



# **HUMAN CAPITAL DEVELOPMENT IN IRAQ: ANALYZING REALITY AND CHALLENGES IN THE CONTEXT OF ECONOMIC TRANSFORMATIONS**

**Assist. Prof. Dr. Shaymaa Rasheed Mohaisen**

University of Kerbala / College of Administration and Economics

[Shayma.r@uokerbala.edu.iq](mailto:Shayma.r@uokerbala.edu.iq)

<b>Article history:</b>	<b>Abstract:</b>
<b>Received:</b> 30 <sup>th</sup> May 2025	Human capital is a pivotal element in promoting sustainable economic and social development, given its vital role in raising productivity rates, stimulating innovation, and achieving sustainable growth. This research aims to provide a comprehensive analysis of the reality of human capital development in Iraq, focusing on current challenges in light of rapid economic transformations, whether these transformations result from changes in economic policies or are influenced by successive security and financial crises.
<b>Accepted:</b> 28 <sup>th</sup> June 2025	The research relied on a descriptive analytical approach, reinforced by analyzing data from reliable sources, in addition to the results of a questionnaire directed at a sample of workers in the educational and economic sectors. The research examined the main indicators of human capital: education, health, and skills development, while analyzing the impact of economic variables on these indicators for the period (2010-2024).

**Keywords:** human capital, economic transformations, labor market, sustainable development, economic reform.

## **INTRODUCTION**

Human capital represents a fundamental pillar of comprehensive and sustainable development. Contemporary economic development is no longer limited to the availability of natural resources or physical capital, but increasingly relies on the quality of human resources, their level of qualifications, their productive efficiency, and their ability to adapt to successive technological and economic changes. In this context, Iraq faces a complex set of challenges in its quest to develop its human capital, particularly in light of the economic transformations it has witnessed since 2003, the structural changes associated with economic liberalization policies, the decline of the government's role, and the overreliance on the oil sector as the primary source of national income. The most prominent manifestations of the challenge in Iraq are the weak infrastructure for education and healthcare, high unemployment rates, especially among young people, the increasing phenomena of migration and internal displacement, and limited financial allocations for training and capacity-building programs. These combined factors have weakened the effectiveness of human capital and limited the Iraqi economy's ability to keep pace with the demands of the digital age and the transition to a knowledge economy. Furthermore, the absence of integrated, stable development strategies, and weak coordination among relevant institutions have constituted a major obstacle to building human capital capable of innovation and competitiveness.

Assessing the reality of human capital development in Iraq requires analyzing a set of key indicators, most notably: education, health, unemployment, skills, and the extent of compatibility between educational system outcomes and labor market needs. It also requires a thorough understanding of the institutional and economic challenges that hinder its development, such as corruption, mismanagement, and the absence of a long-term strategic vision. Based on the above, this research seeks to provide a comprehensive analytical vision of the reality of human capital in Iraq, and explore the main challenges that hinder its development, while proposing effective policies and procedures to enhance its efficiency and employ it in the service of national development, in line with the 2030 Sustainable Development Goals, specifically Goal 4 (Quality Education) and Goal 8 (Decent Work and Economic Growth).

## **Research Problem:**

The research problem revolves around the following main question: What is the reality of human capital development in Iraq? What are the most important challenges facing its development in light of current economic transformations?



## **Research Objectives**

The research seeks to achieve the following objectives:

1. Evaluate the status of human capital in Iraq by analyzing its key indicators and the most prominent challenges and obstacles facing human capital development.
2. Study the impact of contemporary economic transformations on the path of human capital development.

## **Research importance:**

The importance of the research lies in the following aspects:

1. It highlights a strategic axis linking the sectors of the economy, education, skills, and sustainable development.
2. It contributes to achieving the Sustainable Development Goals (2030), particularly Goal 4 (Quality Education) and Goal 8 (Decent Work and Economic Growth).

## **Research Hypotheses:**

The research is based on the following hypotheses:

1. There is a statistically significant relationship between the level of education and training and the efficiency of human capital in Iraq.
2. Economic transformations (such as economic reform policies and reductions in public spending) negatively affect human capital development.

## **Research Methodology:**

The research adopts the following methodology:

- Methodology used: Descriptive analytical approach supported by specific quantitative analyses.

## **Data collection tools:**

- A questionnaire directed at workers in the educational and economic sectors.
- Analysis of data from international and local reports (Human Development Reports, World Bank data, statistics from the Ministries of Planning and Higher Education).

**Research community:** Academics, employees in ministries involved in economic development, educational specialists, graduate students.

