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STRUCTURAL TRANSFORMATION AND LABOR MARKET ADJUSTMENTS IN AFGHANISTAN: EMPIRICAL EVIDENCE FROM ECONOMIC DEVELOPMENT AND EMPLOYMENT TRENDS (2017–2024)

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Abdul Ahmad Pooya
Hunan University, Applied Economics, School of Economics and Trade, Changsha, P.R. China.
ahmadpooya777@gmail.com, ORCID: 0009-0003-5526-6316

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ABSTRACT

Purpose – This study examines Afghanistan's structural transformation and labor market dynamics from 2017 to 2024, focusing on the disruptions caused by the 2021 political transition. It aims to identify how institutional fragility, return migration, and the collapse of the formal sectors have reshaped employment structure and productivity across the economy.

Methodology – Using cross-sector data from the World Bank, the ILO, and national sources, the research applies a mixed analytical approach combining descriptive trend analysis and structural interpretation. The study traces employment movements across agriculture, industry, and services to uncover the phenomenon of reverse structural transformation, where labor shifts from high- to low-productivity sectors during crises.

Findings – Results show that Afghanistan experienced a sharp 27% contraction in GDP after 2021, with about 2.6 million jobs lost, female employment declining by two-thirds, and informality expanding to 74% of total GDP. Labor reallocation was mainly driven by survival mechanisms rather than productivity gains, leading to increased unemployment, gender inequality, and reliance on subsistence agriculture.

Conclusion – Afghanistan's labor market adjustments after 2021 reflect structural regression rather than progress. Sustainable recovery needs employment-focused diversification, financial revitalization, and gender-inclusive labor policies to turn short-term subsistence resilience into long-term productive growth.

Keywords: Structural transformation, labor market dynamics, reverse structural change, informality, economic fragility, gender inequality.
JEL Codes: O14, J21, O17

1. INTRODUCTION

The global labor markets have experienced significant structural changes over the last 10 years, including the decline of traditional sectors, automation, and the growing significance of service-oriented and knowledge-based sectors (OECD, 2025; Sevinc, 2019; Jung and Choi, 2006). Even though overall productivity and employment are growing, most developing and conflict-affected economies remain characterized by high rates of informality, underemployment, and gender inequality (Bonnet, 2018). These problems are even more complicated in weak states, where frequent shocks—including political instability, migration crises, and external economic shocks—compromise labor market stability and institutional strength (I. Shtunder & Shkuropadska, 2024). Afghanistan is one of the most dramatic examples of the fragility of the labor market in the post-conflict period, the employment system of which is heavily influenced by decades of aid dependency, migration flows, and the instability of regional trade (Pooya, 2025b; Loschmann and Marchand, 2020; World Bank, 2018).

One of the most important factors of sustainable economic development is structural transformation, i.e., transfer of labor and resources to low-productivity sectors (such as agriculture) to higher-productivity sectors (such as industry and modern services) (Lukalo & F. Kiminyei, 2021; Diao et al., 2019). During successful transitions, it not only increases productivity but also widens formal job opportunities and income distribution (Sevinc, 2019). But in weak and aid-dependent economies, the process may be manipulated and even be inverted (Sevinc, 2019). In Afghanistan, recurring security shocks, institutional fragility, and external dependencies have hindered the natural evolution of productive sectors. As a result, labor shifts often occur from formal to informal or subsistence activities rather than toward higher-value sectors, reflecting a phenomenon of "reverse structural transformation" (World Bank, 2025; Farahi, 2024).

Mass job losses, the departure of foreign institutions, and a contraction of the service and trade industries were caused by political and economic shock following the 2021 regime change (Mowahed et al., 2025). At the same time, the agricultural

sector absorbed laid-off workers, serving as the so-called shock-absorbed livelihoods, but also contributed to underemployment and a decrease in production (Farahi, 2024). Besides, the mass repatriation of Afghan refugees from Iran and Pakistan added more pressure on home labor markets, and the further contraction of aid further reduced the possibility of creating formal employment. This interplay of shocks in the structure and labor displacement highlights the vulnerability of Afghanistan's employment system (Pooya, 2025a; Loschmann and Marchand, 2020; Kamminga and Zaki, 2018).

While the global literature has extensively explored structural transformation in developing economies, there is a notable gap in understanding how these processes unfold in fragile, post-conflict, and aid-dependent contexts such as Afghanistan. Few empirical studies have systematically analyzed the post-2021 transformation of the Afghan labor market, notably how economic disruptions, migration flows, and sectoral contractions have reshaped employment composition. This study addresses this gap by offering an evidence-based, sectoral analysis of Afghanistan's labor market evolution between 2017 and 2024.

This research paper adds value to the literature in three major scenarios. (1) It presents one of the earliest complete sets of data on the changes in employment in Afghanistan in the course of political transformation and economic turmoil. (2) It also presents the notion of reverse structural transformation that explains the retrogressive pattern of labor reallocation that occurred in the period after 2021. (3) It provides policy-oriented information regarding the strategies of facilitating productive employment and inclusive recovery in fragile states through the exploitation of emerging sectors like construction, mining, and digital services. Overall, this study adds to the knowledge of the interaction between structural transformation and labor market dynamics in crisis-affected economies. It has implications for both Afghanistan and the similarly vulnerable countries.

The rest of this paper is structured as follows. Section 2 reviews the theoretical and empirical literature on structural transformation and labor market dynamics, especially as applied to developing and fragile economies. Section 3 outlines the data sources and research methodology used to examine the economic and employment developments in Afghanistan between 2017 and 2024. Section 4 presents the empirical results and discusses in detail the structural changes observed across sectors and labor market segments. Lastly, a conclusion is made at the end of Section 5 summarizing the main lessons, policy implications, and future research directions.

2. LITERATURE REVIEW

The concept of structural transformation has long been considered the foundation of economic development, which means the systematic redistribution of labor and output in the low- and high-productivity sectors (such as agriculture and manufacturing and services, respectively) (Cevik et al., 2019; Nanga et al., 2024; Broeck et al., 2023). The process changes the sectoral structure of output but also reforms employment patterns, productivity levels, and the overall growth path of the economy (Beylis et al., 2020). The classical pattern of development remains predictable: as agricultural production increases, surplus labor is directed to other sectors of production and, finally, to the service sector, which becomes predominant at more advanced stages of development (Cevik et al., 2019).

Theoretically, the framework of structural transformation is based on the interplay among technological advancements, capital accumulation, and sector-specific productive differentials, which collectively drive changes in output and the composition of employment (Kongsamut et al., 2001; Cevik et al., 2019). In reality, though, the empirical data indicate that. In contrast, the process of output transformation may be relatively quick, but employment transformation usually takes even longer because modern industries are more capital- and knowledge-intensive (Fox et al., 2018). Therefore, the contribution of agriculture to GDP can decrease sharply in lower-middle-income countries, even though most workers still work in agriculture (Fox et al., 2018).

Empirical analyses of the world show significant diversity in the rates and patterns of structural change across regions. The movement of labor, especially in low-productivity agriculture, to more productive manufacturing and services, especially in East and Southeast Asia (especially in South Korea, Malaysia, and Vietnam), has been highly growth encouraging (Nissanke, 2019; Baymul et al., 2019). Long-term investments in manufacturing capacity and human capital make the Asian model stand out, as income transitions much faster than in non-Asian economies (Foster-McGregor et al., 2016). Conversely, in most economies in Sub-Saharan Africa and Latin America, structural transformation has been productively reducing in nature, whereby employment is moving out of agriculture too soon and directly into low-productivity service sectors, skipping the manufacturing phase that is essential to continue driving productivity (Sen, 2019; Baymul et al., 2019; Nissanke, 2019).

The international experience indicates that transformation effectiveness is determined by both macroeconomic and institutional factors, such as trade transparency, infrastructure levels, population changes, and human capital development, as well as microeconomic factors, including labor mobility and company-level dynamics (Cevik et al., 2019). The high rate of population growth has the potential to decelerate employment change despite the ongoing output diversification process, which is why employment-intensive growth policies are necessary (Fox et al., 2018). In addition, trade and technological

shocks may entail high adjustment costs, especially when labour mobility is low, and displaced workers and new industries may experience long-term mismatches (Hollweg et al., 2014).

Wage employment relations provide a different, critical perspective on the transformation to be considered. Evidence from India and other developing economies shows that during structural transformation, workers leave agricultural self-employment and transition to wage employment in industry and services, resulting in gains in earnings (Hasan et al., 2019). The larger, urban-based companies are more likely to pay higher wages and provide better working conditions, which is where the emphasis lies on policies that can help promote the growth of the formal sector and urban jobs. The role of labor-market institutions is crucial and complicated in this process: flexible yet protective policies can promote the welfare and facilitate transformation, like severance payments that work to ensure the worker but not limit their mobility, whereas the strictness of dismissal legislation tends to force the workers to informality (Ranjan et al., 2018).

