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# Employment in Yemen: Recent Statistics and Future Trends

By

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## Key Points

This report presents an in-depth analysis of future employment trends in the Republic of Yemen in light of the ongoing conflict and its associated economic and humanitarian challenges, and their impact on the structure of the labor market. It focuses on the opportunities available to revitalize the economy through support for promising sectors and the development of human capital. The key findings are as follows:

- Yemen's economy is experiencing a sharp rise in unemployment rates, particularly among youth and women, due to the contraction of both the public and private sectors. Youth unemployment exceeded 32% in 2023, while the unemployment rate for women reached around 38%, highlighting a significant gap in access to employment opportunities.
- The digital economy is among the most promising sectors for generating quality and sustainable employment for youth, in areas such as programming, digital marketing, and freelancing, despite the limitations of the current digital infrastructure.
- Small and medium enterprises (SMEs) are emerging as effective tools to stimulate local economic growth and create flexible and independent employment opportunities, particularly in food industries, crafts, and commercial services, provided that adequate financial and technical support is available.
- The agriculture and agribusiness sector represents one of the strategic pillars for enhancing food security and rural employment, requiring modernization of production methods and better integration with markets and value chains.
- The expansion of renewable energy projects, particularly solar energy, offers job opportunities in system installation and maintenance—especially in communities not connected to the national grid—and supports the transition to a sustainable economy.
- The healthcare sector is witnessing increased demand due to the humanitarian crisis, necessitating the training of new medical personnel and the expansion of community health programs, particularly in displacement zones and vulnerable communities.
- Technical and vocational education is a strategic option for rebuilding the technical and vocational skills of youth and a key pillar in reconstruction efforts—provided that curricula are modernized and training is aligned with labor market needs.
- Universities are playing an increasingly vital role in developing modern graduate skills through the integration of technology, entrepreneurship, and language learning into academic programs, thereby improving graduate readiness to engage in the modern economy both locally and regionally.

## Youth Unemployment Rates

Since 2015, the Republic of Yemen has faced a multifaceted crisis with deep economic, social, and humanitarian dimensions, driven by the protracted armed conflict. This has led to the collapse of public institutions, a sharp decline in economic activity, and a significant contraction in employment opportunities—particularly in the formal public and private sectors. These profound shifts have caused major distortions in the labor market, resulting in rising unemployment rates, a growing informal sector, and a widening skills gap between educational outputs and labor market demands.

According to World Bank data, the overall unemployment rate in Yemen stood at approximately 17.22% in 2023—a slight decrease from 17.51% in 2022. However, it remains among the highest globally compared to a global average of 6.99%. Furthermore, this rate exceeds Yemen's historical average of 13.12% during the period from 1991 to 2023 [1], reflecting the continued structural pressures on the labor market (see Figure 1).

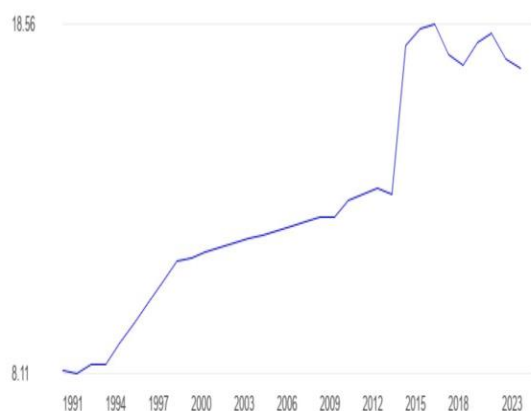


Figure 1: Historical Trends in Unemployment Rates

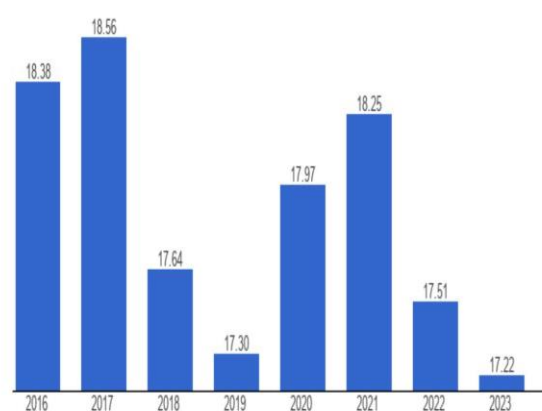


Figure 2: Unemployment Rates(2023–2016)

The youth unemployment rate (ages 15–24) reached 32.65% in 2023, marking a slight decrease from 32.94% in 2022. However, it remains among the highest globally—more than double the global average of 16.08%. This persistently high rate highlights the exclusion of a large segment of Yemeni youth from both public and private sector employment, despite youth being the largest demographic group in the population. These figures reflect longstanding structural issues. The historical average youth unemployment rate in Yemen from 1991 to 2023 stands at approximately 23.35%, indicating that this group has long lacked sufficient access to economic participation—even prior to the recent crisis. The lowest recorded youth unemployment rate was 16.63% in 1992, while the highest was 34.18% in 2020 [2], underscoring the severe impact of the ongoing economic and political crisis. Several factors contribute to the persistent rise in youth unemployment, including the mismatch between educational outcomes and labor market needs, the scarcity of practical training opportunities, weak career guidance systems, and overarching economic constraints. Moreover, the absence of major national employment initiatives or investment incentives for local companies has significantly limited job prospects for recent graduates and job seekers in both urban and rural areas.

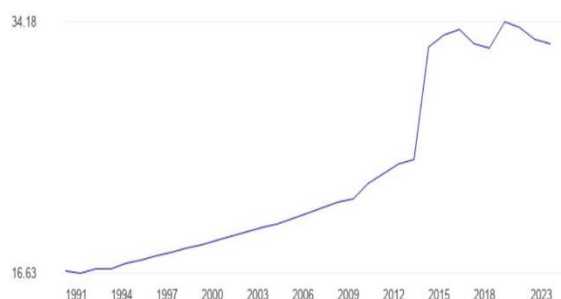


Figure 3: Historical Trends in Youth Unemployment Rates (Ages 15–24)

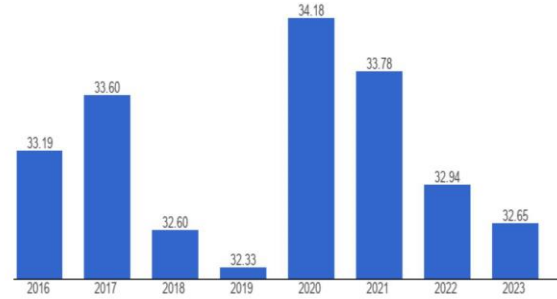


Figure 4: Youth Unemployment Rates (Ages 15–24) from 2016 to 2023

The female unemployment rate in Yemen stood at 29.49% in 2023, showing a slight decrease from 29.9% in 2022. Nonetheless, it remains among the highest globally—more than three times the global average of 8.37%. This indicator reflects a persistent structural challenge in integrating Yemeni women into the labor market. Historically, the average female unemployment rate in Yemen between 1991 and 2023 was approximately 17.38%, indicating a steady upward trend over the past decade. The lowest recorded rate was 3.81% in 1992, while the highest reached 30.66% in 2017 [3]. The continued rise in female unemployment is attributed to several interrelated factors, notably the low female labor force participation rate, which was only 5.1% in 2023—compared to a global average of 51.07%. Women make up just 7.77% of Yemen’s total labor force, one of the lowest rates globally, reflecting a profound gap in economic empowerment [4]. This disparity stems from various structural causes, including restrictive social and cultural norms, limited access to education and vocational training for girls, and a lack of targeted initiatives to economically empower women—particularly in rural and conflict-affected areas. Additionally, poor infrastructure, the absence of women-friendly workplaces, and the lack of supportive policies for female employment further entrench this divide.

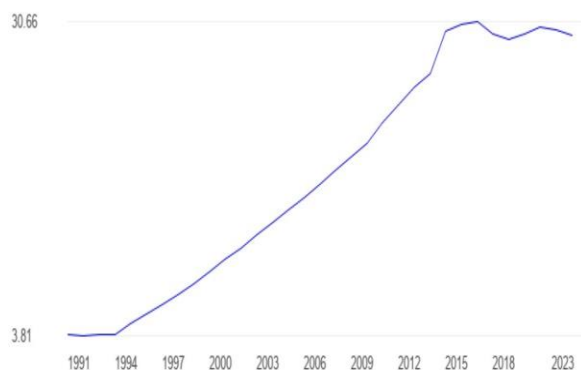


Figure 5: Historical Trends in Female Unemployment Rates

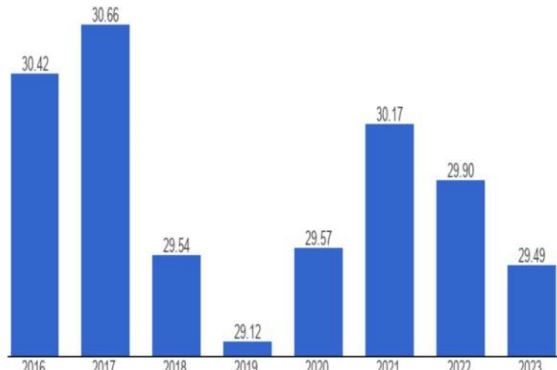


Figure 6: Female Unemployment Rates (2016–2023)

Yemen's total labor force reached approximately 7.59 million individuals in 2023—the highest recorded level since tracking began in 1991—compared to a historical average of 5.3 million. This increase reflects significant demographic expansion, but it was not accompanied by a proportional growth in job opportunities, resulting in a widening unemployment gap, particularly among youth and women [5]. The overall labor force

participation rate was 32.79% in 2023, which is lower than Yemen's historical average of 39.54% and significantly below the global average of 60.88%. This indicates a decline in the share of economically active individuals, despite the numerical increase in the labor force [6]. Female participation remains critically low: only 5.1% of women participated in the labor force in 2023, compared to 60.42% of men. Women accounted for just 7.77% of the total labor force, far below the global average of 41.56%. Historically, the female participation rate in Yemen dropped from 21.61% in 1999 to its current level, reflecting a continuous contraction in women's economic empowerment. Self-employment remains the dominant form of work, accounting for 54.48% of employment in 2022, compared to the global average of 40.56%. Informal employment constituted approximately 77.4% of total employment in the most recent official estimate (2014) [4, 7–9], placing Yemen among the countries with the highest informal employment rates globally. These combined indicators underscore the fragility of Yemen's labor market and highlight the urgent need for targeted policies to increase labor force participation—especially among women and youth—expand formal employment opportunities, and grow the organized economy. With regard to the participation rate specifically, the figure of 32.79% in 2023 remains below both the historical average for Yemen (39.54%) and the global average (60.88%). Male participation was 60.42%, while female participation stood at just 5.1%, again reflecting a stark gender gap in economic empowerment. This disparity is attributed to a number of structural factors, including economic contraction, the halt of many productive activities, large-scale population displacement, poor infrastructure and basic services, and a decline in both public and private investment.

