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Innovative Pay Methods: Addressing Compensation Challenges in the Construction Sector in South Sudan

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ABSTRACT

The protracted civil conflict in South Sudan has significantly impeded the development of infrastructure, particularly the road system, which remains inadequate or nonexistent in many rural areas where 80% of the population resides. Among the many difficulties faced by construction companies include material delivery delays, a shortage of local skilled labor, disruptions during the rainy season, insecurity, delayed project approvals and payments, and a large number of public holidays. Furthermore, culturally motivated employee procrastination has a detrimental impact on output. Employee pay usually does not take these difficulties into consideration, which affects business performance. The purpose of this study was to suggest innovative payment strategies suited to the unique construction environment of South Sudan. The study employed a mixed-methods approach. Data was collected from eight project locations via questionnaires, interviews, and workshops. SPSS and qualitative content analysis were used to analyze the data. Three successful pay models were found: Management-Driven Pay (MDP), Shared Pay Rate (SPR), and Team-Based Pay (TBP). These strategies seek to match incentives with actual problems that exist on the ground, such as security and weather. To encourage better labor relations in the industry, the report suggests modifying the Labor Act of 1997.

INTRODUCTION

Background

Due to decades of civil war, South Sudan essentially experienced a lack of fundamental infrastructure, which eventually reduced a large portion of its industrial potential. An estimated 80% of the country's population lives in rural areas, where the road network is appalling and, in some places, nonexistent (ADB, 2012). As a key tactic to promote economic growth, the South Sudanese government has made road construction investments a top priority. This stance was reaffirmed during the nation's Economic Cluster of the Council of Ministers meeting, which highlighted the urgent need for roads in the nation to facilitate trade and generate employment (UNMISS, 2013).

However, due to the high cost of developing roads throughout the nation, the government's and its development partners' road construction projects have not gone smoothly. Inadequate equipment for high-quality road building, insufficient but unskilled human resources paid through haphazard compensation methods, and unfavorable climate variations that cause drought or heavy rainfall to damage unpaved or murram roads, are the main causes of these high costs. According to UNICEF's 2011 Labour Market Report, 94% of young people in South Sudan enter the workforce without any qualifications. This suggests that workers from neighboring countries fill specialized roles in industries like construction. Although this may serve as an explanation for the pay gap between international and domestic workers, unskilled foreign workers occasionally earn more than their domestic counterparts. Furthermore, the situation is not improved by the fact that international employees are paid in US dollars (Sudan Tribune, 2012). Even though bad weather, insecurity, and delays in the supply of construction materials and equipment sometimes force road construction to halt, road construction companies still pay their employees their full monthly salaries, which drives up the cost of building a single road in South Sudan.

It's also crucial to remember that most local workers do not associate their work performance with their pay because of their cultural background and the detrimental effects of the civil war. For them, simply showing up for work is sufficient reason to be paid. In response to the attitude of local workers, respective construction companies have strengthened their supervisory functions, typically by hiring a foreign expert. This has further increased the already exorbitant cost of road construction (Business Daily, 2014).

One of the main causes of the high cost of building roads is the employment of random compensation techniques in the country. The current pay method in the construction industry in South Sudan is not supporting the growth of the companies. The fact that the existing pay structure ignores significant issues that impact the nation's road construction sector lends credence to this viewpoint.

These issues include things like delayed delivery of building materials due to impassable roads, a shortage of skilled local workers, the inability to work during rainy seasons, insecurity brought on by rebels and intertribal

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conflict, the inability to obtain new projects after old ones are finished or suspended, the approval and payment of certificates, and an excessive number of public holidays. Procrastination also affects work, which is a product of staff culture and mindset.

LITERATURE REVIEW

As stated by Zaharie (2013), decisions related to compensation should be approached strategically. This is due to the significant portion of a company's resources allocated to compensation-related efforts. Consequently, it is essential for management and company owners to align compensation strategies with the broader goals and objectives of the organization. In the context of the road construction sector in South Sudan, the unpredictable environment in which these companies function limits the ability to take such careful considerations. In this situation, the majority of road construction firms in South Sudan have embraced an entitlement compensation philosophy, which Zaharie (2013) describes as a philosophy that ensures salaries, benefits, and incentives regardless of the variations in industry or economic conditions.