There is additional cross-country evidence of distinct labor-market patterns in developing and developed economies. In low-income countries, employees work longer hours, experience greater informality, and have reduced sector mobility than those in advanced economies (Lagakos et al., 2023; Bick et al., 2021). The replacement of self-employment by wage employment is a sign of effective structural change, which explains much of the increase in total working hours observed with increasing economic development (Lagakos et al., 2023). There is also the process of occupational upgrading: alongside development, service-oriented and knowledge-intensive jobs are gaining momentum across industries, which signals a more profound technological and organizational transformation (Duernecker et al., 2021; Dinkelman et al., 2024).

Recent technological changes, such as automation, digitalization, and the ascendancy of the platform economy, have brought new forces of structural change. Such trends have changed the face of conventional employment relations, shifting from stable wages to more mobile, often precarious work (Li et al., 2022). Automation in developing nations is also an intriguing problem because it reduces the labor-intensive nature of the production process and can lead to premature deindustrialization (Autor et al., 2020). As developing and advanced economies polarize in different ways, middle-skill jobs are being lost, and developing countries tend to polarize incompletely, as opportunities for low-skilled workers do not accompany the growth of high-skilled jobs.

Nevertheless, the transfer of excess labor from the agricultural and informal sectors to more productive sectors is a critical channel for sustainable development despite these challenges (Basole, 2022). This is a process that occurs as a result of the simultaneous action of within-sector productivity gains (the Solow process), intersectoral labor transfer (the Kuznets process), and the shift out of subsistence and into profit-seeking activities (the Lewis process), leading to virtuous growth cycles (Donovan et al., 2023). Nevertheless, unremedied labor-market frictions, such as skills mismatches, low mobility, and sectoral wage differentials, continue to slow this process, especially in low-income economies (Donovan et al., 2023).

The service sector, once considered a late-stage driver of change, has become an engine of productivity growth not only in developed economies but also in developing ones. Trade services, including information technology, finance, and business process outsourcing, were the key sources of post-1990 growth in India (Avdiu et al., 2022; Salimova, 2021). Likewise, education and infrastructure investment have been essential to advancing this transformation by facilitating labor mobility and upgrading technology (Laurente, 2022; Martins, 2018). However, the shift toward the majority of the service sector has also been shown to decrease labor productivity when labor markets become less flexible and require more skilled workers (Abbott et al., 2017; Laurente, 2022).

The complexity of structural transformation stems from the need to balance the following interdependent areas: industrialization, urbanization, demographic transition, and human capital accumulation (Degu et al., 2019). A lack of advancement in a single dimension can bring the entire transformation process to a standstill. The problem of skills mismatch and low absorption capacity in industries is especially acute across various developing nations, as agricultural output tends to push workers out of the farming sector faster than non-agricultural industries can absorb them (Palmtag, 2023; Degu et al., 2019). They are also external shocks, such as conflicts and prolonged instability, which disrupt the pathways of transformation by destroying human capital and discouraging investment (Adelaja et al., 2021).

As policy implications, effective structural change requires interventions that increase labor mobility, facilitate skill upgrading, and enhance institutional capacity (Pasieka et al., 2020). Education and vocational training investments remain the key to preparing workers for modern areas. Meanwhile, labor-market policy will have to be more flexible than protectionist, promoting labor mobility without compromising security. Transport, telecommunications, and financial infrastructure investments are also critical for facilitating diversification and connecting rural workers to the urban and digital markets. In addition, developing nations should anticipate the consequences of automation and artificial intelligence, which can transform comparative advantage and alter employment patterns (Venkat & Kirshna Kumar Balaraman, 2025).

Although global research has extensively examined structural transformation and labor-market dynamics, significant empirical gaps remain concerning fragile and aid-dependent economies. Afghanistan, characterized by a weak productive base, aid-driven growth, and a volatile labor market, has received little scholarly attention within this framework. Despite

economic and employment shifts between 2017 and 2024, the country lacks systematic, evidence-based studies that analyze how sectoral transformations have affected employment composition, productivity, and income dynamics. This research, therefore, fills a critical gap by providing an empirical examination of Afghanistan's structural transformation and labor-market evolution, offering valuable insights into how fragile economies can achieve sustainable, inclusive growth under conditions of persistent external dependency and institutional fragility.

3. DATA AND METHODOLOGY

3.1. Data

As shown in Table 1, the present paper relies on combined data gathered from various institutional and international sources to provide a solid basis for comparison. The primary sources of data are the World Bank Group to represent national accounts and sector production, the International Labor Organization (ILO) to model unemployment and labor participation (2018-2024), and CEIC Data (2024) to represent macro-labor indicators. The additional data were obtained from ACAPS (2024) on the informal economy, as well as from the National Statistics and Information Authority (NSIA, 2024), which provides accessible, recent data on the labor market and demographic distributions. Further, Farahi (2024) and Akbari (2025) conducted domestic empirical studies to capture the post-2021 forces of job loss, the reversal of structural transformation, and gender-based job inequality. The combination of these cross-verified datasets helps dampen the discrepancies in the disjointed post-shock statistical system in Afghanistan, especially in agricultural employment estimates. All indicators were computed at constant prices and for international comparisons of employment, making their analysis coherent across sources and time (2017-2024).

Table 1: Summary of Datasets and Sources Utilized in the Study

Categories	Main Indicators / Variables	Source
Macroeconomic Indicators	- *GDP (Constant Prices)* - *GDP Growth* - *Sectoral Output* - *Inflation Rate*	WDI *CEIC Data* *WDI* *CEIC Data*
labor Market and Employment	- *Employment by sector* - *Unemployment* - *Labor force participation* - *Youth NEET rate* - *Gender Employment Gap* - *Sectoral Employment Structure* - *Demographics* - *Wages*	WDI *ILO*
Informal Economy Indicators	- *Employment Rate* - *Informal Sector Share of GDP* - *Informal Employment Rates*	*NSIA* *CEIC Data*
Socioeconomic and Structural Factors	- *Job Losses* - *Gender Inequality* - *Post − 2021 Structural Changes*	*ACAPS* *Farahi, Akbar*i

3.2. Methodology

This study uses a mixed-methods analytical approach, combining quantitative trend analysis and a qualitative structural interpretation. The first step was a sectoral breakdown of GDP and employment quotas to track labor movements in agriculture, industry, and services in the pre- and post-2021 regimes. This comparative and descriptive evaluation was supplemented with a temporal analysis (2017- 2024) to quantify labor displacement, increases in unemployment, and growth in informality. At the second stage, the research applied an evidence-based interpretive model grounded in structural transformation theory, with a focus on the interplay among macro shocks, labour mobility, and institutional fragility. The analysis model presents the term "reverse structural transformation," which refers to the regression of labor in the high- and low-productivity sectors during crisis conditions. The combination of micro-level and macro-level dynamics (youth NEET rates and gendered labor outcomes) and macro-level indicators (GDP contraction, informality rates, unemployment) allows the

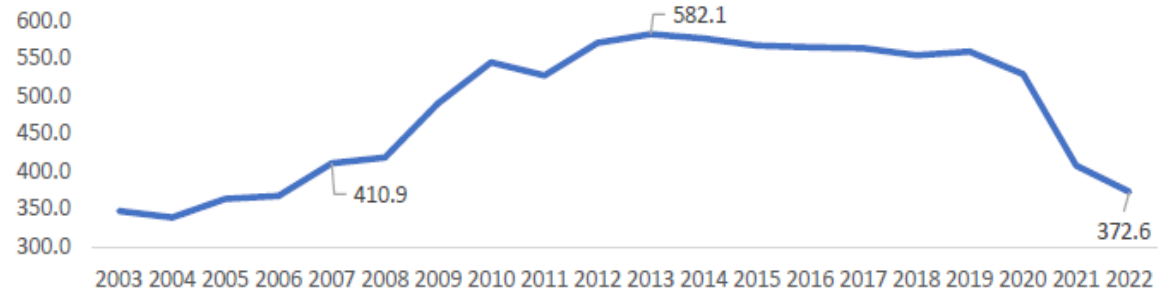
approach to understand multidimensional labor adjustment in Afghanistan following 2021. Such a mixed-methods approach is consistent with the requirements of comparative development research and enhances the explanatory power of the results for fragile and conflict-affected economies.