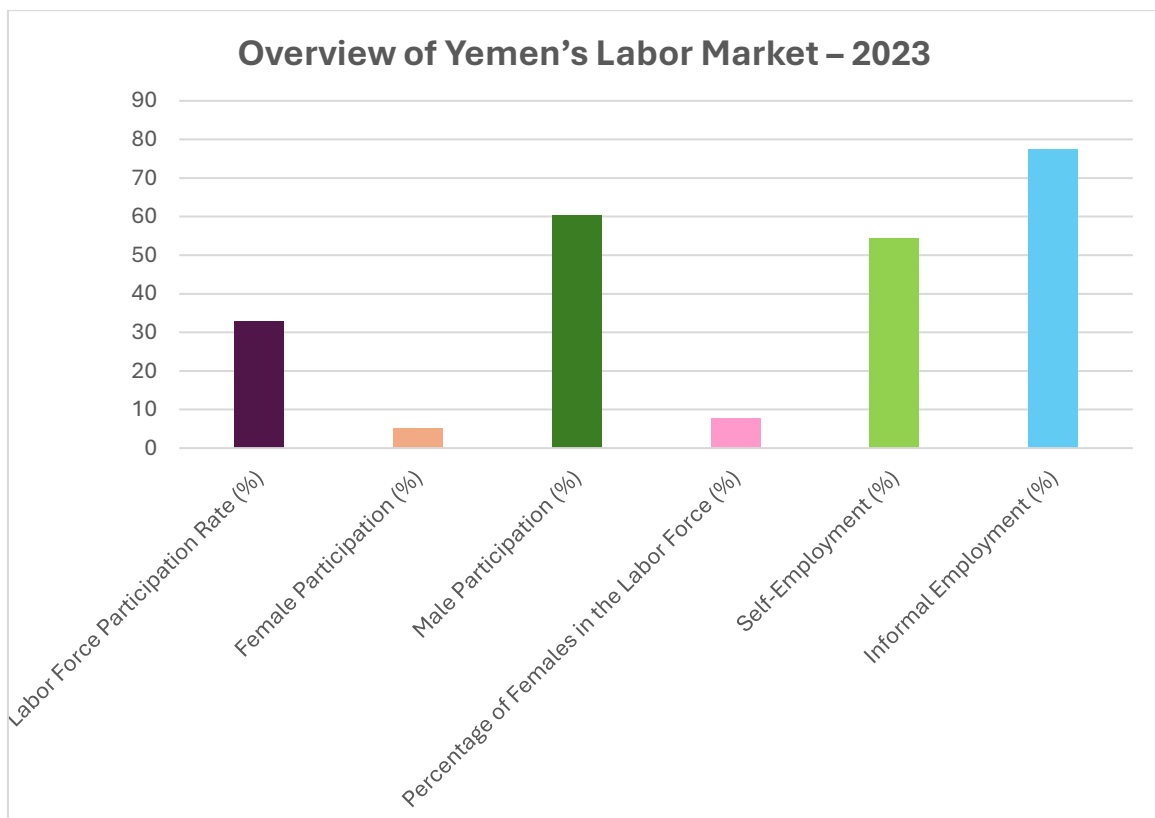


Figure 7: Overview of Yemen's Labor Market – 2023

## Size of the Informal Employment Sector

The informal sector constitutes a major component of Yemen's labor market and has become the primary channel for absorbing labor amid the contraction of the formal sector caused by the conflict. According to pre-war estimates by the International Labour Organization (ILO), more than three-quarters of the workforce (approximately 77%) were employed in informal jobs by the mid-2010s. This includes work in family businesses, agriculture, and small-scale commercial activities [10, 11]. The ILO defines the informal sector as encompassing economic activities conducted without legal registration or official licensing, and typically operating outside formal government oversight. It includes self-employed individuals without business registration, street vendors, artisans, seasonal workers, and employees in small enterprises that do not offer formal contracts or social insurance [12]. While the informal sector is characterized by flexibility and rapid responsiveness during crises, it suffers from significant vulnerability due to the absence of labor rights and protections. Its widespread prevalence in Yemen negatively impacts job quality, wage levels, and social protection coverage, and poses a major challenge to any labor market reform efforts. This situation reflects the broader fragility of Yemen's labor market and underscores the urgent need for comprehensive structural reforms. With the economy deteriorating between 2020 and 2024, the significance of the informal sector likely increased. Many Yemenis—particularly youth and women—were forced to establish small-scale ventures or engage in freelance work to secure their livelihoods [13]. Data shows that less than half of workers receive formal wages or salaries: only around 47% of employed men and 34% of employed women are classified as wage earners (i.e., formal employees), while the rest are self-employed or unpaid family workers [14]. This trend aligns with the sharp decline in the formal private sector. Additionally, SMEs have been severely affected by the war, prompting many business owners to shut down or scale back operations. As a result, employment in government institutions and humanitarian organizations has become limited, increasing reliance on informal activities such as petty trade, artisanal work, and community-based services. The dominance of informal employment presents a major obstacle to the future of the labor market, as it is associated with low productivity and weak social safety nets. Development reports emphasize the need for formalization programs—aimed at integrating the informal economy into the formal system—in order to improve working conditions and boost future government revenues [15]. However, achieving this goal depends on broader improvements in Yemen's security and economic environment.

## Sectoral Contributions to Employment

Yemen's employment structure is characterized by a concentration of labor in the services and agriculture sectors, with significantly lower contribution from industry. In 2014—prior to the outbreak of war and based on the most recent available data—ILOSTAT estimated the distribution of employment as follows: approximately 29.2% of the labor force worked in agriculture (including farming and fishing), only around 14.5% were employed in industry (including manufacturing, mining, and construction), while the services sector accounted for about 56.2% of total employment. This distribution reflects the dominance of services and agriculture in the Yemeni economy. The services sector includes

employment in trade, transportation, public administration, education, healthcare, and other fields [16]. Notably, the share of agriculture in employment has risen over the past decade. The agricultural sector remains one of Yemen’s traditional sources of employment. According to World Bank data, agricultural employment constituted 29.26% of total employment in 2022—a slight decline from 29.83% in 2021, yet still above the global average of 23%. Historical data shows that the average agricultural employment rate in Yemen between 1991 and 2022 was approximately 37.89%, with a peak of 56.88% in 1998 and a low of 24.11% in 2010 [17]. This gradual decline reflects a structural transformation in Yemen’s economy, driven by urban expansion, reduced agricultural land, and rural-to-urban migration. Nevertheless, the agricultural sector continues to serve as a vital safety net for large segments of the population, particularly in rural areas. Future employment opportunities in agriculture lie in modernizing production methods, adopting climate-smart practices (such as drip irrigation and solar energy), and promoting agro-industries linked to farming, such as packaging, transport, and storage. Additionally, developing agricultural value chains and connecting farmers to local and regional markets could help create new jobs and boost incomes—contributing to the sustainability of the sector and reinforcing its role as an essential economic and social pillar, especially in the context of national recovery and reconstruction.

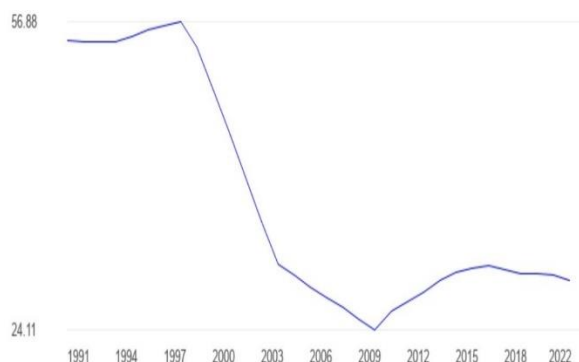


Figure 8: Historical Trends in Agricultural Sector Participation in the Labor Force

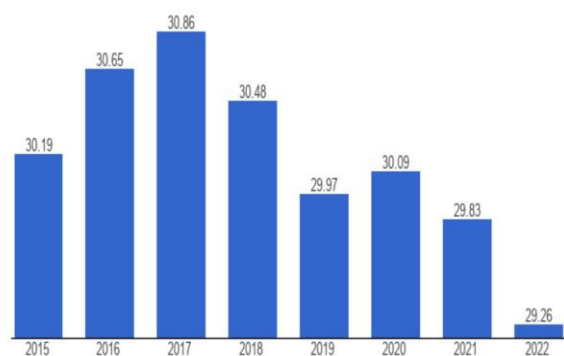


Figure 9: Agricultural Sector Participation Rates in the Labor Force (2016–2022)

In contrast, the share of the industrial sector has declined due to the suspension of most oil and gas activities and the contraction of manufacturing, driven by ongoing security and economic challenges. As a result, the industrial sector’s contribution fell by 1.03% [18]. The services sector remains the largest employer overall, though it too has been affected by the broader economic contraction. Many service-related jobs are tied to the public sector (such as administration, education, and healthcare) or to local trade and market activities. Nevertheless, approximately 60% of the workforce was employed in services as of 2021 [18], reflecting the sector’s continued significance even amid the crisis. This figure also includes workers in the informal service economy, such as street vendors and urban artisans

## Skills Development and Technical and Vocational Training Efforts



Given the deterioration of employment opportunities and the rising unemployment rate, the importance of technical and vocational training has grown significantly as a means of equipping youth with practical skills. Between 2020 and 2024, efforts by the government—within its limited capacity—were complemented by support from international organizations such as ILO and the United Nations Development Programme (UNDP) to activate skill development programs. Strengthening the Technical and Vocational Education and Training (TVET) system has become a central pillar in Yemen's poverty reduction and economic recovery strategies. UNESCO and the European Union reports concur that empowering youth with practical skills is key to rebuilding the economy and fostering social stability [13]. Over the past decade, the ILO has worked to expand the TVET system and build the capacities of its institutions through programs that included curriculum updates and trainer preparation across all governorates [19]. In 2023, the ILO launched the Apprenticeship Program, training 795 young men and women—48% of whom were female—in trades in demand in the local market. This program relies on hands-on training in workshops run by skilled artisans, allowing trainees to gain direct experience that qualifies them for employment or launching their own small businesses [19]. In parallel, the UNDP implemented a package of vocational training and entrepreneurship projects across 24 districts in nine governorates. These included courses in food processing, sewing and textiles, handicrafts, and technical equipment maintenance [20]. Graduates of these programs who successfully complete an approved business plan receive in-kind grants valued at approximately USD 1,000 to purchase equipment and launch micro-enterprises. By the end of 2024, more than 1,500 young men and women had benefited from these interventions, with notable success stories in mobile phone repair and local food production in Hadramout, Lahj, Ibb, and Dhamar [19–21]. In addition to international partners, the Small and Micro Enterprise Promotion Service (SMEPS) plays a key role in building entrepreneurship and business management skills. It focuses on unemployed youth and women-led households, offering training in home-based crafts and digital marketing [22]. Despite challenges related to funding shortages and difficulty accessing some rural areas, the development of technical and vocational skills remains a dual priority: it addresses immediate unemployment while preparing the workforce to participate in future reconstruction efforts [19]. Recent UNESCO reports conclude that sustained investment in human capital—by modernizing TVET curricula and aligning them with labor market and reconstruction needs—will remain critical for Yemen's long-term economic recovery.