Widely Used Pay Models by Companies

Different researchers and dictionaries have recognized distinct pay models. According to the Free Online Dictionary, a fixed monthly salary is the sum of money provided to employees for office or professional labor, usually on a monthly basis. The Fee for Service (FFS) model is an additional model. Employees are compensated according to the number of office visits, tests, and treatments they perform under this approach, which is popular among healthcare practitioners (Centre for Studying Health System Change 2008 as cited in Greene *et al.*, 2013). Merit pay, also known as pay for performance (PFP), has been seen as a successful strategy for encouraging workers to put in more effort (Mulvaney *et al.*, 2012; Park & Sturman, 2012).

"Forge a link between pay expenditures and individual productivity" is the theory behind this approach (Mulvaney *et al.*, 2012, p. 507). A compensation plan known as "team-based performance pay" links financial rewards to a group's or project team's performance as opposed to individual work. Among its fundamental tenets are responsibility and common objectives (Lawler, 1990) group incentives connected to quantifiable results (Gomez-Mejia & Balkin, 1992) and interdependence and cooperation as a means of motivation (Hackman, 2002).

Team Based Performance (TBP) Pay Method and Compensation Challenges in Road Construction Sector in Turbulent Environments

Meyer (1994) examined how effective metrics can support teams and identified four key principles: the objective of measurement should be to assist a team; a team ought to establish its own measurement framework; a team should develop metrics that monitor the process for delivering value across multiple functions; and importantly, a team should not implement numerous metrics simultaneously. Meyer's principles will aid a team in collectively reaching a goal. In road construction, a group can set a goal and strive to achieve it together. Merriman (2009) argues that incentivizing team performance may be counterproductive, as team members may perceive it as unfair. Rewarding teams is a good idea but there should be ways of how to reward individuals within the team or else low performers will get paid for work done by other people. Kim *et al.* (2011) examined the impact of group-based pay for performance and discovered that it improves overall company performance. Members are more likely to collaborate as a team rather than focus on individual efforts (Ellemers *et al.*, 2004; Kim *et al.* 2011). Through this approach, individual objectives are accomplished by aligning them with group goals, which motivates the team to work diligently towards achieving personal aspirations. Each team member contributes their unique skills and knowledge, allowing the group to reach its shared objectives. This, in turn, fosters a spirit of teamwork. According to Kim *et al.* (2011), the sustainability of group-based pay for performance supports empowerment practices, which Kirman *et al.* (2004) defined as 'an increased task motivation that is due to employees'. If empowered, teams will be able to make decisions that will support their plan to achieve specific set of goals. They are usually satisfied when the outcome shows the impact of their decision.

It's crucial to understand that when employees are driven by their anticipated pay, they may be inclined to overwork machinery and deliver inferior quality output simply to meet their own interests. In the road construction sector of a volatile environment like South Sudan, workers often misuse machinery when motivated by promised bonuses, and they rush to complete a section, which results in subpar work. Consequently, the consultants brought in to supervise the project often reject that section. As a result, the company is then forced to redo the work, leading to significant expenses on machinery repairs. Nonetheless, the communal way of living in South Sudan may foster effective teamwork. Individualistic lifestyle is not common in South Sudan. People live communal life and may support working as a team.

Shared Pay Rate (SPR) and Compensation Challenges in Road Construction Sector in Turbulent Environments

The challenging and unproductive circumstances that employees encounter in unpredictable environments are often not represented in conventional compensation models. Studies indicate that workers are frequently undercompensated despite their readiness to remain engaged when projects experience delays due to logistical challenges, seasonal weather issues, and safety concerns (Mundial, 2017; Ahmed & Ochieng, 2020). As a result of these shortcomings, researchers and industry professionals are exploring alternative compensation structures that align pay more closely with the actual

situational conditions. Among these options, the Shared Pay Rate (SPR) has gained traction as a method that offers employees income stability by designating a portion of their wage that is independent of individual daily performance. This method recognizes the uncontrollable outside influences that prevent consistent labor performance, such as weather extremes, road inaccessibility and civil unrest.

The significance of SPR becomes particularly evident in volatile environments where traditional "pay-for-performance" approaches fall short. By instilling a sense of job stability and equity, SPR boosts employee morale and retention, especially in situations where risks are collective rather than individual (Bawole *et al.*, 2021). Given that employees often face challenges beyond their control, SPR serves as an effective compensation strategy in South Sudan by ensuring that 50% of wages are guaranteed regardless of productivity. Research indicates that such models also enhance relationships within industries, foster collaboration, and mitigate conflicts between labor and management (Ndegwa & Wanjiku, 2022).