4. RESULTS AND DISCUSSION

4.1. Structural Fragility and Uneven Recovery

On August 15, 2021 (24 Asad 1400), the Islamic Emirate of Afghanistan took over the country. The political transition in Afghanistan was a sudden turning point that had a significant impact on the economy and society. After this date, Afghanistan could no longer use the international banking system or its foreign exchange reserves, and the central bank's assets were frozen. The drop in foreign aid and the resulting uncertainty led to a sharp decline in overall demand, which in turn triggered capital flight and a significant drop in investment confidence (World Bank Group, 2024; Afghanistan, 2023; Sahibzada et al., 2021).

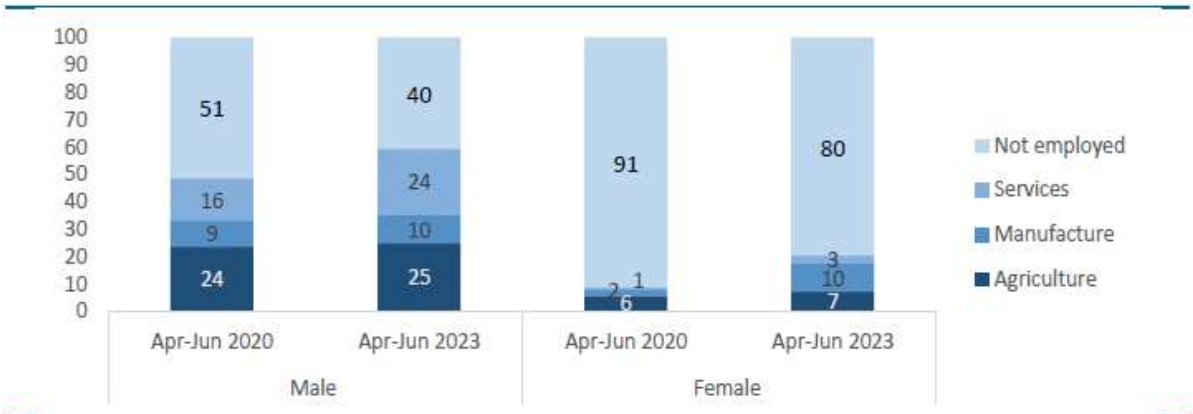
Figure 1: Long-Term Fluctuations in Afghanistan's GDP per Capita (Constant 2015 US$), 2003–2022



Source: https://databank.worldbank.org/source/world-development-indicators?locations=AF.

Figure 1 shows that Afghanistan's GDP per capita grew steadily from 2003 to 2012, reaching a high of US$582.1 in 2012, after ten years of high aid inflows and growth driven by rebuilding. But in the years that followed, the average growth rate fell below the population growth rate. In 2021, the Islamic Emirate of Afghanistan took over, and GDP per capita fell sharply to US$372.6 in 2022, its lowest level since 2008. These changes represented a 27% decrease in total production. As a result, Afghanistan's gross domestic product (GDP) immediately fell by 27.0%. This event brought the modern parts of the economy to a halt, which had previously accounted for a large share of total output. In 2016, estimates indicated that the services sector accounted for 55.9% of GDP, industry for 21.1%, and agriculture for 23.0%. The financial shock caused a drop in overall demand and a liquidity freeze, hurting the services and manufacturing sectors significantly. The impact of this economic shock forced workers into low-productivity subsistence and informal activities (Afghanistan, 2023; Sahibzada et al., 2021).

Figure 2: Sectoral Distribution of Youth Employment in Afghanistan by Gender, 2020–2023

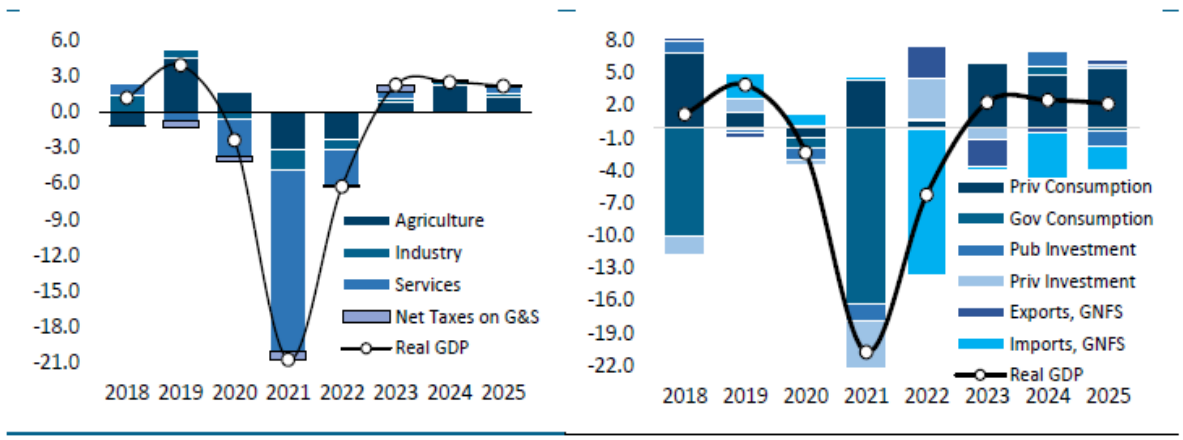


Source: World Bank. (2025a). Afghanistan development update: Unlocking youth potential for resilience and economic recovery. The World Bank Group. https://thedocs.worldbank.org/en/doc/71dd45bbb425564ee41e22e1dc2c2f57-0310012025/original/Afghanistan-Development-Update-April-2025-Final.pdf?utm.

As shown in Figure 2, from 2020 to 2023, there were significant changes in the structure of youth employment in Afghanistan, with both sectoral and gender gaps identified. The male occupation was still comparatively diversified, with the agriculture sector (25 percent), manufacturing (10 percent), and services (24 percent) being the primary ones. On the other hand, female

employment was skewed towards non-employment (although somewhat better), namely, 91% in 2020 and 80% in 2023. This transformation signifies the relegation of women to low-productivity activities, especially agriculture and informal services, primarily driven by economic need rather than the expansion of formal opportunities. In 2024, the country's GDP was predicted to increase by 2.5%, marking the second year of economic growth. This growth is primarily due to progress in the agricultural, mining, construction, and trade sectors. Nevertheless, the manufacturing and services industries still face severe problems due to an unfavorable business environment, export restrictions, and a decline in foreign aid (Group, 2025; World Bank Group, 2024).

Figure 3: Sectoral and Demand-Side Drivers of Afghanistan's Post-Shock Growth: Evidence of Uneven Recovery and Structural Fragility (2018–2025)



Source: World Bank. (2025a). Afghanistan development update: Unlocking youth potential for resilience and economic recovery. The World Bank Group. https://thedocs.worldbank.org/en/doc/71dd45bbb425564ee41e22e1dc2c2f57-0310012025/original/Afghanistan-Development-Update-April-2025-Final.pdf?utm.

Figure 3 shows how Afghanistan's growth by sector and demand changed from 2018 to 2025, indicating a weak, uneven recovery. Agriculture has become the primary driver of real GDP growth, taking in workers who have lost their jobs and helping them find new jobs. At the same time, the industrial and service sectors remain weak due to trade barriers, low investment, and institutional constraints. On the demand side, private consumption—bolstered by remittances and lower domestic prices- has driven short-term expansion, though rising imports have deepened external imbalances. The trends reflect a recovery shaped more by subsistence resilience than by structural transformation, underscoring Afghanistan's persistent dependence on agriculture and vulnerability to external and policy shocks.

Table 2: Sectoral Contributions and Economic Performance in Afghanistan

Economic Sector	Share in GDP (2016)	Estimated Performance (2024)	Analytical Note
Agriculture	23.0%	Main driver of recovery growth	Stabilization of domestic demand played a key role
Industry (including mining and construction)	21.1%	Primary source of growth (investment in infrastructure)	Revitalization of mining and infrastructure projects
Services	55.9%	Facing persistent challenges and stagnation	Contraction is due to reduced foreign aid and an unfavorable business climate.

Source: World Bank Group. (2024, April 18). The World Bank in Afghanistan. World Bank. https://www.worldbank.org/en/country/afghanistan/overview.

Table 2 provides the structure and sector performance of the Afghanistan economy and compares the pre-crisis GDP shares in 2016 with projected sectoral dynamics in 2024. According to the data, agriculture (previously accounting for 23% of GDP) is returning to the forefront of the recovery, primarily due to the stabilization of domestic demand and its role as a livelihood shock absorber following the 2021 political transition. The industrial sector, logging, and construction account for 21.1 percent of GDP, and they have emerged as the major drivers of short-term growth through investment in infrastructure, especially mining expansion and the Qosh Tepa Canal. On the other hand, the services sector, which formerly accounted for 55.9% of GDP, is still experiencing severe stagnation due to lower foreign aid, low institutional activity, and a poor business environment.