## **Trends in the Digital Labor Market and Entrepreneurship**

Amid the stagnation of traditional sectors and the difficulty of securing employment in a shrinking local economy, many Yemeni youths have turned to the digital labor market and online freelancing as a new window of opportunity. Between 2020 and 2024, numerous initiatives emerged to digitally empower young people and equip them with the skills needed to participate in the global digital economy—whether as remote employees or as entrepreneurs launching tech startups. For example, UNDP supported several training programs in programming, digital marketing, and app development to enhance youth employability online [23, 24]. In addition, digital incubators and innovation competitions were launched with support from international organizations to encourage young Yemeni



entrepreneurs to develop tech-based business ideas. Despite weak infrastructure, there are already successful examples of digital employment: some young Yemenis work as freelancers with companies and individuals abroad in fields such as software development, graphic design, translation, and social media management [25, 26]. These individuals benefit from currency arbitrage, earning wages in dollars that improve their standard of living compared to local market conditions. Local tech startups have also begun to emerge in fields such as agri-tech, solar energy applications, and e-learning—founded by young entrepreneurs leveraging available training and funding support. Although the share of entrepreneurs in Yemen’s economy remains small—for instance, only 2.6% of working women in 2023 were business owners or managers of their own enterprises [27]—the culture of entrepreneurship is gradually gaining ground. This is supported by startup incubator programs and national competitions (such as youth entrepreneurship contests organized by various organizations), which promote the exchange of innovative ideas and fund the most promising projects. Entrepreneurship is increasingly seen as a practical solution to unemployment, not only by creating jobs for founders and their teams, but also through the development of local solutions to pressing challenges in food, energy, and social services. On the other hand, the expansion of Yemen’s digital labor market faces significant structural obstacles, foremost among them being the limited availability and poor quality of internet and electricity services. Only about 18% of the population regularly used the internet in 2022 [28]—among the lowest rates globally. Some estimates based on mobile subscriptions suggest a rate of around 26.7% [29], though this is still very low. The damage to telecommunications infrastructure due to the war, the disruption of many fiber-optic cables, and ongoing power outages have made internet access unreliable or entirely unavailable for extended periods. The high cost of the limited internet services available adds another financial burden, as Yemenis often pay steep prices for slow and low-quality connections compared to other countries. These factors hinder young people from competing on global freelancing platforms. Additionally, banking restrictions and challenges in transferring money into the country further complicate access to international income. Despite these challenges, the digital economy and entrepreneurship remain among the most promising future pathways for Yemeni youth. As infrastructure gradually improves, the digital transformation is expected to play an increasingly important role in the labor market in the coming years. Promoting education in modern technical skills—such as coding, data analysis, and digital marketing—alongside fostering a culture of freelancing, expanding access to the internet and electricity, and providing microfinancing for entrepreneurs, are all essential steps to turning this trend into widespread success stories [24, 30].

It is worth noting that reports suggest even modest increases in internet access could open up a vast remote labor market, as Yemeni labor remains cost-competitive relative to other countries with similar skill levels. Meanwhile, traditional entrepreneurship through small and medium-sized on-the-ground businesses remains a key avenue for job creation, especially as the public sector’s hiring capacity continues to decline. Indeed, youth-led initiatives are emerging in food production (such as local honey and dairy products), handicrafts, and commercial services—supported by social media marketing and flexible supply chains. Therefore, empowering youth with entrepreneurial tools—both digital and traditional—represents a central pillar of any future strategy to combat unemployment.

## Promising Economic Sectors and Employment Opportunities

Despite the devastation inflicted on Yemen's economy, there remain several promising sectors that could serve as foundations for employment recovery—provided they receive adequate support and investment. Below is an overview of the key sectors identified by various studies as having high potential, based on the structure and capabilities of the Yemeni economy. Each is assessed in terms of its near-future growth and employment potential:

### ➤ Agriculture and Food Industries

The agricultural sector is the backbone of Yemen's rural economy and a primary source of livelihood for millions of households. As previously mentioned, it contributes to nearly 30% of total employment. Closely linked to this sector is the food industry (agro-processing), which includes activities such as crop processing and the production of food goods—e.g., grain milling, oil pressing, vegetable and fruit canning, and dairy production [31]. This dual sector (agriculture/food) holds substantial potential for job creation and generating added value within the Yemeni economy for several reasons. Chief among them are the availability of fertile agricultural land and a diversity of products (grains, vegetables, fruits, coffee, honey, and livestock) [32], alongside the country's urgent need to improve food security. Yemen currently imports approximately 70% of its food and around 97% of its grains [33]. During the war years, many people returned to farming as a last resort. However, they faced severe challenges with input supplies and marketing due to disrupted supply chains and rising costs [34]. Looking forward, this sector could drive economic growth if production methods are modernized through the adoption of advanced irrigation technologies, improved seeds, and appropriate fertilizers [35]. Additionally, training farmers in climate-smart agriculture will be crucial to address water scarcity and changing climate conditions [36].

### ➤ Public Health and Social Services

Yemen's health sector has come under immense pressure during the years of conflict due to the spread of diseases and epidemics and the collapse of healthcare services, leading to a growing demand for healthcare personnel. The ongoing humanitarian crisis has left more than 11 million children and women in urgent need of health and nutritional services [37]. Conversely, the health system has suffered a crippling blow: less than half of the country's health facilities are fully operational today. According to the World Health Organization, only 54% of facilities remain functional [38], many of which face severe shortages in doctors, nurses, and essential medicines [39]. This situation positions the health sector as a promising area for future investment in human resources—through both recruitment and training of new personnel and the rehabilitation and reactivation of health facilities. There is an acute need to train and deploy hundreds of doctors, nurses, midwives, and health specialists to fill the current gaps, especially in rural areas and internally displaced persons (IDP) camps where access to care is critically limited [40]. Rapid training programs—such as nursing and primary healthcare courses—could offer

immediate job opportunities for unemployed youth, while simultaneously saving lives by improving healthcare service delivery. Moreover, the war has produced enormous psychological and social pressures across the population (including trauma, injury-related disability, orphans, and people with disabilities), opening further opportunities for employment in psychosocial support. Organizations like the International Organization for Migration (IOM) have started training social workers and counselors to support affected communities [41]. Public health initiatives—such as vaccination campaigns and WASH (Water, Sanitation, and Hygiene) programs—also offer temporary employment opportunities in community outreach, especially after targeted youth training [42]. With any future improvement in security, the health services sector will likely be one of the first requiring comprehensive reconstruction. Rebuilding destroyed hospitals and clinics will create construction jobs for laborers and technicians, and reopening these facilities will require the hiring of medical, administrative, and support staff [43]. Additionally, rising demand for healthcare services will fuel growth in the private sector (e.g., hospitals, clinics, pharmacies), while medical education itself will need investment, as medical and nursing schools have been damaged and their output has declined during the war. Overall, the public health sector represents a dual-priority domain: improving citizens' living conditions and alleviating their suffering while also generating direct employment (in the form of healthcare staff) and indirect employment (in construction, administration, and medical supply chains). Development reports recommend increasing health spending in recovery plans, securing international support to operate facilities and recruit staff, and encouraging the return of expatriate Yemeni doctors to participate in rebuilding the healthcare system.

### ➤ **Renewable Energy and the Green Economy**

In a country suffering from the collapse of its electrical grid and near-constant power outages, solar energy has emerged as a lifeline for many households and institutions during the war. Solar panel systems have proliferated widely to meet basic needs such as lighting, charging devices, and operating water pumps. This spontaneous expansion has already created new job opportunities in the sale, installation, and maintenance of solar energy systems at the local level. Reports from UNDP highlight the success of solar energy projects in powering essential facilities—such as hospitals and water wells—and in creating sustainable business models for youth through the management of micro-grid electricity networks (micro-grids) [44]. As a result, the renewable energy sector is considered one of the most promising sectors in Yemen for several reasons: abundant year-round sunshine, a dire need for electricity across all sectors, and the suitability of solar and wind technologies for remote communities not connected to the national grid. With the restoration of stability, investment in renewable energy projects is expected to grow—both at the level of small-scale decentralized systems (e.g., panels on rooftops and farms) and larger-scale plants capable of supplying entire cities. This will create demand for trained technicians and professionals in areas such as solar panel installation, electrical wiring, battery and inverter maintenance, as well as

jobs in distribution and retail of system components. A recent World Bank study estimated that by 2030, the solar energy sector in Yemen could directly and indirectly generate approximately 22,000 new jobs under a moderate scenario, and up to nearly 50,000 jobs under an optimistic one [45]. These jobs include installation, operation, and maintenance roles (representing around 40–50% of total expected green jobs), in addition to indirect employment across the supply chain (such as importing components, retail, and transportation) and new jobs created as a result of electricity access (e.g., the launch of workshops or small enterprises). Notably, many of these green jobs can be filled by youth with intermediate skills following short-term technical training—making them well-suited to quickly address unemployment. Beyond energy, the broader green economy offers additional opportunities. For example, the waste management and recycling sector is virtually nonexistent in Yemen today, yet its development—through the creation of companies for collection, sorting, and recycling of plastics and metals—could provide significant employment for low-skilled workers in collection, transport, and sorting, while also improving urban environments. Afforestation and environmental protection projects, whose importance will grow in the face of climate change, can also employ large numbers of workers during implementation. International reports have indicated that adopting environmentally friendly policies—such as investing in renewable energy and climate-resilient agriculture—could help Yemen create jobs while achieving long-term sustainable growth [46]. For instance, improving water resource management by constructing dams and water-harvesting barriers supports agriculture, employs large numbers in construction, and strengthens resilience to drought. It is therefore clear that directing a portion of reconstruction efforts toward green solutions would yield dual benefits: economically through job creation, and environmentally by enhancing the country’s ability to adapt to a changing climate.