Management-Driven Pay (MDP) and Compensation Challenges in Road Construction Sector in Turbulent Environments

In unstable regions such as South Sudan, challenges like systemic inefficiencies, poor infrastructure, and regular interruptions from conflict and adverse weather conditions often exacerbate compensation problems in the road construction sector. These persistent external factors remain unaddressed by conventional compensation models, which primarily focus on direct labor output. Consequently, these issues often lead to worker dissatisfaction, reduced productivity, and strained relationships within the industry (Gollin, 2019; Ali & Kamau, 2021). The increasing research on compensation reform in fragile states highlights the necessity for adaptable pay models that account for local contextual factors. The Management-Driven Pay (MDP) framework introduces a shift in accountability by empowering management to actively tackle site-level challenges such as material delays, security issues, and work interruptions due to weather. MDP fosters enhanced strategic planning and coordination among clients, contractors, and employees by making management accountable for establishing conditions that allow work to continue smoothly.

The foundations of MDP are based on institutional and contingency theories, which assert that efficient compensation structures must consider both organizational capabilities and external conditions. To shield employees from unjust penalties, managers implementing MDP should not only ensure work readiness but also discuss non-performance factors with clients, such as inclement weather, conflicts, or inaccessible roads (Omwenga & Abebe, 2020). Research indicates that this approach mitigates blame-shifting and labor disputes by aligning accountability with decision-making authority, thereby enhancing fairness and performance (Ndegwa, 2022). Nonetheless, effective leadership, clear contractual agreements, and supportive labor policies are essential for the successful execution of MDP. As a result, connecting pay results to managerial performance and project execution that considers the context, MDP provides a viable yet management-heavy approach to addressing compensation issues in delicate construction settings.

Compensation Challenges Faced by Road Construction Companies in Turbulent Environments

Construction companies operating in unstable regions deal with challenges such as political instability, conflict, poor infrastructure, and extreme weather conditions. These companies encounter significant problems related to compensation, which ultimately impacts employee morale and the completion of projects. Traditional performance-based compensation models often fall short in these contexts because they fail to account for uncontrollable delays such as supply chain disruptions, flooding, or insecurity (Ali & Kamau, 2021). Although external disruptions frequently hinder employees from fulfilling their duties, they are often penalized for not performing. This has been linked to ongoing labor conflicts, decreased motivation, and elevated employee turnover (Gollin, 2019). In addition, inconsistent project financing and delayed client payments hinder construction companies from providing competitive salaries, particularly in public sector contracts. The absence of a legislative framework that can adjust to these unpredictable working conditions further complicates the provision of fair and prompt compensation (Omwenga & Abebe, 2020).

Insufficient labor regulations, informal employment agreements, and inconsistent enforcement strategies exacerbate compensation issues and erode employee trust. To avoid navigating complex labor laws, companies often resort to informal hiring practices, which later results in conflicts over wages and benefits (ILO, 2018). Moreover, social fragmentation plays a significant role because ethnic factors can influence perceptions of pay equity, potentially causing clashes among local labor organizations (Saferworld, 2019). In addition, many road projects in South Sudan rely on funding from the government or donors, and delays in payments frequently impact worker morale and project timelines (Norwegian Refugee Council, 2022). Overall, these factors highlight the need for compensation strategies that are transparent, flexible, and tailored to the realities of fragile states.

MATERIALS AND METHODS

Research Approach and Strategies

The research employed a mixed-method approach, integrating both quantitative and qualitative techniques as a research strategy. The goal was to enhance triangulation by complementing action research with diverse forms of quantitative and qualitative information. As noted by

Denzin (1978), triangulation in action research involves gathering various types of data, utilizing different sources, and collecting information at multiple points in time. This approach ensures a comprehensive and credible understanding of the situation. Data was gathered from workshops, interviews, and questionnaires.

Study Population

At the time of this research, there were only three local firms engaged in bridge and road construction: Payii, Markeric, and Tumu. Consequently, a decision was made to draw study samples from all members of the population. As noted by Babbie (2007), researchers should ensure that, when possible, every element that meets the theoretical criteria has an opportunity to be included in the sample. This approach allows researchers to maintain the representativeness and generalizability of their results.