**Analysis tool:** Statistical analysis using SPSS and Excel.

## **Research Limits:**

- Spatial Limits: Iraq.
- Temporal Limits: 2010-2024.

## **Literature Review:**

Many Arab and foreign studies and research have addressed the topic of human capital development in various contexts, including the impact of economic transformations and public policies on human resource efficiency. The following is an analytical review of the most prominent studies relevant to the research topic:

### **First: Local and Arab Studies**

1. Al-Azzawi's study (2020) entitled "Challenges of Human Capital Development in the Iraqi Rentier Economy," which highlighted the impact of excessive reliance on the oil sector on the neglect of other productive sectors, especially education and vocational training. The study concluded that the lack of economic diversification represents one of the structural factors hindering human capital development in Iraq.

2. Al-Jumaili's (2019) study, titled "Higher Education Reform and Human Capital Development in Iraq," published in the Iraqi Journal of Economic Sciences, demonstrated the impact of weak funding and unstable educational policies on the low quality of graduates. It also presented practical proposals to enhance the link between education and the labor market through specialized training programs and effective partnerships with the private sector.

### **Second: International Studies and Reports**

1. The World Bank study (World Bank, 2022) entitled "Iraq Human Capital Index Update" revealed that Iraq has low levels in the human capital index compared to other countries in the region. This is due to the declining quality of education and healthcare, which negatively affects the future productivity of emerging generations. The study emphasized the need to adopt comprehensive structural reforms in the education and health sectors.

2. The United Nations Development Program (UNDP, 2023) report entitled "Human Development in Iraq" focused on the multiple challenges facing human capital in light of the overlapping crises (economic, security, and health). It noted weak institutional coordination and declining public investment in skills and competencies development, leading to a wide gap between educational outcomes and labor market needs. 3. The Organization for Economic Co-operation and Development (OECD, 2023) study, "Human Capital Development for Inclusive Growth," emphasized that developing human capital



requires sustained investments in education and training, and linking skills to labor market needs through strategic partnerships between the public and private sectors. It also emphasized the importance of continuous education and digital transformation as key factors for enhancing human capacity in developing countries.

4. The World Economic Forum (WEF, 2023) "Future of Jobs Report," which addressed the impact of technological and economic transformations on the labor market, emphasizing that investing in retraining and upskilling has become a strategic necessity, not a tactical option. It also indicated that countries that fail to keep pace with these transformations would suffer from a productivity gap and slow growth in human capital.

## **Chapter One: The Theoretical Framework of Human Capital**

Human capital constitutes one of the most important pillars of economic development in the twenty-first century. With the shift toward knowledge-based economies, investment in human resources has become a crucial factor in determining countries' competitiveness (World Bank, 2018). This chapter presents the theoretical framework of human capital through three main axes: basic concepts, measurement indicators, and related economic theories.

### **1.1 Basic Concepts of Human Capital**

#### **1.1.1 Definition of Human Capital**

Schultz (1961) defined human capital as "the sum total of knowledge, skills, and health capabilities acquired by individuals that increase their economic productivity." Becker (1964) agrees with this definition, adding that investment in human capital includes education, training, and health care (Becker, 1964). The literature indicates that investment in education, training, and health not only increases individual productivity but also constitutes a key factor in comprehensive and sustainable economic growth (OECD, 2021).

1.1.2 Components of Human Capital

Human capital components can be classified into three main categories:

#### **1. The Educational Component**

- Basic Indicators: Figure 2: The analytical framework prepared by the researcher
  - Years of Schooling (Academic Attainment)
  - Quality of Education (Learning Outcomes)
- Economic Importance:
  - Increases productivity by 10-15% for each additional year of education
  - Impacts Innovation Capacity (Hanushek & Woessmann, 2008)

#### **2. The Health Component**

- Key Elements: General Health Status      Nutrition Indicators      Life Expectancy
- Development Impact:
  - A 1% improvement in health increases economic growth by 0.3-0.5%
  - Reduces the cost of absenteeism (Bloom et al., 2004)

#### **3. The Skills Component**

- Types of Skills:
  - Technical (digital skills - crafts)
  - Creative (problem solving - innovation)
  - Social (leadership - teamwork)
- Measurement Standards:
  - Competency Tests such as PIAAC
  - Matching Skills to Labor Market Needs (OECD, 2019)