In addition, tens of thousands of high-quality Afghans have fled the country, which has become a severe blow to the human capital in the country. This brain drain compromises the economy's ability to return to a path of modern structural transformation and renders future growth reliant on low-productivity models (Rahmat, 2025).

Table 3: Sectoral Dynamics of Afghanistan's Real GDP Growth, 2020–2023

Sectors	2020	2021	2022	2023
Agriculture	4.4	-9.8	-6.6	2.1
Industry	-5.6	-12.8	-5.7	2.6
Mining & Quarrying	1.4	1.7	4.1	6.9
Manufacturing	-7.2	-10.3	-10	1.7
Food and Beverages	2.7	2.2	-9.5	1.7
Non-Food Manufacturing	-19.2	-29.4	-11.1	1.6
Electricity, Gas, and Water	-3.4	-5.8	-3	5
Construction	-6.4	-35.4	-0.8	-0.9
Service	-4.6	-30.1	-6.5	2.3
Wholesale & retail trade	-2.1	-14.8	-8.6	17.9
Transport, Repair of Vehicles & Storage	-18	-37.4	-0.4	5.9
Restaurants & hotels	-38.1	-42.8	-4.9	1.6
Post and telecommunications	1	-18.6	-4.7	1.4
Finance and Insurance	-9	-30	-6.6	1.6
Real Estate	-0.2	-12.9	-5.2	-5
Other Service	-2	-37.9	-7.7	-0.8
Plus, Import Duties	-5.4	-16.5	-3	11.4
Totals / GDP at Market Prices	-2.1	-20.7	-6.2	2.7

Source: World Bank. (2025a). Afghanistan development update: Unlocking youth potential for resilience and economic recovery. The World Bank Group. https://thedocs.worldbank.org/en/doc/71dd45bbb425564ee41e22e1dc2c2f57-0310012025/original/Afghanistan-Development-Update-April-2025-Final.pdf?utm (2019=100).

As Table 3 illustrates, the Afghan economy's performance from 2020 to 23 shows that all sectors have become highly volatile. The economy declined considerably in 2021 (-20.7%), with the steepest declines in agriculture (-9.8%) and industry (-12.8%). Small recoveries occurred in 2023, and total GDP growth was 2.7%, driven by rebounds in mining (+6.9%), utilities (+5.0%), and trade-related services (+17.9%). Nevertheless, the main sectors of the economy, such as construction and real estate, remained flat or continued to decline, indicating an uneven recovery.

Figure 4: Sectoral and Aggregate GDP Growth Trends in Afghanistan (2003–2023): A Comparative Analysis of Agriculture, Industry, and Services Before and After the Islamic Emirate Takeover

Note: The black figure represents agriculture output (% change year-on-year), the red figure shows industry growth (% change year-on-year), and the green figure depicts services growth (% change year-on-year).

Source: World Bank. (2025a). Afghanistan development update: Unlocking youth potential for resilience and economic recovery. The World Bank Group. https://thedocs.worldbank.org/en/doc/71dd45bbb425564ee41e22e1dc2c2f57-0310012025/original/Afghanistan-Development-Update-April-2025-Final.pdf?utm (2019=100)

The volatility and structural break in Afghan economic growth between 2003 and 2023, as shown in Figure 4, reveal both sectoral and aggregate trends amid significant political and economic changes. The period between 2003 and 2012 witnessed strong growth in Afghanistan, averaging about 9 percent per year, primarily driven by international aid, reconstruction funds, and security-related inflows. Nevertheless, the rate of growth slowed significantly after 2013, falling below the population growth rate, indicating the depletion of the aid-based model.

Agricultural production (black figure) exhibits sharp cyclic variation associated with climatic shocks and is highly reliant on rain-fed production. The growth of industries (red figure) follows an unstable, downward curve, constrained by poor investment, declining construction, and decreased external funding. The services sector (green figure), which was traditionally dependent on foreign aid, experienced a sustained decline after 2012 due to reduced aid and weaker urban demand.

The fact that all industries went into a synchronized breakdown in the aftermath of the political transition in August 2021 can be attributed to the deep-seated economic shock caused by the change of regime, the isolation, and the sanctions imposed by the international community. Although it has seen a slight 2.7 percent recovery in 2023, the overall GDP is still about 70 percent of what it was in 2021, indicating structural stagnation and a weak state of low-growth equilibrium in Afghanistan's post-transition economy.

4.2. Macroeconomic Dynamics of the Labor Market: Unemployment, Participation, and Demographic Pressure

Over the past few years, unemployment in Afghanistan's labor market has increased, and the labor force participation rate has changed significantly. The general unemployment rate (calculated by the ILO) rose by 13.28 per cent in 2021 to 14.1 per cent in 2022 and to 15.4 per cent in 2023. It was estimated that the unemployment rate would remain high in 2024 and 2025 (Akbari, 2025; CEICdata.com, 2024).

With the increasing unemployment, the economy of Afghanistan has been experiencing intense pressures due to high rates of poverty of up to at least half of the population and due to food insecurity, which challenges a large proportion of about 15 million people. These have led to forced labor participation, as households are forced to enlist more labor, especially youth, to sustain themselves. This influx of involvement, coupled with a shortage of employment opportunities, has compounded labor-market pressures, thereby increasing unemployment. Workers in these conditions of survival can hardly choose their employment: they are forced to accept any available job, most of which are in the informal sector (World Bank, 2024; Farahi, 2024; Afghanistan, 2023).

Figure 5: Employment Type Distribution among Afghan Youth by Gender, 2019–2023

Source: World Bank. (2025a). Afghanistan development update: Unlocking youth potential for resilience and economic recovery. The World Bank Group. https://thedocs.worldbank.org/en/doc/71dd45bbb425564ee41e22e1dc2c2f57-0310012025/original/Afghanistan-Development-Update-April-2025-Final.pdf?utm.

Figure 5 shows a significant change in the gender makeup of youth employment from 2019–20 to 2023. The percentage of men who were self-employed rose slightly (from 17% to 23%), while the rate of men who worked for wages, especially in the private sector, fell (from 45% to 29%). For young women, the structural change is even more apparent: unpaid family work went from 54% to 30%, and self-employment went from 2% to 49%. This rise is due to a shift toward low-productivity activities done at home, such as handicrafts and small businesses, rather than more formal entrepreneurship.

4.3. Youth Unemployment

One of the most significant problems in Afghanistan's job market is that young people can't find work. In 2021, 52.7 percent of young people were NEET (not in employment, education, or training). This unemployment rate is much higher than the regional and income-group averages. The World Bank (2025) reports that 16.4% of young people aged 15 to 24 are unemployed, underscoring the vulnerability of this group.

Table 4: Key Labor Market indicators of Afghanistan: Trends from 2018 to 2023

Indicator	2018	2021	2022	2023
Overall unemployment rate (ILO estimation)	8.4%	13.28%	14.1%	15.4%
Youth unemployment rate (ages 15–24)	17.7%	16.4%	N/A	N/A
Youth NEET rate (%)	N/A	52.7%	N/A	N/A

Source: Afghanistan, S. (2023). Outlook. https://www.undp.org/sites/g/files/zskgke326/files/2023-04/SEO%202023-Executive%20Summary_Farsi.pdf. CEICdata.com. (2024). Afghanistan AF: Unemployment: Modeled ILO Estimate: % of Total Labour Force. Ceicdata.com; CEICdata.com. https://www.ceicdata.com/en/afghanistan/employment-and-unemployment/af-unemployment-modeled-ilo-estimate--of-total-labour-force.

Table 4 presents the significant indicators of labor markets in Afghanistan between 2018 and 2023, along with the overall trend of an increasing employment crisis during and after the 2021 political transition. Economic decline, institutional breakdown, and decreased investment led to an overall rise in the unemployment rate from 8.4% in 2018 to 15.4% in 2023. Youth unemployment remained at 16.4 percent in 2021, and the number of young people not in education, employment, or training (NEET) rose to 52.7 percent, indicating that the majority of the Afghan population's largest cohort is not connected to the labor market.