Study Sample Size

The group of participants for Payii consisted of 7 staff members from each of the 4 projects, resulting in a total of 28 field participants and 7 management staff. Therefore, the overall population for Payii was 35. Tumu had 2 projects, each with 7 staff members, leading to a total of 14 field participants and 3 management staff. Hence, the total population for Tumu was 17. Markeric also had the same total population of 17. When it came to the actual distribution of interview questionnaires, Payii had 29 individuals who collected the questionnaires, while both Mutu and Markeric had 17 each. This resulted in a questionnaire distribution rate of 83% for Payii and 100% for both Mutu and Markeric. Additionally, qualitative data were gathered from the workshops.

Data Analysis

The gathered data was reviewed for any errors resulting from either omission or misrepresentation. Frequency analysis of both the interview and survey data was conducted using the Statistical Package for Social Sciences (SPSS). The data collected from workshop minutes was analyzed through qualitative content analysis. Hsieh and Shannon (2005) identify three types of content analysis: conventional, directed, and summative. Qualitative content analysis involves identifying underlying themes within the materials under examination. The researcher utilized both personal interview data and workshop minutes to derive meaning from the texts for better understanding. The frequency with which items appeared in the texts significantly contributed to the study's findings. Hsieh and Shannon (2005) referred to this as summative content analysis. This method involves counting and comparing keywords or content, along with interpreting the deeper context.

RESULTS AND DISCUSSIONS

Questionnaire Return Rate

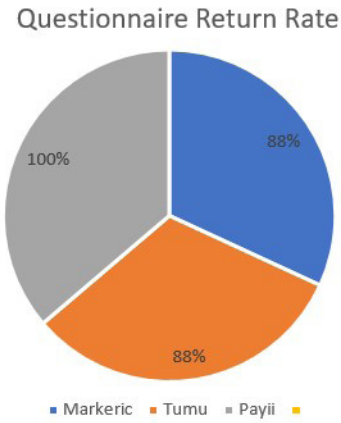

Figure 1: Questionnaire Return Rate

As depicted in Figure 1, 29 employees from Payii completed and submitted the questionnaires, while Tumu and Markeric each had 15 employees who completed and returned theirs. This resulted in a 100% return rate for Payii and an 88% return rate for both Tumu and Markeric.

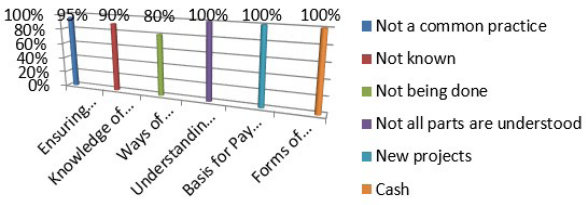

Figure 2: Employees' understanding of pay

Employees' Understanding of Pay

As illustrated in Figure 2 above, employees typically show a strong interest in understanding the factors related to their compensation. Concerns like the criteria for salary increases and types of bonus payments are highly prioritized by these workers.

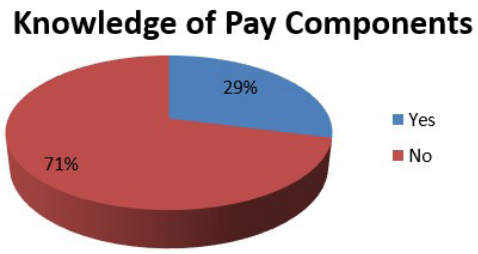

Figure 3: Knowledge of Pay Components

Knowledge of Pay Components

Figure 3 above indicates that 29% of employees are aware of the components of their compensation, while 71% are not informed. Many individuals lack knowledge about what constitutes their compensation. If only employees understand what they are entitled to in terms of overall pay, they will actively seek those benefits.

Employees should insist on being informed of all their entitled compensation before starting their job. From the researcher's observations, when prospective candidates in South Sudan are queried during interviews about their expected salary, they tend to hesitate.