### ➤ **Logistics and Supply Chains**

The transport and logistics sector plays a vital role in any economy. In Yemen’s case, it could be the key to reconnecting interior regions with markets and preparing the country to reengage in regional and international trade. During the war, large portions of supply chains were disrupted: roads and bridges were damaged, and the activity of seaports and airports declined sharply due to security conditions, resulting in a contraction of goods movement and a sharp rise in transportation costs. With anticipated political stabilization in the future, this sector will require a significant push to regain its former vitality and expand further.

There are several sub-sectors worth focusing on:

1. **Rehabilitation and Operation of Ports and Airports:** Yemen possesses several strategic ports—such as Aden, Hodeidah, and Mukalla—that could become regional logistics hubs if upgraded and equipped with free trade zones. Revitalizing these ports would generate both direct jobs (e.g., dockworkers, crane operators, customs officers, administrative staff) and indirect jobs in warehousing and inland transport services.

2. **Reconstruction of Road and Bridge Networks:** Connecting rural areas with urban centers will require labor-intensive infrastructure projects, which would provide jobs for construction firms, engineers, and manual laborers. Improved road access will also boost the agricultural sector by facilitating the movement of goods from farm to market, revitalizing road transport (including mechanics, service stations, and roadside support services).
3. **Modernization of Land Transport Fleets:** Upgrading truck fleets, freight vehicles, and refrigerated transport for food products is essential. Additionally, the development of modern logistics services—such as express shipping and last-mile delivery—offers opportunities for private-sector investment. Local transport companies can be encouraged, or international logistics firms attracted to enter the market. This would create jobs for drivers, maintenance technicians, warehouse staff, and shipping personnel.

Yemen also has long-term potential to become a key trade corridor between Asia and Africa due to its strategic location near the Bab el-Mandeb Strait. This would require developing shipping services, offloading, and storage infrastructure. The revitalization of this sector will drive demand for professionals skilled in supply chain management and international trade—opening employment opportunities for young graduates in business and commerce to work with shipping companies, customs clearance offices, or relevant government agencies. Additionally, the internal courier and delivery services sector has the potential to grow in tandem with the local expansion of e-commerce. As online buying and selling gain traction even within Yemen, local delivery companies (couriers) are emerging, employing young workers to distribute goods across cities and neighborhoods. The domestic public transportation system—both within and between cities—will also require modernization. This presents job opportunities in operating buses (drivers, fare collectors) and in support and maintenance services. If future plans include the development of railway lines (a long-term goal), this would create substantial employment during their construction phase. In short, improving logistics and supply chains is not only an economic necessity to stimulate trade and reduce the cost of living but also a driver for job creation across several interconnected sectors. Therefore, reconstruction plans should include dedicated provisions for rebuilding transport infrastructure and enabling the growth of this sector, with incentives provided to companies willing to invest post-conflict.

#### ➤ **Other Promising Sectors**

In addition to the sectors previously discussed, there are other areas that could contribute significantly to employment generation and economic growth in Yemen, based on the country's specific characteristics and needs. The most notable of these include:

- **Reconstruction and Construction:** Given the widespread destruction of homes, buildings, and infrastructure, the construction sector is expected to be one of the largest sources of employment in the post-conflict phase. Projects to rebuild



homes, hospitals, schools, and water and electricity networks will require large numbers of both skilled and unskilled workers (e.g., masons, metalworkers, carpenters, laborers, engineers, and technicians). Many unemployed youth can be absorbed into construction work if provided with basic training. Some relief programs have already begun training youth in building trades and historic restoration during the war. Regional and international construction firms are also expected to enter the Yemeni market to participate in large-scale reconstruction efforts—opening job opportunities for hundreds in both implementation and project management. In short, reconstruction will serve as a major employment engine for years to come, highlighting the critical importance of peace to resume these vital activities.

- **Fisheries and Marine Industries:** Yemen's long coastline along the Red Sea and Arabian Sea is rich in marine resources. Before the war, fish were Yemen's second-largest export after oil [47], and a key livelihood for hundreds of thousands in coastal communities. UN studies indicate that the fisheries sector contributed about 3% of GDP and employed around 2% of the labor force before its recent decline. Investing in improved fishing port infrastructure (e.g., building new landing sites, ice plants, and refrigeration units) and supporting fishers with modern equipment (motorboats, advanced nets) could significantly boost productivity. This would create employment along the entire value chain—from fishing itself (hiring more fishers), to transport, storage, marketing, and even processing (e.g., canning, freezing, fish feed production). Recent data shows the fisheries value chain already supports the income of 1.7 million coastal residents and is a primary livelihood for up to 20% of the population in some coastal areas [47], underscoring its social importance. Developing this sector—alongside protecting marine resources from overfishing and pollution—will help diversify the economy, create jobs, and ensure a vital local source of dietary protein.
- **Telecommunications and Information Technology:** Beyond digital freelancing, another opportunity lies in developing the telecom industry itself. Modernizing and expanding mobile networks to reconnect all regions, and deploying 4G (and potentially 5G) services in the future, will require engineers, technicians, and laborers to build towers, operate exchanges, and maintain networks. Building a local software development industry—with government support—could also employ computer science graduates and provide services to the domestic market, generating high-value technical jobs. Some small tech startups already exist in Sana'a and Aden and need support to scale and hire more workers.
- **Extractive Industries (Oil, Gas, and Minerals):** Before the war, oil and gas were Yemen's main source of public revenue, though their employment impact was relatively limited. Resuming oil and gas production and field development would create some technical jobs (in fields, refineries, and support services), but more importantly, would restore government revenues that could fund public employment projects. Yemen also possesses a variety of untapped mineral resources (e.g., gold, zinc). If stability is achieved and mining investments are attracted, a modern

mining sector could emerge, creating jobs in exploration, extraction, and infrastructure development in remote areas.

- **Tourism and Heritage:** Yemen is home to several UNESCO World Heritage Sites (such as Sana'a, Shibam, Zabid, and Socotra), but tourism has completely collapsed due to the war. In the long term, and with improved security, reviving cultural and eco-tourism could create jobs in hospitality, guiding, transport, and handicrafts. Restoring historic cities and archaeological landmarks is itself part of the reconstruction effort and provides work for traditional builders and craftsmen. The return of foreign tourists—even gradually—would stimulate a chain of businesses capable of employing a significant portion of local populations in these areas.

These are among the additional sectors worth considering when formulating Yemen's economic recovery policies. Of course, their growth and employment potential depends on improvements in security and political stability, as well as the ability to attract investment. These sectors are also interconnected with the major ones previously discussed. For example, agricultural development strengthens food industries, and improved electricity access supports all sectors, including health, education, and tourism. This highlights the need for an integrated and comprehensive development vision to revitalize Yemen's labor market across multiple domains.

## Factors Influencing Yemen's Labor Market

In addition to sectoral analysis, it is essential to understand the demographic and social factors that influence labor supply and demand. In the Yemeni context, three major issues stand out in this regard: internal displacement and migration, demographic shifts, and higher education and its outcomes. Each is discussed below:

### ➤ Internal Displacement and Migration

The ongoing conflict and its associated security and economic deterioration have led to massive internal population displacement in recent years. The United Nations estimates that approximately 4.5 million people have been displaced within Yemen since the onset of the conflict [48]. This means that nearly 15% of the population are now internally displaced persons (IDPs), many of whom have lost their previous livelihoods and now depend on aid or temporary work. Most displaced families are concentrated in relatively safer governorates or areas with a stronger humanitarian presence, such as Marib, Aden, and Hadramout, placing additional pressure on local labor markets in those regions. For instance, the population of Marib city has multiplied several times due to waves of displacement, creating a surplus of job seekers that exceeds the local economy's absorption capacity [46]. This sudden population surge has resulted in intense competition for limited job opportunities and increased unemployment and poverty in displacement-affected communities—especially given the weak infrastructure (housing, schools, hospitals) and slow pace of private investment due to ongoing risks. In addition to conflict-driven displacement, there was already ongoing



economic migration before the war, with youth moving from rural areas to major cities (Sana'a, Aden, Taiz, etc.) in search of better opportunities. This movement has likely increased due to agricultural collapse and the lack of services in rural regions, pushing more people toward urban centers despite limited job availability.

As a result, cities have witnessed high population growth, the expansion of informal settlements, and a rise in informal labor (e.g., street vendors, day laborers) due to a shortage of formal employment. On another front, the war and economic collapse have also led to unprecedented levels of external migration, with many young Yemenis and workers traveling to neighboring countries—particularly Saudi Arabia, the Gulf states, and East Africa—in search of livelihoods. These migrant workers often send remittances back home to support their families, which has served as a lifeline for many households and helped mitigate the humanitarian crisis to some extent. However, it also means the domestic labor market has lost a portion of its young workforce—both skilled and unskilled. Looking ahead, the stabilization of conditions will be crucial in reshaping population distribution. If peace is achieved and displaced people can safely return to their places of origin, this could revitalize those areas economically. However, it would also present reintegration challenges, including the urgent need to secure livelihoods for returnees. Planning must begin now for rapid recovery projects in areas of return—such as cash-for-work programs for housing repairs and rebuilding essential services. Additionally, the skills and experiences of returning migrants should be leveraged by offering incentives to integrate them into development projects. Overall, migration and displacement have been emergency conditions that negatively impacted the labor market during the war. However, with proper management, these challenges can be transformed into opportunities—such as enabling displaced individuals to contribute to the reconstruction of their home areas and offering them access to new economic opportunities.