4.4. Return of Migration Pressure and Regional Disruption

Return migration dynamics have emerged as a defining factor in shaping the post-2021 process of labor-market adaptation and structural transformation in Afghanistan. The massive repatriation of Afghan refugees, especially those of Iran and Pakistan, over the last few years has exacerbated the domestic labor-market strains and revealed some deep structural vulnerability in the efficiency of employment absorption and institutional capacity. These return flows, which have already reached the millions since 2016 and rapidly increased after 2021, have overwhelmed the already weak humanitarian infrastructure in Afghanistan and burdened the country with an unusual burden on its limited productive areas (Kamminga & Zaki, 2018; Farahi, 2024).

Weaknesses in Afghanistan's infrastructure have been accompanied by a shrinkage in formal employment positions and a surge in returning workers, creating an acute imbalance between labor demand and supply. The informality and low productivity that have already defined the labor market in Afghanistan lack the mechanisms to absorb such returnees into the wage sector. Accordingly, labor repositioning has manifested as a retrogressive adjustment, forcing a large number of employees into subsistence farming, day-to-day wage labor, and informal urban services. Workers moving from the service and industrial sectors to the agricultural industry is an ideal example of reverse structural change, where shocks) external and internal) hasten the relocation of labor back into low-productivity sectors rather than increasing upward mobility. Its consequences are far-reaching: rather than contributing to the diversification of the country and the expansion of productivity, return migration has strengthened Afghanistan's reliance on agriculture and informal survival (World Bank, 2024; Loschmann and Marchand, 2020).

In the regional sense, the deportation and voluntary repatriation of the Afghan workers have had disproportionate labor-market impacts on the economies of neighboring countries. The decrease in the supply of Afghan migrant labor in Iran has caused high wage inflation, doubling the income of unskilled workers and raising skilled labor wages to up to 2.5 times (Afghan Paper, 2025). This wage increase highlights the structural reliance of major industries in Iran, such as construction, agriculture, and low-end services, on the Afghan labor force. The phenomenon reveals a localized labor interdependence that has developed over decades, in which Afghanistan has both served as a source and a recipient of labor mobility shocks. Dislocation of this system has therefore had a twofold impact: shortage of labor and increased cost in the host nations, and unemployment and underemployment in Afghanistan.

The lack of institutional coordination between migration management and domestic labor policy has hindered the reintegration of returnees in Afghanistan, not to mention the skill mismatches. Numerous returning migrant workers have specific sector experience abroad, especially in construction and manufacturing. However, the local demand for these skills is low because industrialization and urban investment are stagnant. The absence of vocational requalification initiatives or reemployment assistance has fueled the depreciation of this human capital to the extent that it counterbalances the possible productivity spillovers that a process of returning migration would have produced (Garrote Sanchez, 2018; Farahi, 2024).

4.5. Sectoral Transformation of Employment: Reverse Shift and Data Inconsistencies

The labor market in Afghanistan before the 2021 political shock (government transition) followed the general trend of developing economies, with the agricultural sector as the largest employer, accounting for 45.7 percent of total employment —roughly 2.6 million jobs. Social and public services (16.7) followed the retail and hospitality sector (10.8). This kind of composition in the industry leads to the conclusion that the country depends heavily on low-productivity and informal jobs before the institutional shocks of 2021 (Farahi, 2024).

Nonetheless, recent data on employment show significant inconsistencies across employment sources. Whereas some datasets indicate 44.3% in agricultural employment in 2017 and 45.7% in 2020, a comparatively newer source estimates it at 78%. This dramatic difference suggests the loss of uniform definitions of employment and the large-scale movement of labor to subsistence and self-employment actions in the informal sector of agriculture. This divergence highlights the structural shocks that have forced the labor force out of productive areas into survival-based livelihoods (Akbari, 2025; Farahi, 2024).

This sharp increase in reliance on agriculture is a strong indication of a reversal of structural change, or the process by which labor moves out of more productive sectors into less productive activities as a kind of shock absorber for household demand in an unstable economy. In that regard, the displaced and unemployed labor force has found new shelter in agriculture and in subsistence self-employment. This shift from the tertiary sector to the primary sector is not only a reversal of general economic productivity but also a representation of the failure of the formal labor market to create sufficient and sustainable employment opportunities (Sen, 2019; Boone and Wilse-Samson, 2021).

The financial and institutional crises induced by the economic and institutional shocks that followed the 2021 political transition led to a mass breakdown of formal employment in Afghanistan. It was estimated that around 2,640,454 jobs had been lost in 2021-2023. The worst shrinkage was in the services sector, which had previously been the most significant contributor to GDP. The exit of international organizations, the drastic reduction in external assistance, and the curtailing of public sector operations drove it. This slump has severely weakened the sector's ability to retain a skilled workforce, thereby limiting overall job creation and accelerating the skilled exodus. In turn, such developments have exacerbated structural imbalances and undermined the prospects for an inclusive labor market recovery (Group, 2025; Farahi, 2024).

Unlike the disintegration of the formal labor market, the informal economy in Afghanistan has grown rapidly. According to estimates published as of July 2024, informal sector activities account for 73.6 percent of the country's total GDP, almost twice the rate in neighbouring Pakistan (35.7 percent). This growth has been mainly due to internal displacement, the shrinking of formal jobs, and increased reliance on low-barrier-to-entry jobs, such as seasonal work, petty trade, and self-employment. The dominance of the informal sector constitutes a significant policy challenge, as it impedes the government's ability to raise domestic revenue and enforce labor policies, such as social protection and minimum wage policies. This course indicates a shift toward chronic formalization, with long-term consequences for productivity, fiscal sustainability, and an inclusive economic recovery (Group, 2025; ACAPS, 2024).

Table 5: Sectoral Employment Structure and Post-2021 Labor Market Transformation in Afghanistan

Sector/Category	Total employment (IELS2020)	Share in Employment (IELS 2020)	Job loss rate (2021–2023)	Structural Transformation Status
Agriculture	2.6 million	45.7%	N/A	Increased dependency after the 2021 shock (up to 78%)
Industry	N/A	18.1% (2017)	N/A	Recession in industries except construction services
Services	N/A	37.6% (2017)	N/A	Severe contraction of the formal sector employment
Total estimated job losses	N/A	N/A	2.64 million	Sharp decline in formal sector employment
The proportion of the informal economy of GDP (2024)	N/A	N/A	N/A	73.6% (2024)

Source: ACAPS. (2024). ACAPS ANALYSIS HUB. https://www.acaps.org/fileadmin/Data_Product/Main_media/20240730_ACAPS_Afghanistan-Mapping_informal_economies_in_informal_settlements.pdf; Akbari, S. (2025, May 3). Afghanistan's labor market: Unemployment status, employment, and prospects. IRAF – Afghanistan and Iran News. Retrieved from https://iraf.ir/61191 ; Farahi, A. (2024). Assessing key trends in the Afghan economy three years into the Taliban rule: A policy paper.Princeton School of Public and International Affairs. Retrieved from https://spia.princeton.edu/sites/default/files/2024-11/Farahi2024.pdf.

Table 5 provides an overview of the structural reorganization of the Afghan labor market following the 2021 political and economic shock. This information shows a clear trend of reverse structural change, as labor moved back towards low-productivity agriculture and the share of employment rose to almost 78 per cent in 2024, compared to 45.7 per cent in 2020. Meanwhile, industry shrank, unless there was some recalcitrance in construction. The services sector, which had been a major employer, was hit hardest as international bodies pulled out and aid-based operations collapsed. The fact that about 2.64 million formal jobs were lost between 2021 and 2023 indicates the extent of the economic disruption. Meanwhile, the informal sector had grown to 73.6 percent of GDP, reflecting the influence of unregulated, subsistence-based employment. Overall, the table shows that the labor market in Afghanistan has reverted to informality and subsistence employment, compromising productivity growth and the stability of the labor market institutions.

4.6. Capacity Building through Emerging and Infrastructure Sectors

Despite the broader economic decline, other industries such as mining and construction have been singled out in 2024 as possible sources of GDP growth. This trend is primarily fuelled by the introduction of large national and regional-level infrastructure projects that will incrementally restart the economy. For example, the Mes Aynak copper project, when fully realized, is expected to create about 40,000 direct and indirect employment opportunities and to provide the government with an estimated USD 350 million in tax revenue each year. When well-coordinated, these initiatives would become important capacity-building levers, economic diversification levers, and could provide a means of reinstating formal jobs in Afghanistan (Group, 2025; World Bank Group, 2024; Gouhari, 2014).