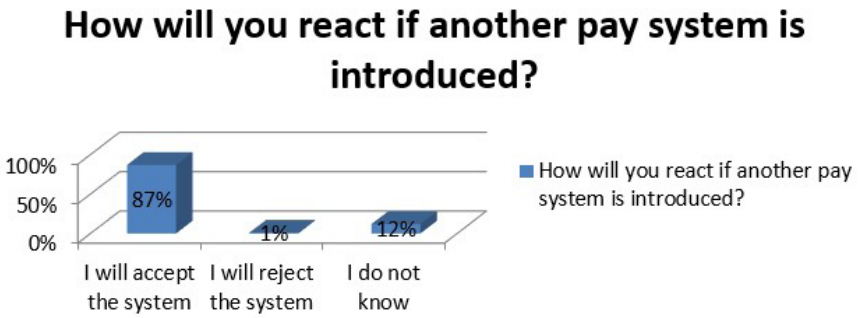

Figure 4: Reaction to the introduction of a new system

Views on the Introduction of a New System

Based on the individuals who completed the surveys, the responses to the implementation of a new pay structure are illustrated in the figure above.

Based on Figure 4 above, 87% of individuals are likely to embrace a new system, while only 1% will oppose it, and approximately 12% remain uncertain about their response. It's likely that the 12% unsure about the new pay system feel apprehensive due to the fear of the unknown.

The 87% who are willing to accept the new system are characterized as risk-takers, indicating that these employees are open to exploring opportunities that could be advantageous for them. This presents an opportunity for employers to implement innovative approaches that could be mutually beneficial for both employees and the organization.

As a result of the selected sample, 87% are open to accepting modifications that would include the compensation elements they have been lacking. Concerns regarding the sustainability of the payment methods were raised during the interviews. The participants recognized that maintaining a consistent monthly salary is challenging due to various unforeseen circumstances.

The Preferred Pay Methods

The research performed a comparative evaluation of how employees are compensated through three interactive workshops: Workshop 1, Workshop 2, and Workshop 3. These workshops gathered participants from Payii, Tumu, and Markeric, which are three construction firms operating in South Sudan. The structure of these workshops was based on agenda topics that were previously formulated from insights gained from comprehensive questionnaires and interviews with employees, managers, and site supervisors. The payment methods assessed during the workshops included Pay for Performance (PFP), Team-Based Pay (TBP), Management-Driven Pay (MDP), Special Team-Based Pay (STBP), and Skill-Based Pay (SBP).

Throughout all three workshops, discussions consistently indicated that Pay for Performance (PFP), Team-Based Pay (TBP), and Management-Driven Pay (MDP) were the most favored compensation strategies. Participants noted that PFP incentivizes individual effort and accountability,

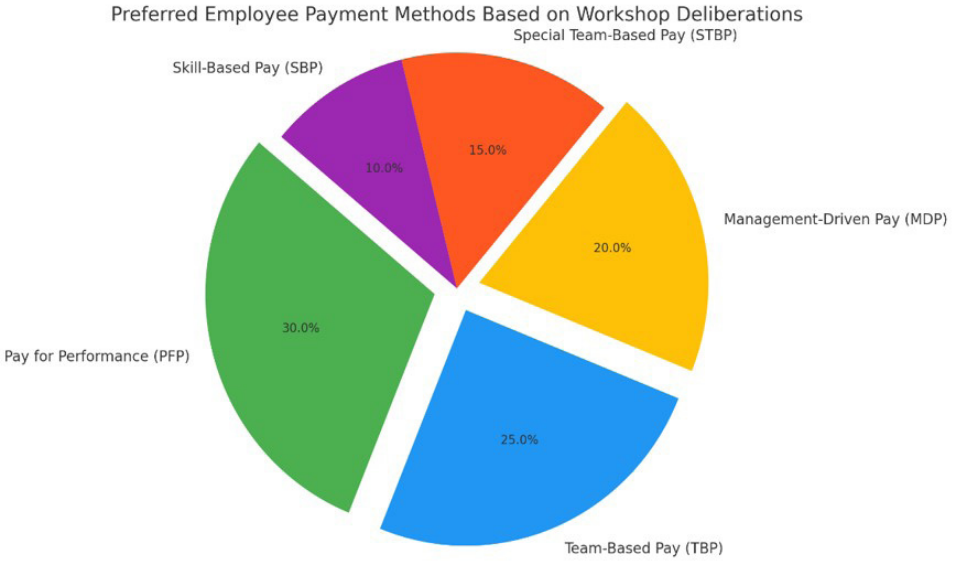

Figure 5: Preferred Employee Payee Method

especially during work periods when conditions regarding environment and security are optimal. TBP was preferred for fostering collaboration and shared accountability, particularly in scenarios where teams must seize fleeting opportunities to complete tasks amidst unstable circumstances. MDP received strong support as it places the onus on management to manage external disruptions—such as delayed supplies, insecurity, or severe weather—thereby shielding employees from being penalized for factors outside their influence.