### ➤ **Demographic Shifts**

Yemen's population is notably youthful; the age structure is heavily skewed toward children and young people. Statistics indicate that approximately 41% of the population is under the age of 15, and more than 20% are between the ages of 15 and 24 [49]. This means that nearly two-thirds of Yemen's population are children or youth. The median age in 2025 is approximately 18.4 years—making Yemen one of the youngest societies in the world [50]. This demographic composition results in a large annual influx of new entrants into the labor market. For example, over the next decade, millions of children will reach working age and begin seeking employment. Previous studies estimate that to maintain stable unemployment rates, Yemen's economy would need to create at least 150,000 new jobs annually to absorb these new entrants [45]—a number far beyond the country's current job-creation capacity, which has essentially been nonexistent during the war. Despite rising mortality rates due to the conflict and deteriorating healthcare, population growth remains high because of a still-elevated fertility rate, even though it has slightly declined in recent years. Birth rates have been estimated at around 3.6 to 4 children per woman in recent years [51], which has kept population growth at

roughly 2–3% annually. Yemen's population stood at around 30 million on the eve of the war and is currently estimated to have surpassed 33 million as of 2023. If current trends continue, it is expected to nearly double by 2050 [52]. This rapid population growth puts continuous pressure on the labor market by constantly increasing the supply of job seekers. In the absence of economic growth, this leads to worsening unemployment and poverty—as is currently observed. Another critical demographic dimension is the age-sex participation disparity. As previously noted, female labor force participation is extremely low—only about 5%. This is partly due to traditional social and cultural norms that have historically excluded many women from the labor market. However, the war has introduced a new dynamic: on the one hand, the loss of many working-age men due to death or injury has left some women as the sole breadwinners in their families, pushing them to seek work—which may lead to a modest rise in women's participation in the future. On the other hand, the growing conservatism in some areas during the conflict has further restricted women's mobility and roles, especially with the collapse of services that previously supported women's employment, such as childcare facilities. Thus, the future of female participation depends heavily on empowerment efforts and the emergence of a more open cultural environment in the post-war period. In conclusion, Yemen's demographic changes—chiefly its youthful and rapidly growing population—are a double-edged sword. On one side, they present a "demographic opportunity" if the energy of youth can be harnessed positively for development. This generation could become a driver of economic growth, as seen in East Asian countries that invested in youth education and employment. On the other side, it could become a social time bomb if this massive youth cohort remains unemployed, uneducated, and unskilled—potentially leading to unrest or mass migration. Therefore, one of the highest priorities for any future economic policy in Yemen must be to absorb and prepare youth through education, training, and the creation of productive jobs. Otherwise, the demographic window of opportunity will be missed and may turn into a catastrophic burden.

### ➤ **Higher Education and Its Outcomes**

Yemen's higher education system—comprising universities and advanced institutes—has suffered severe disruptions during the conflict, significantly affecting both the quantity and quality of human capital entering the labor market. Prior to the war, Yemen had dozens of public universities and a number of private institutions, collectively graduating tens of thousands of students annually. However, the majority of these graduates held degrees in theoretical or humanities-related fields such as education, Islamic studies, social sciences, and commerce, while graduates in applied scientific fields—such as engineering, IT, medicine, and natural sciences—were relatively limited [53]. This imbalance in academic disciplines left many graduates unable to find jobs aligned with their qualifications. The economy simply could not absorb large numbers of teachers or administrative staff, while there was a shortage in critical sectors needing technical and professional skills. The war further exacerbated these problems. Some universities were shut down or severely disrupted, especially in conflict zones, and many

experienced professors emigrated in search of safety and better opportunities abroad [53]. The economic collapse also weakened families' ability to afford higher education, and many young people were forced to work early to support their households. As a result, the number of regular graduates declined significantly compared to pre-war projections. While new graduates continue to emerge annually from major universities (e.g., Sana'a, Aden, Hadramout, Taiz) and from technical institutes, experts believe that the quality of education has deteriorated due to a lack of resources and broken ties with modern academic developments [54]. This has widened the gap between education outputs and labor market demands. Many graduates remain unemployed because their fields of study are misaligned with the stagnant economy or because their skills are inadequate—particularly given outdated curricula and weak practical training. Meanwhile, sectors like health and technology suffer from a lack of qualified personnel, either because too few study these disciplines or because graduates migrate abroad. Between 2020 and 2024, some institutions attempted to bridge the skills gap through short vocational training programs targeting unemployed graduates—teaching them technical skills, languages, or computer literacy to improve employability. Organizations such as UNDP also launched entrepreneurial training programs to help graduates start their own businesses instead of waiting for nearly non-existent public sector jobs [19, 20]. Some universities began introducing entrepreneurship and digital literacy courses into their curricula to foster a self-employment mindset among students. Nevertheless, challenges remain substantial. Yemen's low university enrollment rate is itself a major problem, as most youth do not reach higher education at all. Even those who graduate face an economic environment that cannot absorb them easily. In the future, reforming higher education must be a core part of Yemen's labor market development strategy. This includes updating curricula to align with reconstruction needs (e.g., introducing programs in infrastructure engineering and project management), increasing focus on applied and technical education at the intermediate institute level to address the technician shortage, and expanding enrollment in in-demand fields like medicine, engineering, and technology. Stronger partnerships between universities and the emerging private sector are also essential to provide students with practical training and connect them to potential job opportunities before graduation. Most importantly, financial aid and scholarships must be made available to students from poor and displaced families to prevent an entire generation from being excluded from education due to poverty. Aligning higher education outputs with the needs of a renewed Yemeni labor market will not be easy or fast—but it is vital to breaking the cycle of chronic unemployment among degree holders. As development reports consistently note: Yemen cannot achieve economic revival without investing in its human capital and educating its youth. Human resources are the country's greatest asset—relying solely on oil or foreign aid will not build a sustainable future [55].

## **Political, Environmental, and Social Context and Its Impact on the Labor Market**

Understanding the state of Yemen's labor market—or anticipating its future—requires considering the country's broader political, social, and environmental context. The ongoing armed conflict, the severe humanitarian crisis, environmental and climate degradation, and the collapse of infrastructure and basic services have all profoundly shaped and continue to influence the labor market. Below is a breakdown of how each of these factors impacts employment in Yemen:

➤ **Ongoing Armed Conflict**

The armed conflict that began in 2015 is the primary driver behind most of Yemen's current economic challenges. The war has led to a historic economic contraction, with a sharp decline in GDP [56], a steep drop in both private and foreign investment, and the near-complete suspension of most government development projects. This has resulted in the collapse of employment opportunities across both the public and private sectors. In the public sector, salaries for a large portion of government employees have been suspended for extended periods—especially in areas outside the control of the internationally recognized government—forcing many to abandon their posts or seek alternative income sources. State institutions that once employed tens of thousands, such as those in oil, electricity, water, and municipal services, have suffered either physical destruction or financial paralysis, leading to mass layoffs or leaving staff nominally employed but functionally idle. In the private sector, thousands of businesses have closed due to active fighting, disrupted imports, or lack of demand—particularly in manufacturing, tourism, and construction. Estimates suggest that more than 55% of the workforce in Yemeni companies was laid off during the war years [57]. The oil and gas sectors have virtually ceased operations, leaving workers jobless or prompting them to migrate abroad. The war has also destroyed productive assets: factories bombed, agricultural land and farms damaged by landmines and shelling, fishing boats hit or rendered inoperable by fuel shortages, and stores looted. These material losses have deprived tens of thousands of entrepreneurs and workers of their livelihoods.

Naturally, the conflict has also destabilized security, increased business risks (due to extortion, threats, or fear of being targeted), and made launching or expanding a business a high-stakes gamble few are willing to take. Beyond the physical and economic damage, the psychological and social toll of the war has also affected the labor environment. An entire generation of youth has grown up amid conflict—many deprived of proper education or training, and some drawn into combat as child soldiers or young fighters. Reintegrating them into civilian life and the labor force presents a significant challenge. Additionally, the prolonged conflict has led some segments of society to become dependent on the war economy (aid, informal, or even illicit work), which may make transitioning to a peace-time economy difficult without tailored programs. In sum, without peace and an end to the conflict, any talk of labor market recovery remains limited. Ceasing hostilities is a prerequisite for reopening channels of investment, reviving development, and creating large-scale employment. The longer a political resolution is delayed, the more Yemen's human and physical capital erodes, and the higher the future cost of reconstruction becomes—both economically and socially. Conversely, once

peace is achieved, numerous opportunities will emerge immediately: resumption of oil and gas production, lifting of import/export restrictions, return of Yemeni capital from abroad, and normalization of the banking sector. These changes could spark rapid economic growth—directly increasing labor demand across sectors. Political and security stability is therefore the cornerstone upon which everything else in the labor market depends.

### ➤ **Poverty and the Humanitarian Crisis**

For several years, Yemen has been classified by the United Nations as the world's worst humanitarian crisis. As a result of war and economic collapse, the majority of the population has fallen into extreme poverty and food insecurity. Recent estimates indicate that more than 80% of Yemenis live below the poverty line [58], and around 21 million people—two-thirds of the population—are in need of some form of humanitarian assistance [48]. Of these, nearly 17 million face acute hunger and do not know where their next meal will come from [48]. This catastrophic situation has profound implications for the labor market. When the overwhelming majority of families are barely surviving and rely on aid, the priority becomes finding any type of work—regardless of nature or pay—just to stay alive. This explains the widespread prevalence of informal, irregular, and poorly paid labor, as people are forced to accept any available job for minimal compensation to avoid starvation. Poverty also drives many children into the labor market at a young age to help support their families, increasing child labor and negatively impacting their education and long-term employment prospects. Field studies have documented a rise in the number of boys working in workshops and as street vendors, and in girls working in domestic services or being subjected to early marriage—direct consequences of poverty-related household pressures. This creates a new generation of unskilled laborers trapped in a cycle of poverty that will be difficult to break without strong social interventions.

