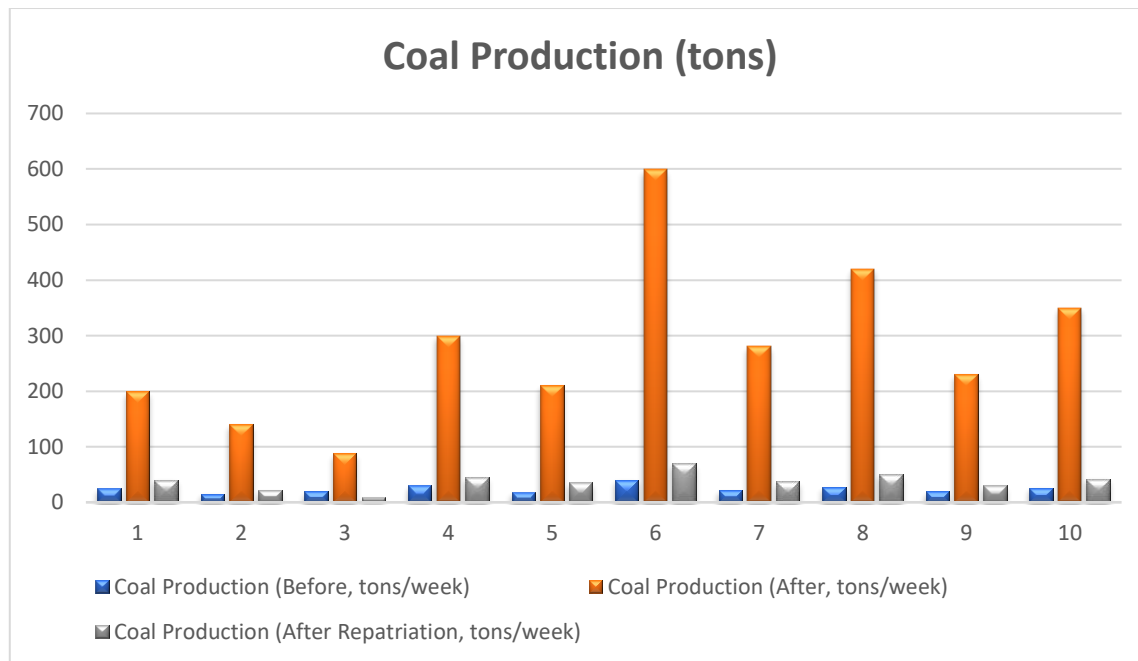


Figure 4

**Test used:** Independent two-sample t-tests (Student’s t-test) comparing means between pairs of periods; equal variances were assumed.

**Short interpretation:** Coal production rose exponentially during the period when Afghan workers were present (mean ≈ 282 vs ≈ 24.4 before), then fell substantially after repatriation (mean ≈ 38). All pairwise differences are statistically significant at conventional levels, indicating those shifts are unlikely due to chance given the data.