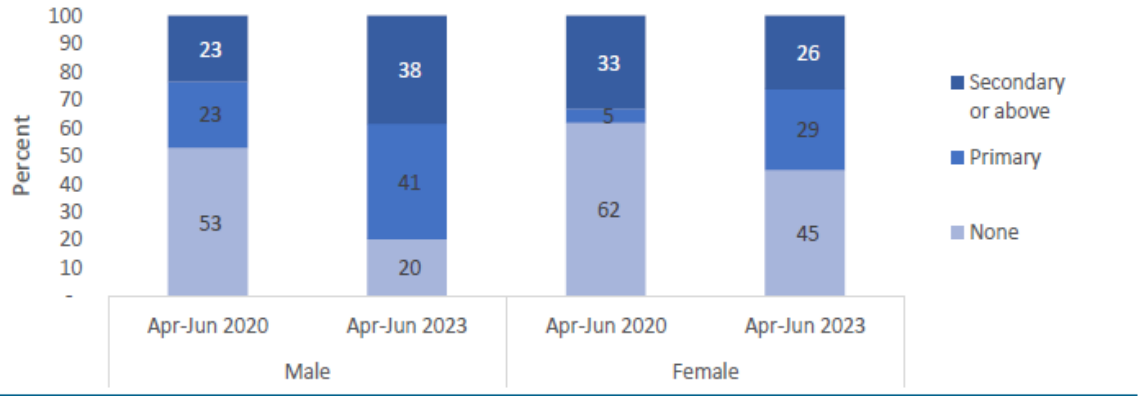
The massive infrastructure projects, including the Qosh Tepa Canal (285 km long), that will be used to re-use about 550,000 hectares of desert lands under farming and the development of major highways (e.g., the Salang corridor) and regional connectivity projects (e.g. the Khaf-Herat railway and TAPI gas pipeline) are central to the facilitation of trade and the economic integration of the region. In addition to facilitating trade, these projects also create large numbers of jobs in construction, transportation, and agriculture, thereby boosting dynamism and reducing unemployment in Afghanistan (Hussaini, 2024; Contemporary Economics, 2024).

Nevertheless, this type of growth, which focuses on infrastructure and extractive sectors, tends to lead to low sustainability and temporary jobs unless it is supplemented by broader private-sector participation and modern services. The high dependence on these industries exposes the economy to changes in commodity prices on the world market, climate changes threatening the agriculture sector, and political instability that makes it challenging to attract stable foreign direct investment in the mining sector. Therefore, in the absence of structural diversification and more robust interpectoral connections, such a growth trajectory will not be translated into sustainable and inclusive economic change (Farahi, 2024).

4.7. Structural Inequalities: The Youth and Gender Employment Crisis

The result of the 2021 institutional shock has been the severe gender division of the labor market in Afghanistan, one of the most notable consequences. The massive deprivation of women in terms of their economic and social involvement in life has resulted in an unequal loss of jobs among women employees. This trend has not only led to a tremendous loss of women's human capital and their role in national production but also significantly compromised the economy's ability to achieve inclusive, sustainable, and profitable productivity (Akbari, 2025; World Bank Group, 2024).

Figure 6: Educational Attainment of Unemployed Youth (Aged 15–29) by Gender in Afghanistan, 2020–2023



Source: World Bank. (2025a). Afghanistan development update: Unlocking youth potential for resilience and economic recovery. The World Bank Group. https://thedocs.worldbank.org/en/doc/71dd45bbb425564ee41e22e1dc2c2f57-0310012025/original/Afghanistan-Development-Update-April-2025-Final.pdf?utm.

Figure 6 demonstrates inconsistent changes in the educational profile of unemployed Afghan youth between 2020 and 2023. Among males, the patterns show a tangible educational boost: the number of people with no education is dropping significantly (53 percent to 20 percent), whereas the proportion with secondary education or more is growing significantly (23 percent to 38 percent). In the case of women, it is a more subtle image. Even though the proportion of women with no schooling was significantly lower (it decreased by half to 45), this did not imply a higher proportion of highly educated women in the unemployed population. Instead, the rate of women with secondary or higher education decreased to 26% from 33%. These statistics show that the educational process for young women has been mostly limited to the primary level, and they are not enjoying the same opportunities for higher education and the avenues to higher education that lead to employment as their male counterparts.

It was also seen that in the years 2021-2023, most women lost their jobs, with 67 percent of their careers at risk, compared to 42 percent for men. That is, women had 1.6 times the chance of being laid off than men, and as a result, approximately 641,028 job opportunities were lost among women. This extreme constriction has effectively barred half of the potential labor force in Afghanistan from the formal economy, with a devastating impact on the country's human capital base and family-level economic capacity (Farahi, 2024; Afghanistan, 2023). Usually, the problem of female unemployment in Afghanistan is significantly more significant than that of men, which is primarily explained by the institutional barriers, the absence of social support, and the inability to receive vocational education. In 2021, young women had an unemployment rate of 21.4%, indicating that many were locked out of the formal labor market (World Bank, 2025).

Gender disparities are also further highlighted by the sectoral distribution of youth employment. Although young men show a more balanced representation across industry (30%) and services (29%), young women remain highly concentrated in subsistence-based sectors. Some 66 percent of women employed in agriculture work in agriculture, versus 41 percent of men (World Bank, 2024). The fact that women are highly concentrated in the agricultural sector and have very little representation in the industry and services (only 17% of farming, 17% of industry, and 17% of services) portrays an extreme structural chasm. The shift to industry and services as the primary drivers of productivity growth has been a significant challenge for women, leaving them in enterprises operating outside formal regulation and with the lowest incomes and productivity (World Bank, 2024)

5. CONCLUSION AND RECOMMENDATIONS

The empirical results show that Afghanistan's structural transformation has taken a backward step since 2021, characterized by the collapse of formal employment and a rapid increase in informality. The economy shrank by nearly 27% immediately after the political shift, resulting in the loss of about 2.6 million jobs. Labor shifted mainly toward subsistence farming, with employment in this sector rising to nearly 78%, indicating a reversal of structural development. The informal sector now makes up around 74% of total GDP, highlighting the dominance of low-productivity, unregulated activities. At the same time, gender exclusion worsened: between 2021 and 2023, women lost nearly two-thirds of their jobs, reducing their participation in the formal economy to very low levels. Youth unemployment and NEET rates remain alarmingly high, pointing to serious structural issues. Although some signs of recovery appear in agriculture, mining, and construction, these sectors lack the productivity connections and institutional support needed for lasting growth. Overall, the findings suggest that Afghanistan's labor market is stuck in a cycle of increasing informality, demographic pressures, and skill loss—conditions that block human

capital development and long-term economic resilience. Sustainable recovery, therefore, requires a coordinated policy approach focused on diversification, gender inclusion, and strengthening institutions.

Building on the findings, this study proposes a set of evidence-based policy directions to reduce labor-market frictions and initiate a sustainable structural transformation pathway. First, gender labor market stabilization and social investment are essential. Policy barriers that restrict women's participation should be removed, and targeted incentives for women's entrepreneurship and equal access to vocational training, especially in small-scale manufacturing and agribusiness, must be prioritized to prevent overconcentration in subsistence agriculture, where 66% of employed young women currently work. Second, revitalizing financial infrastructure for the private sector is crucial. Reforms in the banking system, for example, tackling non-performing loans (NPLs), regaining liquidity, and strengthening regulatory oversight, are necessary to attract both foreign direct investment (FDI) and domestic capital into productive industries and services. Third, promoting quality investment and value chain integration is needed to move beyond short-term infrastructure projects. Economic policy should focus on developing value-added sectors, such as textiles and food processing, with high labor-absorption potential. Multi-year partnerships with organizations like the ILO could ensure employment-centered growth strategies. Finally, enhancing rural labor absorption capacity through large-scale agricultural and infrastructure initiatives such as the Qosh Tepa Canal, which could generate about 200,000 jobs, should form a key pillar of transformation policy. These initiatives must be coupled with targeted training programs that equip rural workers with skills relevant to mechanized agriculture and construction. Together, these strategies can gradually shift Afghanistan's labor market from survival-oriented informality toward productive, inclusive, and resilient economic development.

REFERENCES

Abbott, P., Tarp, F., & Wu, C. (2017). Structural transformation, biased technological change and employment in Vietnam. The European Journal of Development Research, 29(1), 54–72. https://doi.org/10.1057/ejdr.2015.64.

ACAPS. (2024). ACAPS ANALYSIS HUB. https://www.acaps.org/fileadmin/Data_Product/Main_media/20240730_ACAPS_Afghanistan-Mapping_informal_economies_in_informal_settlements.pdf.

Adelaja, A., George, J., Fox, L., Fuglie, K., & Jayne, T. (2021). Shocks, resilience and structural transformation in Sub-Saharan Africa. Sustainability, 13(24), 13620. https://doi.org/10.3390/su132413620.