On the other hand, the humanitarian crisis has brought billions of dollars in international aid to Yemen annually. This aid has created a parallel labor market: thousands of Yemenis work with international and local relief agencies in distributing assistance and implementing humanitarian projects—either as employees or temporary field workers. While such aid-related jobs are not a sustainable solution, they have become a vital source of income for certain segments of the population—particularly university graduates employed as program officers, and unskilled workers engaged in distribution and logistics. However, these jobs remain tied to the size and continuity of humanitarian funding, which may decline in the future, making them inherently fragile and short-term. In addition, widespread poverty has eroded domestic demand for goods and services. Most people can barely afford basic necessities, which suppresses consumer spending. This, in turn, discourages new investment and pushes existing businesses to reduce operations or shut down—further shrinking job opportunities. It's a vicious cycle between poverty and unemployment: each reinforces the other. Many who lost their jobs became poor, and their poverty, in turn, makes job creation harder due to weak purchasing power. For these reasons, a dual approach is



needed. On one hand, direct support must be provided to the poorest households now—through national or international social safety nets such as conditional cash transfers—to prevent them from falling into extreme hunger. On the other hand, the economy must be reactivated to create jobs that gradually free people from dependency on aid. One of the most effective tools to achieve both goals simultaneously is investment in **cash-for-work** programs. These provide temporary income to poor families by employing their members in socially beneficial projects. Programs of this kind—such as those supported by the World Bank—have already reached hundreds of thousands of beneficiaries and should be expanded [59]. Ultimately, tackling unemployment and poverty must go hand in hand. The labor market cannot recover while two-thirds of the population is hungry, and the humanitarian crisis cannot end without enabling people to earn a dignified living.

### ➤ **Climate Change and Environmental Degradation**

Yemen is among the countries most vulnerable to the effects of climate change in the region, despite being a negligible contributor to global carbon emissions. The greatest threat lies in the worsening of Yemen's already chronic water scarcity. Yemen is one of the most water-scarce countries in the world, with per capita water availability far below the water poverty threshold of 500 cubic meters per year—some estimates place it at less than 100 cubic meters [60]. Climate change has disrupted rainfall patterns, bringing longer and more intense droughts punctuated by occasional episodes of heavy rainfall that trigger destructive flash floods. These shifting climate conditions have severely affected agricultural productivity, which in Yemen heavily relies on rainfed farming. In recent years, several areas have experienced droughts that decimated crops and killed livestock, forcing farmers and herders to either migrate to urban areas in search of work or rely on food aid [46]. In contrast, flash floods in years such as 2020, 2021, and 2023 caused damage to infrastructure, homes, agricultural lands, and transportation routes.

These recurrent natural disasters directly undermine the livelihoods of hundreds of thousands—particularly farmers and fishers—while depleting their savings and making it harder for them to sustain their activities. According to climate reports, temperatures in Yemen are expected to continue rising, with increased risks of heatwaves and droughts by mid-century [46]. Sea levels may also rise, posing long-term threats to coastal cities and infrastructure near the shore. Without adaptive measures, Yemen could lose around 3.9% of its average annual GDP by 2040 due to climate-related damage to agriculture and infrastructure—a significant figure that would further strain the economy. Additionally, fishery resources are expected to be impacted by warming seas, with projections suggesting a potential 20–30% drop in fishing sector output by mid-century, which would result in further job losses in coastal communities [46]. Other environmental pressures include desertification and land degradation due to overexploitation and deforestation (as firewood is used in place of fuel), along with pollution from oil leaks or waste resulting from weak governance during the conflict. These issues are making rural life more difficult and rendering once-productive farmland and grazing areas

increasingly unviable—forcing further migration, as previously discussed. All of this adds another layer of complexity to Yemen’s labor market. Climate and environmental changes reduce the income-generating capacity of natural sectors (like agriculture and fishing), destroy assets, and increase the risks of investment—especially in rural areas.

Therefore, future responses must integrate climate adaptation policies into the core of development planning. Examples include:

- Adopting modern, water-efficient irrigation systems to protect agriculture from drought;
- Building more rainwater harvesting tanks;
- Promoting the shift to drought- and heat-resistant crops;
- Investing in flood-proofing cities and infrastructure;
- Developing early warning systems for natural disasters.

If implemented, these efforts will protect rural livelihoods, preserve existing jobs, and prevent further deterioration. Moreover, they can generate employment in the process—for example, through small dam construction projects or reforestation and soil conservation programs that employ rural residents.

Additionally, the concept of **green jobs** should be embedded in national strategies—jobs that contribute to environmental sustainability, such as those in renewable energy and waste management, as previously discussed. These types of jobs serve two goals simultaneously: combating unemployment and protecting the environment.

### ➤ **Collapse of Infrastructure and Public Services**

Yemen’s basic infrastructure has suffered severe blows throughout the war, both directly through targeted destruction and indirectly through neglect and lack of maintenance. Numerous roads and bridges connecting cities have been destroyed, and the national electricity grid has collapsed—most regions today are entirely disconnected from the formal grid and rely exclusively on private generators or rudimentary solar setups. Water and sanitation networks have been heavily damaged, resulting in widespread shortages of clean water and the return of waterborne diseases. Major airports have been bombed or shut down for extended periods, impeding the movement of people and goods. In short, vast portions of Yemen’s infrastructure have been reduced to rubble or are functioning at minimal capacity. This situation has severely undermined the business environment and the creation of jobs. Without safe and efficient transportation, domestic trade cannot thrive, nor can investment spread into rural areas. Without reliable electricity, factories and workshops cannot operate, and traders are forced to bear extra costs to secure energy—leading many to downsize or shut down entirely. Without communications and internet, Yemen’s economy remains disconnected from the global market, and even basic modern business operations become difficult to



manage internally. Thus, the collapse of public services and infrastructure has paralyzed large parts of the labor market and pushed economic activity into a more primitive or constrained mode. For example, large-scale industries (such as cement or steel production) have ceased operations due to electricity shortages and non-functional ports, forcing some workers to shift into smaller, artisanal trades.

The collapse of education and healthcare services has also, as previously discussed, weakened Yemen's human capital base—reducing the quality and readiness of the labor force over the long term. In addition, many job opportunities that were previously created through infrastructure projects have disappeared. Before the war, the government implemented road, dam, and school construction projects, and the private sector was building commercial buildings and malls—activities that generated substantial demand for labor in construction, transport, and supply. These projects are now halted, along with the jobs they supported.

On the other hand, the public's need to compensate for the absence of state services has also created alternative, though socially costly, employment opportunities. For example, the rise of private water truck drivers (so-called "*white tankers*") who deliver water to neighborhoods in the absence of public water systems—while providing livelihoods, they also place financial strain on households. Likewise, electrical generator technicians have seen their services flourish as every home or business relies on private generators. These jobs provide income to individuals, but they also signal economic inefficiency and systemic failure. Rebuilding and restoring infrastructure and services will be a foundational pillar of any economic recovery and job creation strategy. Large-scale investments cannot happen without assurances of electricity, roads, and connectivity. The longer reconstruction is delayed, the more the economy will remain trapped in low-productivity, small-scale activities. The good news is that reconstruction itself offers a massive employment opportunity, as previously discussed. Therefore, it is essential to initiate it as soon as possible, in parallel with humanitarian efforts. It is also important to involve the local private sector in infrastructure projects—through subcontracting, for instance—to ensure job creation benefits Yemeni workers rather than relying on imported labor. Additionally, reforming public administration systems is crucial to ensure services are restored equitably and efficiently. For example, restructuring and revitalizing the electricity sector so it can attract investment, operate sustainably, and pay its staff regularly—rather than leaving many skilled power sector employees jobless and unpaid despite the country's dire need for their services. In short, improving infrastructure and public services is a prerequisite for improving the business environment and employment. This is a financially and logistically demanding task, but an unavoidable one. Initial estimates from the World Bank suggest that Yemen will require tens of billions of dollars to rebuild its core infrastructure sectors [46], with the hope that most of the funding will come from international donors and regional allies once peace is achieved. From a labor market perspective, every dollar spent on reconstruction could translate into wages for Yemeni workers and technicians—if projects are implemented with sensitivity toward maximizing local employment.

## Strategic Recommendations for Revitalizing Yemen's Labor Market

In light of the preceding analysis of Yemen's employment landscape, it is clear that revitalizing the labor market requires a comprehensive, multi-track approach. The following are a set of evidence-based, trend-aligned strategic recommendations that—if adopted—can help stimulate sustainable job creation in the coming years:

1. **Achieve Peace and Stability as a Top Priority:** No development effort can succeed without ending the conflict and ensuring security. A sustainable political resolution is therefore the foremost recommendation for reviving the economy and, specifically, the labor market. Peace would reopen access to all regions, restore investor confidence, attract domestic and foreign capital, and enable the resumption of large-scale reconstruction projects—each of which will generate substantial employment.
2. **Launch Immediate Post-War “Rapid Economic Recovery” Programs:** To quickly absorb high unemployment and provide household income, labor-intensive programs should be rolled out immediately after the conflict. Examples include **cash-for-work** initiatives that employ thousands of youth in rubble removal and temporary repairs to roads and public facilities. Additionally, support for livelihoods of displaced people and returnees (such as tools, livestock, or seeds for agriculture; fishing boats and gear) can help people return to work quickly. These transitional interventions act as a bridge between humanitarian aid and development, preventing economic stagnation in the interim phase.
3. **Heavily Invest in Skills Development and Technical Education:** Human capital development is the cornerstone of labor market recovery. Reports recommend expanding vocational training programs for youth in reconstruction-relevant trades (e.g., construction, plumbing, electricity, mechanics), alongside strengthening higher technical education in engineering, IT, and medicine. University curricula should also be modernized to equip graduates with entrepreneurship skills, English proficiency, and digital literacy. Public-private partnerships should be forged to provide students with practical training. Investment in education will ensure a skilled workforce ready to meet the needs of a restructured economy. World Bank analysis indicates that increasing women's participation in education and employment could raise long-term per capita income by up to 85% if gender parity is achieved—highlighting the critical importance of inclusive education and labor policies.
4. **Scale Up Support for Small Businesses and Entrepreneurship:** Empowering young entrepreneurs to turn their ideas into real businesses is vital. This requires business incubators in major cities, affordable financing packages (microloans or grants), and training in business planning and marketing—especially in promising sectors such as agriculture, tech, and crafts. A successful microenterprise may employ multiple family members or neighbors, and the replication of such businesses across regions can have cumulative effects. Experience before and during the war shows that microenterprises can survive hardship if they receive

proper technical and financial support. Future job creation policies should therefore be entrepreneur-friendly, with streamlined procedures for business registration, licensing, etc.