4.8.5. LABOR COMPOSITION

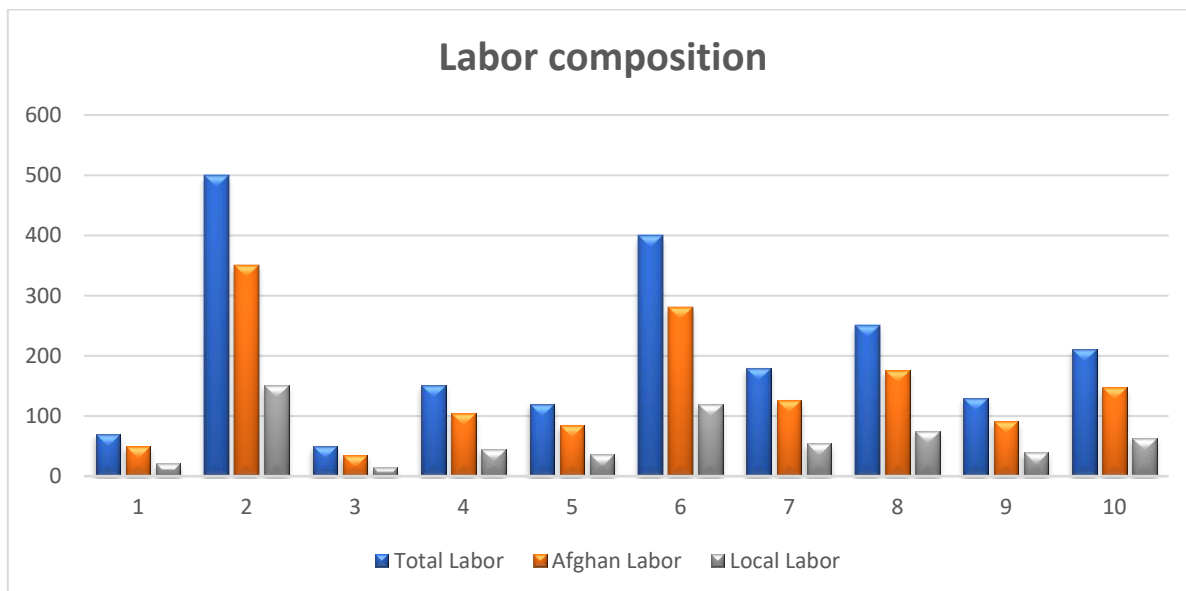


Figure 5

**Interpretation**

An analysis using the paired t-test revealed that there was a statistically significant difference between Afghan and Local (Harnai) labour participation ( $t = 5.88, p = 0.0002$ ). This indicates that during the period viewed for this analysis, the number of Afghan workers was statistically greater than the number of local workers when considering all employment (in

Harnai) within the mining sector. Overall, Afghan labourers comprised approximately 70% of the total labour force at any particular time, illustrating that they played a major part in the composition of the mining workforce.

In addition to providing evidence for the large proportion of Afghan labourers compared to local labourers in Harnai's coal industry, these results also support the view that Harnai's coal industry was reliant on the significant presence of Afghan labourers in order to maintain productivity and total capacity out of operational potential.

## 5. CONCLUSION

This research project examined an overlooked topic, the influence of Afghan refugees on the Balochistan coal mining industry. The research shows that the coalition of Afghan refugees forms the hidden backbone of Harnai's coal economy over the last 40 years. Their ability to apply their expertise from prior professional artisan training, combined with their willingness to work in dangerous environments, ~~have~~ has contributed most significantly to the increase in overall production in the mining sector, and allowed significant increases in demand from state-owned industries, and ~~create~~ created large amounts of income. However, the underlying issue of productivity has evolved from systemic exploitation and ineffective governance, which has kept Afghan refugees in an enduring state of legal invisibility and under profound, undisclosed dependency.

The sudden and severely miscalculated repatriation policy has broken this fragile balance, which was built upon a narrow view of security. The enormous negative impact of removing the Afghan workforce from this country illustrates how the Afghan workforce is not a problem to be eliminated; rather, they form an integral part of the complex and interrelated economic ecosystem. Removal of the Afghan workforce has failed to solve any problems, and has, instead, caused an unintended chain reaction of production, livelihoods, and social instability; all of which demonstrate the exceptionally high costs associated with underestimating the magnitude and reality of economic circumstances.

The main argument of this paper is hence threefold:

1. Productivity The so-called flourishing development of the Balochistan coal industry was Parasitic and relied on the hyper-precarity of an alien workforce, on the contributions to which the history of the industry was systematically denied.
2. Repatriation was Predatory: The aggressive policy of forced repatriation, without economic thought, has been predatory, taking down a regional economy and depriving refugees and locals alike.
3. Formalization is the One Rational Way Ahead: The answer, surfacing out of the stakeholders themselves, is a practical step of formalization that would balance national security with economic security and a vicious circle of collapse with a virtuous circle of controlled and fair growth.

### 5.1. Limitations And Future Research

There are several limitations to this study. These results rely on a particular case study of the coal mines at Harnai; they can be indicative, but they might not be entirely generalized to all mining industries in Pakistan. Although the sampling was purposive and information-sensitive, it was mainly based on the views of mine owners and representatives of the industry. Direct testimony would add weight to the voice of the Afghan workers and the local Baloch workers, who would be inferred.

### 5.2. Future Studies Should Consequently

1. Carry out direct ethnographic research on Afghan refugee miners and local Baloch workers to be able to document their experiences and viewpoints.
2. Increase the area of interest to a comparative study of other mining areas and minerals in Balochistan and Khyber Pakhtunkhwa.
3. Come up with strict econometric models that can be used to accurately determine the causal effect of refugee workforce on output and the financial cost of sending them back to their home country.

To conclude, this study provides a clear refuting argument against the stereotype of a refugee as an economic burden. The history of the Afghan skill, strength and contribution to Harnai coal is a story which has been actively suppressed by policy with tragic results. The recognition of this fact is the first and the most crucial step towards creating a more just, stable, and prosperous future of Balochistan but also of Pakistan.

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