Adisu Abebaw Degu, & Admassu Tesso Huluka. (2019). Does the declining share of agricultural output in gdp indicate structural transformation? The case of Ethiopia. Journal of Economics and Behavioral Studies, 11(5(J)), 54–68.

Afghanistan National Statistical Authority (2023). National Accounts Data. Retrieved September from http://www.nsia.gov.af/home

Afghan Paper. (2025). Iran's economy depends on Afghan labor. Afghanpaper.com. http://www.afghanpaper.com/nbody.php?id=178261.

Afghanistan, S. (2023). Outlook.
https://www.undp.org/sites/g/files/zskgke326/files/202304/SEO%202023Executive%20Summary_Farsi.pdf.

Akbari, S. (2025, May 3). Afghanistan's Labor Market: Unemployment Status, Employment, and Future Prospects - IRAF. IRAAF - Afghanistan and Iran News. https://iraf.ir/61191/social/%D8%A8%D8%A7%D8%B2%D8%A7%D8%B1-%DA%A9%D8%A7%D8%B1-%D8%A7%D9%81%D8%BA%D8%A7%D9%86%D8%B3%D8%AA%D8%A7%D9%86-%D9%88%D8%B6%D8%B9%DB%8C%D8%AA-%D8%A8%DB%8C%DA%A9%D8%A7%D8%B1%DB%8C%D8%8C-%D8%A7%D8%B4%D8%AA/.

Autor, D., Dorn, D., Hanson, G., & Majlesi, K. (2020). Importing political polarization? The electoral consequences of rising trade exposure. American Economic Review, 110(10), 3139–3183. https://doi.org/10.1257/aer.20170011.

Avdiu, B., Bagavathinathan, K. S., Chaurey, R., & Nayyar, G. (2022). India's Services Sector Growth: The Impact of Services Trade on Non-tradable Services. Policy Research Working Papers. https://doi.org/10.1596/1813-9450-10094.

Basole, A. (2022). Structural transformation and employment generation in India: Past performance and the way forward. The Indian Journal of Labour Economics, 65(2), 295–320. https://doi.org/10.1007/s41027-022-00380-y.

Beylis, G. (2020). Going Viral: COVID-19 and the Accelerated Transformation of Jobs in Latin America and the Caribbean. In Washington, DC: World Bank eBooks. Washington, DC: World Bank. https://doi.org/10.1596/978-1-4648-1448-8.

Bick, A., Fuchs-Schündeln, N., Lagakos, D., & Hitoshi Tsujiyama. (2021). Structural Change in Labor Supply and Cross-Country Differences in Hours Worked. NBER. https://doi.org/10.3386/w29099.

Bonnet, F. (2018). Women and men in the informal economy: a statistical picture. Semantic Scholar. https://www.semanticscholar.org/paper/Women-and-men-in-the-informal-economy%3A-a-picture-Bonnet/df3e85f4faab342a9d35bfd96c2fe9f8c2a957d4.

Boone, C. D. A., & Wilse-Samson, L. (2021). Structural change and internal labor migration: evidence from the Great Depression. The Review of Economics and Statistics, 105(4), 1–54. https://doi.org/10.1162/rest_a_01116.

CEICdata.com. (2024). Afghanistan AF: Unemployment: Modeled ILO Estimate: % of Total Labour Force. Ceicdata.com; CEICdata.com. https://www.ceicdata.com/en/afghanistan/employment-and-unemployment/af-unemployment-modeled-ilo-estimate--of-total-labour-force.

Cevik, S., Gottschalk, J., Hutton, E., Jaramillo, L., Karnane, P., & Sow, M. (2019). Structural transformation and tax efficiency. International Finance, 22(3), 341–379. https://doi.org/10.1111/infi.12346.

Cinar Baymul, & Sen, K. (2019). Kuznets Revisited: What Do We Know about the Relationship between Structural Transformation and Inequality? Asian Development Review. https://www.semanticscholar.org/paper/Kuznets-Revisited%3A-What-Do-We-Know-about-the-and-Baymul-Sen/0fb6a885183f9f27ccadb378a021b52fb1b79dd3.

Contemporary Economics. (2024, September 21). The impact of infrastructure development on Iran-Afghanistan relations. Eghtesademoaser.ir; Contemporary Economics. https://eghtesademoaser.ir/fa/amp/news/2970.

Deudibe, G., Merfeld, J., Ndoutamou, J., & Newhouse, D. (2020). Structural Transformation in Sub-Saharan Africa. World Bank, Washington, DC. https://doi.org/10.1596/33327.

Diao, X., McMillan, M., & Rodrik, D. (2019). The recent growth boom in developing economies: a structural-change perspective. The Palgrave Handbook of Development Economics, 281–334. https://doi.org/10.1007/978-3-030-14000-7_9.

Dinkelman, T., Kumchulesi, G., & Mariotti, M. (2024). Labor Migration, Capital Accumulation, and the Structure of Rural Labor Markets. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4731053.

Donovan, K., & Schoellman, T. (2023). The role of labor market frictions in structural transformation. Oxford Development Studies, 51(4), 1–13. https://doi.org/10.1080/13600818.2023.2276702.

Duernecker, G., & Herrendorf, B. (2021). Structural transformation of occupation employment. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3932029.

Farahi, A. (2024). Assessing Key Trends in The Afghan Economy Three Years into The Taliban Rule A Policy Paper. https://spia.princeton.edu/sites/default/files/2024-11/Assessing%20Key%20Trends%20in%20The%20Afghan%20Economy%20Three%20Years%20into%20The%20Taliban%20Rule%20-%20by%20Aman.pdf.

Foster-McGregor, N., & B. Verspagen. (2016). The role of structural change in the economic development of Asian Economies. Asian Development Review. https://www.semanticscholar.org/paper/The-Role-of-Structural-Change-in-the-Economic-of-Foster-McGregor-Verspagen/735edad3c932b07e107de1d00bc479eeaec38f75.

Fox, L., & Kaul, U. (2018). The Evidence Is In: How Should Youth Employment Programs In Low-Income Countries Be Designed? Policy Research Working Papers. https://doi.org/10.1596/1813-9450-8500.

Garrote Sanchez, D. (2018). Managed Labor Migration in Afghanistan. World Bank, Washington, DC. https://doi.org/10.1596/29276.

Georgescu, M.-A., & Herman, E. (2019). Productive employment for inclusive and sustainable development in European Union countries: a multivariate analysis. Sustainability, 11(6), 1771. https://doi.org/10.3390/su11061771.

Gouhari, S. (2014). Mining in Afghanistan. https://www.boell.de/sites/default/files/assets/boell.de/images/download_de/worldwide/Mining_in_Afghanistan_KorrekturenCL.pdf.

Group, W. B. (2025, April 24). Afghan Economy Shows Signs of Gradual Recovery, But Outlook Remains Uncertain – World Bank. World Bank; World Bank Group. https://www.worldbank.org/en/news/press-release/2025/04/23/afghan-economy-shows-signs-of-gradual-recovery-but-outlook-remains-uncertain-world-bank.

Hasan, R., & R. Molato. (2019). Wages over the course of structural transformation: evidence from India. Asian Development Review. https://www.semanticscholar.org/paper/Wages-Over-the-Course-of-Structural-Transformation%3A-Hasan-Molato/33871954974ef42ecedcf2f90f1cdd1b73bce775.

Hollweg, C. H., Lederman, D., Rojas, D., & Bulmer, E. R. (2014). Sticky Feet: How Labor Market Frictions Shape the Impact of International Trade on Jobs and Wages. In The World Bank eBooks. World Bank. https://doi.org/10.1596/978-1-4648-0263-8.

Hussaini. (2024, November 2). Investing in infrastructure and its impact on Afghanistan's economic development. - Anis; National Newspaper Anis. https://anisdaily.com/?p=46233.

I. Shtunder, & Shkuropadska, D. (2024). Determinants of labor market resilience. Scientia Fructuosa. https://www.semanticscholar.org/paper/Determinants-of-labor-market-resilience-Shtunder-Shkuropadska/287f902a79cdf324a3c4d1cc3eba56a238ec4d9c.

Jung, J. H., & Choi, K.-S. (2006). The labor market structure of knowledge-based industries: A Korean case. Journal of the Asia Pacific Economy, 11(1), 59–78. https://doi.org/10.1080/13547860500347810.

Kamminga, J., & Zaki, A. (2018). Returning to Fragility: Exploring the link between conflict and returnees in Afghanistan. Oxfam. https://doi.org/10.21201/2017.1473.