5. **Accelerate Infrastructure Reconstruction with Local Job Localization:** With donor funds expected to flow into reconstruction, contracts and projects must be designed to maximize local employment. For example, large projects can be broken into smaller packages implementable by local contractors and workers, with mandatory local hiring quotas for foreign firms. Fast-track construction training institutes can also be established to prepare youth for road and housing projects. In this way, reconstruction becomes a job creation engine, not just a physical rehabilitation process. Moreover, completed infrastructure will improve the business environment and attract private investment, leading to even more job opportunities—a multiplier effect.
6. **Reform Macroeconomic Policies to Stimulate Growth and Price Stability:** Restoring the role of state institutions in managing the economy is essential for financial stability that supports employment. This includes reunifying the Central Bank, controlling inflation and the exchange rate, and ensuring employers can offer viable wages. A more expansionary fiscal policy focused on capital investment—not bloated public hiring—is also recommended. Improved macroeconomic indicators (e.g., lower inflation, currency stability) will stimulate the private sector and incentivize expansion and hiring. Raising public sector salaries can also boost household consumption and indirectly stimulate job creation.
7. **Empower Women Economically and Remove Barriers to Their Participation:** With one of the lowest female participation rates globally (5%), empowering women to work is an economic and social necessity. Steps include: vocational training programs specifically for women (e.g., tailoring, food processing, domestic tech), childcare facilities in workplaces, financial support for home-based women-led businesses, and community awareness campaigns on the value of women's work. Women should also be included in public works and aid employment programs. The UNDP and others have emphasized that integrating women into Yemen's workforce is key to inclusive development. Therefore, any employment strategy must consider this neglected half of society and remove legal and social obstacles to their participation.
8. **Strengthen Governance and Improve the Formal Labor Environment:** The informal economy must be gradually integrated into the formal system to foster more sustainable and regulated businesses. This can be achieved by simplifying the registration process for small enterprises, offering temporary tax exemptions or incentives (e.g., bidding preferences or access to financing) in exchange for formalization. Developing a national social security and health insurance system would also make formal jobs more attractive. Simultaneously, labor laws must be enforced with enough flexibility to protect workers without burdening small employers. Organizing the labor market will help generate “decent work” and enhance overall productivity. According to the ILO, supporting the transition from

the informal to the formal economy is a top priority for achieving inclusive growth in Yemen.

9. **Design Development Plans for Rural and Conflict-Affected Areas:** To ensure equitable recovery, regional development strategies must address the needs of specific areas. For instance, the Tihama region (Hudaydah governorate) could serve as a national hub for agriculture and food processing, generating thousands of jobs. Eastern governorates (Hadramout, Mahra) could be developed through fisheries, mining, and tourism infrastructure projects, rather than limiting development to Aden and Sana'a. This balanced approach would prevent labor market concentration in major cities and reduce internal migration. Conflict-affected areas should be prioritized for new projects to reduce high unemployment and reintegrate marginalized populations.
10. **Align International Support with National Employment Strategies:** Finally, the Yemeni government must work with donors and international organizations to develop a shared vision for labor market recovery. This includes aligning economic reform programs (especially those from the World Bank and IMF) with job creation goals—ensuring the focus is not solely on macroeconomic stabilization but also includes social protection and employment schemes. Technical assistance from the ILO could help modernize labor and training policies. A dedicated **International Employment Support Fund** could also be established, financed by donors to implement youth employment and capacity-building initiatives until the private sector recovers. Coordination among all stakeholders is critical to avoid duplication and maximize impact.

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These ten recommendations collectively form an initial roadmap for addressing Yemen's employment crisis. Of course, implementing them will require financial resources, strong political and administrative commitment, and improvements in security. Nonetheless, they are necessary and vital steps to avoid the worst-case scenario: entrenched mass unemployment and economic marginalization of large segments of the population. The Yemeni people have demonstrated extraordinary resilience and entrepreneurial spirit during the war—many have found creative ways to survive in the absence of state support. Now is the time to forge a new partnership between the state, the international community, and the private sector to channel that resilience into rebuilding the economy and creating opportunity. Enabling Yemenis to work and earn with dignity will restore their agency, eliminate a major root cause of fragility and conflict, and lay the groundwork for lasting peace and stability in this historic nation.

## References

- [1] theglobaleconomy, "Yemen: Unemployment rate. [https://www.theglobaleconomy.com/Yemen/Unemployment\\_rate/](https://www.theglobaleconomy.com/Yemen/Unemployment_rate/)," 2023.

- [2] theglobaleconomy, "Yemen: Youth unemployment. [https://www.theglobaleconomy.com/Yemen/Youth\\_unemployment/](https://www.theglobaleconomy.com/Yemen/Youth_unemployment/)," 2023.
- [3] globaledge, "Yemen :Female unemployment. [https://www.theglobaleconomy.com/Yemen/Female\\_unemployment/](https://www.theglobaleconomy.com/Yemen/Female_unemployment/)," 2023.
- [4] globaledge, "Yemen: Female labor force participation. [https://www.theglobaleconomy.com/Yemen/Female\\_labor\\_force\\_participation/](https://www.theglobaleconomy.com/Yemen/Female_labor_force_participation/)," 2023.
- [5] globaledge, "Yemen: Labor force. [https://www.theglobaleconomy.com/Yemen/labor\\_force/](https://www.theglobaleconomy.com/Yemen/labor_force/)," 2023.
- [6] globaledge, "Yemen: Labor force participation. [https://www.theglobaleconomy.com/Yemen/Labor\\_force\\_participation/](https://www.theglobaleconomy.com/Yemen/Labor_force_participation/)," 2023.
- [7] globaledge, "Yemen: Male labor force participation. [https://www.theglobaleconomy.com/Yemen/Male\\_labor\\_force\\_participation/](https://www.theglobaleconomy.com/Yemen/Male_labor_force_participation/)," 2023.
- [8] globaledge",  
Yemen: Self-employment. [https://www.theglobaleconomy.com/Yemen/self\\_employment/](https://www.theglobaleconomy.com/Yemen/self_employment/)," 2023.
- [9] globaledge, "Yemen: Informal employment. [https://www.theglobaleconomy.com/Yemen/informal\\_employment/](https://www.theglobaleconomy.com/Yemen/informal_employment/)," 2023.
- [10] ILOSTAT\_International\_Labour\_Organization, "Statistics on the informal economy,<https://ilostat.ilo.org/topics/informality/>. Retrieved 2024-09-16.," 2023.
- [11] en.wikipedia.org, "List of countries by share of informal employment in total employment, [https://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_share\\_of\\_informal\\_employment\\_in\\_total\\_employment#:~:text=47%20%20Image%C2%A0Yemen%20%2077.4,2019.,](https://en.wikipedia.org/wiki/List_of_countries_by_share_of_informal_employment_in_total_employment#:~:text=47%20%20Image%C2%A0Yemen%20%2077.4,2019.,)" 2014.
- [12] International\_Labour\_Organization, "Informal employment," Retrieved from <https://www.ilo.org/media/5481/download>, 2023.
- [13] unesco, "Shaping the Skills of Yemeni Youth for Peace and Sustainable Development. <https://www.unesco.org/en/articles/shaping-skills-yemeni-youth-peace-and-sustainable-development#:~:text=has%20had%20a%20heavy%20impact,under%2024%20years%20of%20age>," 2024.
- [14] World\_Bank\_Group\_Gender\_Data\_Portal, "YEMEN,REP.GENDERLANDSCAPE. <https://documents1.worldbank.org/curated/en/099059207042215986/pdf/IDU02ff6c0130a3d00433f0a4d80951064234999.pdf#:~:text=Female%202023%2033,3>," 2023.
- [15] iemed, "Formalizing the Informal Sector: a Fundamental Policy for the Economic Stability of the MENA Region. <https://www.iemed.org/publication/formalizing-the-informal-sector-a-fundamental-policy-for-the-economic-stability-of-the-mena-region/#:~:text=IEMed%20www,of%20GDP>," 2022.
- [16] iLOSTAT\_International\_Labour\_Organization, "The leading source of labour statistics. [https://ilostat.ilo.org/data/country-profiles/?ref\\_area=YEM](https://ilostat.ilo.org/data/country-profiles/?ref_area=YEM)," 2014.
- [17] theglobaleconomy, "Employment in agriculture. [https://www.theglobaleconomy.com/Yemen/Employment\\_in\\_agriculture/#:~:text=Source%20The%20World%20Bank](https://www.theglobaleconomy.com/Yemen/Employment_in_agriculture/#:~:text=Source%20The%20World%20Bank)," 2022.
- [18] globaledge, "Yemen: Economy. <https://globaledge.msu.edu/countries/yemen/economy#:~:text=Imports%20of%20goods%20and%20services,year%20graph%20on%20the%20right>," 2022.
- [19] UNDP, "Supporting Resilient Livelihoods, Food Security and Climate Adaptation in Yemen, Joint Programme (ERRY III) . [https://www.undp.org/sites/g/files/zskgke326/files/2024-06/erry\\_iii\\_jp\\_annual\\_narrative\\_report\\_of\\_2023\\_final\\_updated.pdf?utm\\_source=chatgpt.com](https://www.undp.org/sites/g/files/zskgke326/files/2024-06/erry_iii_jp_annual_narrative_report_of_2023_final_updated.pdf?utm_source=chatgpt.com)," 2023.
- [20] UNDP, "Yemeni Youth Empowered With Vocational and Business Training. [https://www.undp.org/arab-states/press-releases/yemeni-youth-empowered-vocational-and-business-training?utm\\_source=chatgpt.com](https://www.undp.org/arab-states/press-releases/yemeni-youth-empowered-vocational-and-business-training?utm_source=chatgpt.com)," 2024.