The combination of these three approaches was deemed especially appropriate for implementation by Payii, Tumu, and Markeric, all of which function within the unstable construction sector in South Sudan. Considering the country's persistent political unrest, insecurity, and logistical difficulties, a hybrid compensation framework grounded in PFP, TBP, and MDP would provide a balanced solution. PFP can incentivize top performers when work opportunities arise, TBP fosters team collaboration during joint endeavors, and MDP guarantees fairness by holding management responsible for creating supportive conditions. Together, these models offer adaptability and equity, aligning compensation with both effort and situational context. Their implementation would not only boost productivity and motivation but also enhance labor relations in a conflict-sensitive setting where inflexible pay systems have traditionally fallen short in addressing workers' issues.

Figure 5 presented above shows the distribution of employee preferences regarding pay methods, derived from the outcomes of Workshops 1, 2, and 3. The three most favored methods are Pay for Performance (PFP), Team-Based Pay (TBP), and Management-Driven Pay (MDP). Together, these three account for 75% of the overall preference, highlighting their appropriateness for construction companies in South Sudan to implement.

CONCLUSION

This study investigated the potential of innovative compensation strategies to address pay-related challenges in South Sudan's construction sector. The high survey response rates of 100% from Payii and 88% from Tumu and Markeric reflect strong employee engagement, especially in matters concerning bonuses and salary adjustments. However, the research revealed a significant knowledge gap, with 71% of employees lacking awareness of the components of their compensation packages. Based on data triangulation and workshop feedback, three strategies which include Pay for Performance (PFP), Team-Based Pay (TBP), and Management-Driven Pay (MDP), were identified as the most relevant and feasible. MDP emphasizes managerial accountability in influencing productivity, TBP promotes teamwork in unpredictable construction environments, and PFP motivates individual performance. Together, these strategies provide a balanced framework that aligns with the region's complex economic and social dynamics. Notably, 87% of employees expressed readiness to adopt a revised compensation system. The study concludes that a blended pay model incorporating these approaches could enhance transparency, motivation, and adaptability in South Sudan's fragile construction industry. Implementing such a system may not only improve employee satisfaction and performance but also contribute to long-term organizational resilience and growth in a challenging post-conflict context.

Recommendations

Adopt a Hybrid Pay Model

Payii, Tumu, and Markeric should test a payment system that integrates MDP, TBP, and PFP. This will ensure a fair framework that motivates hard work, promotes collaboration, and makes management accountable for outside constraints.

Increase Employee Pay Awareness

Transparent and candid discussions about salary elements should be a primary focus for organizations. By offering orientation programs and ongoing education about compensation frameworks, employees can better understand and champion equitable pay.

Institutionalization of Feedback Mechanisms

To monitor the effectiveness of adopted compensation strategies and ensure continuous improvement, it is essential to create consistent feedback channels between management and employees (such as suggestion platforms or quarterly workshops).

Policy Reform and Advocacy

Employers, representatives from various sectors, and lawmakers should support reforms to South Sudan's labor laws that include adaptable and context-aware compensation systems reflecting the challenges of unstable conditions.

Mitigate Sustainability Risks

Organizations ought to develop contingency plans, such as standby pay systems or contracts adjusted for weather conditions, to ensure that employee wages remain stable despite unexpected events.

Suggested Areas for Further Research

Longitudinal Impact of Hybrid Pay Models

Future research should assess the long-term impact of integrated compensation systems (PFP, TBP, MDP) on employee retention, productivity, and industrial harmony in conflict zones.

Gender Dynamics in Pay Preferences

Investigate how compensation preferences and experiences differ between male and female employees in the construction sector, especially in fragile contexts like South Sudan.

Client Role in Compensation Sustainability

Explore how donor agencies, government entities, and

private sector clients influence the financial viability and sustainability of pay structures in conflict-prone construction projects.

Technology in Compensation Management

Assess the potential of digital tools (e.g., payroll apps, mobile-based tracking systems) to improve compensation transparency and delivery in hard-to-reach project sites.

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