Kongsamut, P., Rebelo, S., & Xie, D. (2001). Beyond balanced growth. The Review of Economic Studies, 68(4), 869–882. https://doi.org/10.1111/1467-937x.00193.

Lagakos, D., & Shu, M. (2023). The role of micro data in understanding structural transformation. Oxford Development Studies, 51(4), 1–19. https://doi.org/10.1080/13600818.2023.2278601.

Laurente, M. (2022). The effect of structural change on labor productivity growth and employment in the Philippines. International Journal of Academe and Industry Research, 3(3), 1–27. https://doi.org/10.53378/352907.

Li, L., Mo, Y., & Zhou, G. (2022). Platform economy and china's labor market: structural transformation and policy challenges. China Economic Journal, 15(2), 1–14. https://doi.org/10.1080/17538963.2022.2067685.

Liu, L., Wu, C., & Zhu, Y. (2023). Employment effect of structural change in strategic emerging industries. Processes, 11(2), 599. https://doi.org/10.3390/pr11020599.

Loschmann, C., & Marchand, K. (2020). The labor market reintegration of returned refugees in Afghanistan. Small Business Economics, 56(3), 221-235. https://doi.org/10.1007/s11187-019-00315-w.

Lukalo, D., & F. Kiminyei. (2021). Supporting Sustainable Development through Research and Capacity Building Promoting Structural Transformation for High Productivity Jobs in Kenya. Semantic Scholar. https://www.semanticscholar.org/paper/Supporting-Sustainable-Development-through-Research-Lukalo-Kiminyei/4514a6e25b5cab441cbc37ca6b6bc36db8b1fa99.

Mallick, J. (2017). Structural change and productivity growth in India and the People's Republic of China. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3016172.

Martins, P. M. G. (2018). Structural change: Pace, patterns and determinants. Review of Development Economics, 23(1), 1–32. https://doi.org/10.1111/rode.12555.

Mowahed, S. M., Sharif Zada, M. W., & Pooya, A. A. (2025). An empirical study on welfare indicators pre-and post-2021 republic collapse in Afghanistan. International Review of Economics and Financial Issues, 2(1), 1–24. https://doi.org/10.62941/irefi.v2i1.134.

Mpumelelo Nxumalo, & Raju, D. (2020). Structural Transformation and Labor Market Performance in Ghana. In Library Union Catalog of Bavaria, Berlin and Brandenburg (B3Kat Repository). University of Illinois Urbana-Champaign. https://doi.org/10.1596/34849.

Nanga, M., & Widjaja, W. (2024). Structural transformation in the indonesian economy: why does "financial development" matter? Ekuilibrium: Jurnal Ilmiah Bidang Ilmu Ekonomi, 19(2), 213–222. https://doi.org/10.24269/ekuilibrium.v19i2.2024.pp213-222.

Nasution, A. R., Wulandari, M., Hasugian, F. M. S., Dachi, I., Hasibuan, A. P., Maulana, J., & Muntaza, K. R. (2024). Analysis of the effect of structural transformation of the economy. International Journal of Education, Social Studies, and Management (IJESSM), 4(2), 368–376. https://doi.org/10.52121/ijessm.v4i2.256.

Nissanke, M. (2019). Exploring macroeconomic frameworks conducive to structural transformation of sub-Saharan African economies. Structural Change and Economic Dynamics, 48, 103–116. https://doi.org/10.1016/j.strueco.2018.07.005.

Novák, Z. (2020). Structural change in central and southeastern Europe: Does technological efficiency harm the labour market? Sustainability, 12(11), 4704. https://doi.org/10.3390/su12114704.

OECD. (2025). Structural Transformation in the OECD. OECD. https://doi.org/10.1787/5jlr068802f7-en.

Palmtag, T. (2023). The unequal effect of economic development on perceived labor market risks and welfare. Political Science Research and Methods, 1–18. https://doi.org/10.1017/psrm.2023.47.

Pasieka, S., Bil, M., Dmytrenko, M., & Krasnomovets, V. (2020). Global transformation of employment as a factor of country's labor market development. Research in World Economy, 11(4), 62. https://doi.org/10.5430/rwe.v11n4p62.

Pooya, A. A. (2025a). Afghanistan in the shadow of tensions: Analyzing the economic consequences of the Iran–Israel conflict on domestic prices. International Review of Economics and Financial Issues., 2(2), 97–120. https://doi.org/10.62941/irefi.v2i2.153

Pooya, A. A. (2025b). The impact of global geopolitical risk on Afghanistan's economic condition: Evidence from wavelet quantile regression. Journal of Economics and Business Letters, 5(5), 24–36. https://doi.org/10.55942/jebl.v5i5.566.

Rahmat, N. R. (2025). Decoding Afghan emigration: informing EU policy amid the migration crisis and brain drain from Afghanistan. The EURASEANS: Journal on Global Socio-Economic Dynamics, 1(1(44)), 548–577. https://doi.org/10.35678/2539-5645.1(44).2024.548-577.

Ranjan, P., Hasan, R., & Eleazar, E. J. (2018). Labor market regulations in the context of structural transformation. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3188619.

Ripoll, S., Andersson, J., Badstue, L., Büttner, M., Chamberlin, J., Erenstein, O., & Sumberg, J. (2017). Rural transformation, cereals and youth in Africa: What role for international agricultural research? Outlook on Agriculture, 46(3), 168–177. https://doi.org/10.1177/0030727017724669.

Sahibzada , H., Muzaffari , S. M., Haque , T. A., & Waheed, M. (2021). Setting course to recovery. https://thedocs.worldbank.org/en/doc/e406b6f24c2b7fdeb93b56c3116ed8f1-0310012021/original/Afghanistan-Development-Update-FINAL.pdf.

Salimova, G. (2021). Structural and dynamic changes in economy and labor productivity. Montenegrin Journal of Economics, 17(4), 111–121. https://doi.org/10.14254/1800-5845/2021.17-4.10

Sen, K. (2019). Structural transformation around the world: patterns and drivers. Asian Development Review, 36(2), 1–31. https://doi.org/10.1162/adev_a_00130

Sevinc, O. (2019). Shades of automation in the labor market. Procedia Computer Science, 158(158), 485–489. https://doi.org/10.1016/j.procs.2019.09.079.

Ssozi, & Bbaale. (2019). The effects of the catch-up mechanism on the structural transformation of Sub-Saharan Africa. Economies, 7(4), 111. https://doi.org/10.3390/economies7040111.

Steenbergen, V., Hebous, S., Wihardja, M. M., & Abror Tegar Pradana. (2020). The Effect of FDI on Indonesia's Jobs, Wages, and Structural Transformation. In World Bank, Washington, DC eBooks. World Bank . https://doi.org/10.1596/36188.

Van den Broeck, G., Kilic, T., & Pieters, J. (2023). Structural transformation and the gender pay gap in Sub-Saharan Africa. PLOS ONE, 18(4), e0278188. https://doi.org/10.1371/journal.pone.0278188.

Venkat, & Kirshna Kumar Balaraman. (2025). Skill-Based Labor Market Polarization in the Age of AI: A Comparative Analysis of India and the United States. Semantic Scholar. https://www.semanticscholar.org/paper/Skill-Based-Labor-Market-Polarization-in-the-Age-of-Ganuthula-Balaraman/3848a577f2aeabe796985c86d5759f83c66f76cf.

World Bank. (2018). Managed Labor Migration in Afghanistan: Exploring Employment and Growth Opportunities for Afghanistan. Openknowledge.worldbank.org. https://doi.org/10.1596/29275.

World Bank. (2024a). Afghanistan Development Update: Navigating Challenges – Confronting Economic Recession and Deflation. The World Bank. https://thedocs.worldbank.org/en/doc/18a1ccff0457effb0a456c0d4af7cce2-0310012024/original/Afghanistan-Development-Update-April-2024.pdf.

World Bank. (2024b). Managed Labor Migration in Afghanistan: Exploring Employment and Growth Opportunities for Afghanistan. Openknowledge.worldbank.org. https://doi.org/10.1596/29275.

World Bank. (2025a). Afghanistan development update: Unlocking youth potential for resilience and economic recovery. The World Bank Group. https://thedocs.worldbank.org/en/doc/71dd45bbb425564ee41e22e1dc2c2f57-0310012025/original/Afghanistan-Development-Update-April-2025-Final.pdf?utm.

World Bank. (2025b). Economy | Afghanistan | World Bank Human Capital. World Bank Human Capital. https://humancapital.worldbank.org/en/economy/AFG.

World Bank Group. (2024, April 18). *The* World *Bank in Afghanistan*. World Bank. https://www.worldbank.org/en/country/afghanistan/overview.