- [21] UNDP, "UNDP Yemen: Apprenticeship programme inspires new beginnings in Lahj Governorate, Yemen. ," 2024.
- [22] ILO, "Women Entrepreneurship Programme in Yemen. [https://www.ilo.org/projects-and-partnerships/projects/women-entrepreneurship-programme-yemen?utm\\_source=chatgpt.com](https://www.ilo.org/projects-and-partnerships/projects/women-entrepreneurship-programme-yemen?utm_source=chatgpt.com)," 2010.
- [23] UNDP, "Young women entrepreneurs in Yemen: vocational training in the digital age. <https://www.undp.org/arab-states/stories/young-women-entrepreneurs-yemen-vocational-training-digital-age>," 2024.
- [24] UNDP, "UNDP and KSrelief empower rural youth in Yemen with vocational and business training. <https://www.undp.org/arab-states/press-releases/undp-and-ksrelief-empower-rural-youth-yemen-vocational-and-business-training>," 2023.
- [25] riseforyemen, "Freelancing in Yemen: The payment problem - Rise for Yemen. <https://riseforyemen.org/blogs/news/freelancing-in-yemen-the-payment-problem>," 2023.
- [26] upwork, "Hire freelancers in Yemen. <https://www.upwork.com/hire/ye>".
- [27] worldbank\_genderdata, "Employers ,total (% of total employment) (modeled ILO estimate). [https://translate.google.com/?sl=auto&tl=ar&text=Employers%2C%20total%20\(%25%20of%20total%20employment\)%20\(modeled%20ILO%20estimate\)&op=translate](https://translate.google.com/?sl=auto&tl=ar&text=Employers%2C%20total%20(%25%20of%20total%20employment)%20(modeled%20ILO%20estimate)&op=translate)," 2023.
- [28] theglobaleconomy, "Yemen: Internet users . [https://www.theglobaleconomy.com/Yemen/Internet\\_users/](https://www.theglobaleconomy.com/Yemen/Internet_users/)," 2022.
- [29] datareportal, "Digital 2022: Yemen. <https://datareportal.com/reports/digital-2022-yemen>," 2022.
- [30] worldbank, "Yemen's Economy Faces Mounting Crises: Report. <https://www.worldbank.org/en/news/press-release/2024/06/26/yemen-s-economy-faces-mounting-crises-report>," 2024.
- [31] Food\_and\_Agriculture\_Organization\_of\_the\_United\_Nations, "Yemen Plan of Action 2018–2020. <https://openknowledge.fao.org/server/api/core/bitstreams/8c625820-53c1-486e-a7a4-f5e6f7b96990/content>," 2020.
- [32] Food\_and\_Agriculture\_Organization\_of\_the\_United\_Nations, "Smallholder Agricultural Production Restoration and Enhancement Project (SAPREP) (P162659). <https://openknowledge.fao.org/server/api/core/bitstreams/8207757f-f0b2-42fa-bb08-883403b226e3/content>," 2017.
- [33] reliefweb, "Food affordability in conflict-torn Yemen in light of the Ukraine war 2023. <https://reliefweb.int/report/yemen/food-affordability-conflict-torn-yemen-light-ukraine-war-2023>," 2023.
- [34] eliefweb, "GIEWS Country Brief: Yemen 31-October-2024. <https://reliefweb.int/report/yemen/giews-country-brief-yemen-31-october-2024>," 2024.
- [35] worldbank, "Climate-Resilient Irrigation. <https://www.worldbank.org/en/topic/climate-resilient-irrigation>".
- [36] reliefweb, "Yemen Quarterly Food Security Update - Quarter 1, Issued 5th May 2024. <https://reliefweb.int/report/yemen/yemen-quarterly-food-security-update-quarter-1-issued-5th-may-2024>," 2024.
- [37] unicef, "Yemen crisis. <https://www.unicef.org/emergencies/yemen-crisis>".
- [38] World\_Health\_Organization, "Eight years of prolonged conflict in Yemen leave over 20 million people in need of urgent health assistance. <https://www.emro.who.int/media/news/eight-years-of-prolonged-conflict-in-yemen-leave-over-20-million-people-in-need-of-urgent-health-assistance.html>," 2023.
- [39] reliefweb, "Make do or die: healthcare in Yemen. <https://reliefweb.int/report/yemen/make-do-or-die-healthcare-yemen>," 2015.
- [40] reliefweb, "Health care workers face a double battle – COVID-19 in a conflict zone. <https://reliefweb.int/report/yemen/health-care-workers-face-double-battle-covid-19-conflict-zone>," 2020.

- [41] reliefweb, "IOM Yemen: THE HEALING JOURNEY - Mental Health Support Uplifts Displaced Communities in Times of Crisis [EN/AR]. <https://reliefweb.int/report/yemen/iom-yemen-healing-journey-mental-health-support-uplifts-displaced-communities-times-crisis-enar>," 2024.
- [42] reliefweb, "Yemen: All Girls Foundation WASH Project [EN/AR]. <https://reliefweb.int/report/yemen/yemen-all-girls-foundation-wash-project-enar>," 2021.
- [43] World\_Health\_Organization, "Achieving health for all in Yemen A book of human stories. [https://www.emro.who.int/images/stories/yemen/achieving\\_health\\_for\\_all\\_in\\_yemen.pdf](https://www.emro.who.int/images/stories/yemen/achieving_health_for_all_in_yemen.pdf)," 2024.
- [44] UNDP, "Solar Power Brings Renewable Energy To Hospitals In Yemen. <https://www.undp.org/yemen/stories/solar-power-brings-renewable-energy-hospitals-yemen#:~:text=Solar%20power%20brings%20renewable%20energy,grids,>" 2023.
- [45] T. \_WORLD\_BANK, "THE EMPLOYMENT BENEFITS OF AN ENERGY TRANSITION IN YEMEN. <https://documents1.worldbank.org/curated/en/099051123072028548/pdf/P1705460663479050bb960b45af733669e.pdf#:~:text=10%2C000%20jobs%20could%20be%20created,of%20PV%20is%20even%20more>," 2023.
- [46] worldbank, "Navigating Climate Challenges amidst Conflict: Pathways for Yemen's Future. <https://www.worldbank.org/en/news/press-release/2024/11/20/navigating-climate-challenges-amidst-conflict-pathways-for-yemen-s-future#:~:text=Yemen%20faces%20rising%20temperatures%2C%20unpredictable,agricultural%20productivity%20and%20infrastructure%20damage>," 2024.
- [47] The\_Sector\_Network\_Rural\_Development\_Africa, "Fisheries – A Key Lever for Change in Yemen. <https://www.snrd-africa.net/fisheries-a-key-lever-for-change-in-yemen/#:~:text=activities%20have%20been%20estimated%20to,certain%20vitamins%20and%20trace%20elements>".
- [48] wfp, "What's Happening in Yemen? An Explainer on the Conflict and Its Impact on Civilians. <https://www.wfpusa.org/articles/whats-happening-yemen-explainer-conflict-impact-civilians/#:~:text=conflict%20has%20claimed%20over%20377%2C000,in%20Yemen%20are%20extremely%20hungry>," 2024.
- [49] statista, "Yemen: Age structure from 2013 to 2023. <https://www.statista.com/statistics/524184/age-structure-in-yemen/#:~:text=Age%20structure%20in%20Yemen%202,023Read%20more>," 2023.
- [50] worldometers, "Yemen Demographics. <https://www.worldometers.info/demographics/yemen-demographics/#:~:text=Trends%29%20www,4%20years%20%282025>," 2025.
- [51] Wikipedia, "Demographics of Yemen. [https://en.wikipedia.org/wiki/Demographics\\_of\\_Yemen#:~:text=,%D7%A2%D7%91%D7%A8%D7%99%D7%AA](https://en.wikipedia.org/wiki/Demographics_of_Yemen#:~:text=,%D7%A2%D7%91%D7%A8%D7%99%D7%AA)," 2023.
- [52] World\_Health\_Organization, "Population, Yemen. <https://data.who.int/countries/887#:~:text=Yemen%20,to%2070%2C976%2C403%20by%202050>."
- [53] F. Khaled, "A War of Attrition: Higher Education in Yemen. [https://sanaacenter.org/files/A\\_War\\_of\\_Attrition\\_Higher\\_Education\\_in\\_Yemen\\_en.pdf](https://sanaacenter.org/files/A_War_of_Attrition_Higher_Education_in_Yemen_en.pdf)," 2024.
- [54] acaps, "Social impact monitoring report: July–September 2022. [https://www.acaps.org/fileadmin/Data\\_Product/Main\\_media/20221122\\_acaps\\_yah\\_simp\\_july\\_to\\_september\\_2022.pdf](https://www.acaps.org/fileadmin/Data_Product/Main_media/20221122_acaps_yah_simp_july_to_september_2022.pdf)," 2022.
- [55] worldbank, "World Bank Increases Funding to Expand Electricity Access in Yemen. <https://www.worldbank.org/en/news/press-release/2022/06/30/world-bank-increases-funding-to-expand-electricity-access-in-yemen>," 2022.
- [56] reliefweb, "Yemen Country Economic Memorandum: Glimmers of Hope in Dark Times- 2023 [EN/AR]. <https://reliefweb.int/report/yemen/yemen-country-economic-memorandum-glimmers-hope-dark-times-2023>-



- enar#:~:text=Yemen%20Country%20Economic%20Memorandum%3A%20Glimmers,The%20conflict%20has," 2023.
- [57] A. Nasser, "PRIVATE SECTOR ENGAGEMENT IN POST-CONFLICT YEMEN. [https://carpo-bonn.org/media/pages/publikationen/weitere/private-sector-engagement-in-post-conflict-yemen/6f5be934d0-1733577276/rethinking\\_yemens\\_economy\\_white\\_paper\\_3.pdf](https://carpo-bonn.org/media/pages/publikationen/weitere/private-sector-engagement-in-post-conflict-yemen/6f5be934d0-1733577276/rethinking_yemens_economy_white_paper_3.pdf)," 2018.
- [58] UNHCR, "Yemen Crisis Explained.
- [59] reliefweb, "UNICEF Yemen Humanitarian Situation Report No. 4, January - December 2023 [EN/AR]. [https://reliefweb.int/report/yemen/unicef-yemen-humanitarian-situation-report-no-4-january-december-2023-](https://reliefweb.int/report/yemen/unicef-yemen-humanitarian-situation-report-no-4-january-december-2023-en-ar)  
enar#:~:text=UNICEF%20Yemen%20Humanitarian%20Situation%20Report,million%20people%20were%20estimated," 2023.
- [60] worldbank, "Publication: Yemen - Assessing the Impacts of Climate Change and Variability on the Water and Agricultural Sectors and the Policy Implications. <https://openknowledge.worldbank.org/entities/publication/535dd55f-829b-5f77-be8e-7b3a40774fb>.2021 ",3