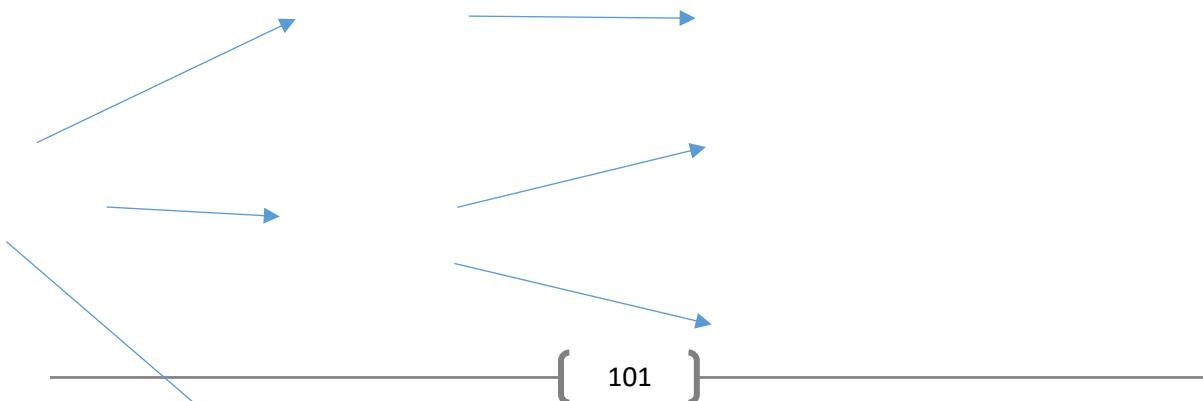


Figure 1: The analytical framework prepared by the researcher

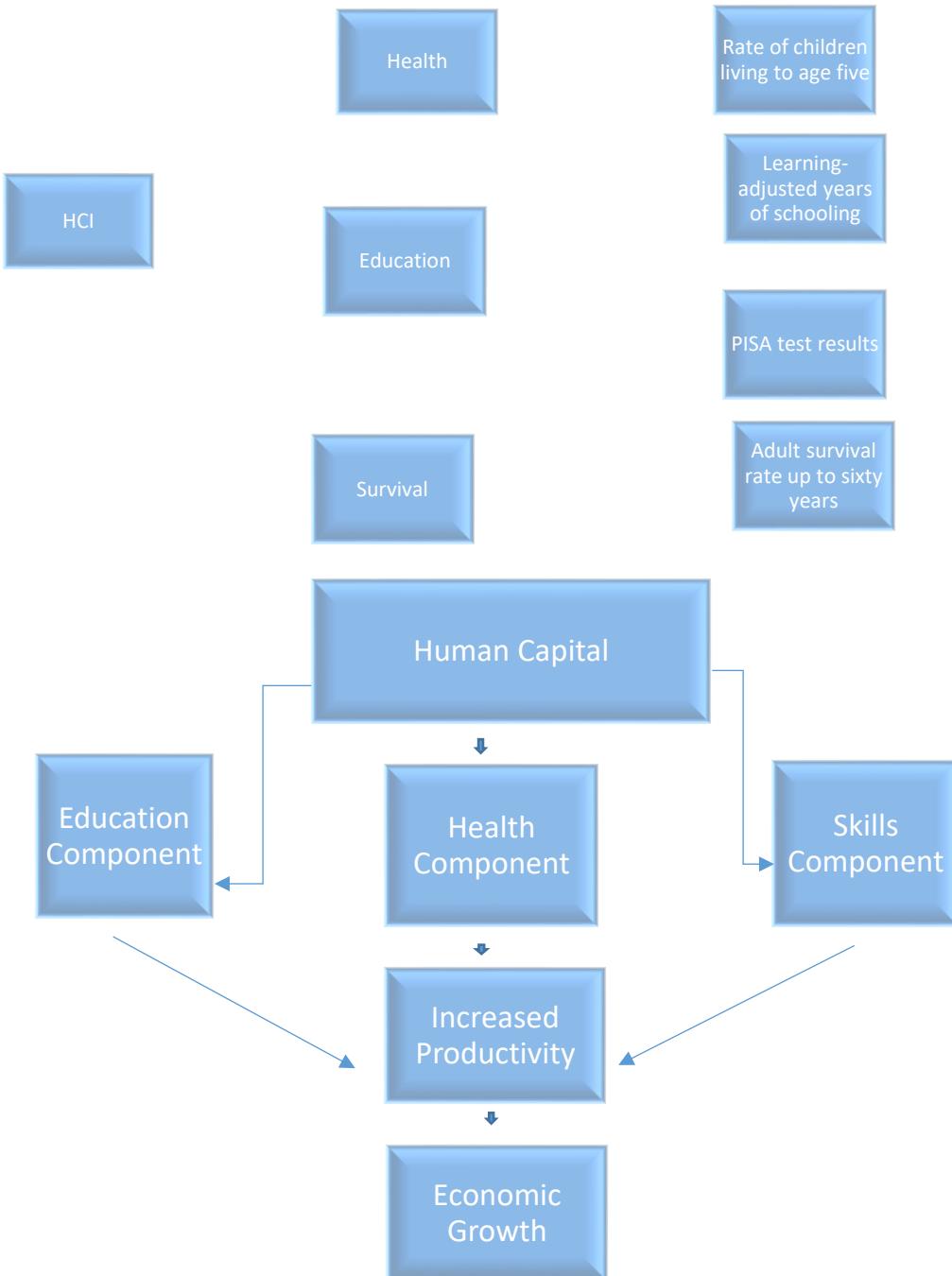


Figure 2: The complementary relationships between the components Prepared by the researcher

### 1.2 Indicators Measuring Human Capital

#### 1.2.1 Human Capital Index (HCI)

The World Bank developed this index to measure an individual's expected productivity by age 18, based on three main dimensions:

- Survival rate (health)
- Quality of education (standardized learning tests)

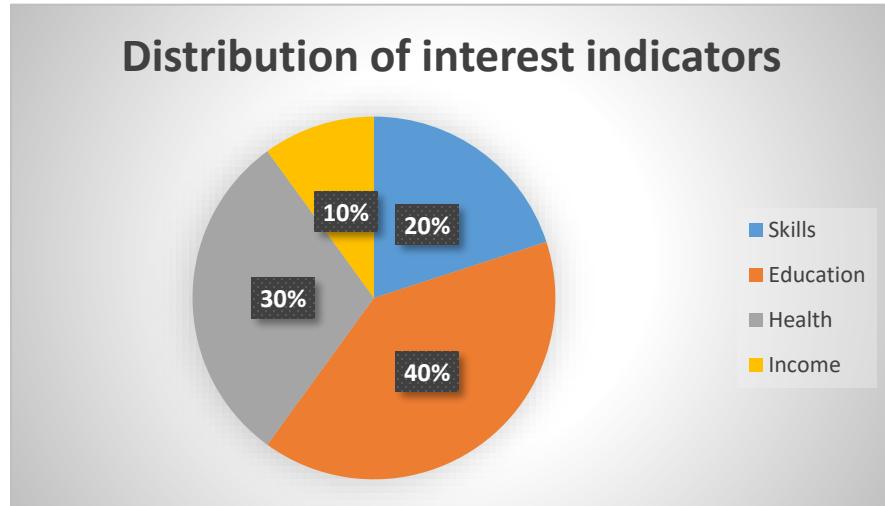


- Learning-adjusted years of schooling (World Bank, 2020)

### 1.2.2 Other Indicators

There are several other indicators for measuring human capital, including:

- Human Development Index (HDI) – United Nations Development Programmed.
- World Skills Index.
- Global Human Capital Index – World Economic Forum (2017).



**Figure 3: Comparison between indicators  
Prepared by the researcher**

### HCI Characteristics:

- Measures expected productivity at age 18
- Scale from 0 to 1 (1 = maximum)
- Based on three basic components (World Bank, 2020)

### 2.1 Complementary Indicators

Key Components	developer	Index
• Income • Education • Health	UNDP	Human Development Index (HDI)
• Technical Skills • Cognitive Skills	WSI	Global Skills Index
• Education • Employment • Development Environment	WEF	Global Human Capital Index

Source: Prepared by the researcher based on (World Bank, 2020)

### Chapter Two: Economic Theories of Human Capital

Human capital represents one of the cornerstones of analyzing economic growth and sustainable development in the modern economy. Economic theories of human capital have evolved over the decades, from classical to contemporary, reflecting the growing role of investment in human capital as a pivotal tool for enhancing productivity and innovation.

#### 2.1 The Classical Theory of Human Capital

The classical theory of human capital, which emerged in the 1960s, is one of the first systematic efforts to explain the relationship between education and economic growth. It was founded by Schultz (1961) and Becker (1964), who proposed that education, training, and healthcare are not merely social expenditures, but rather investments that enhance individual productivity and thus support long-term economic growth. This theory asserts that the economic returns from education often exceed the returns from material investments, and that the difference in labor productivity between individuals and



countries is largely due to differences in education and skill levels. This theory has contributed to the adoption of development policies focused on education and vocational training, especially in developing countries (Becker, 1993).

## 2.2 Human Capital Theory in the New Growth Economics

This theory emerged in the 1990s through the work of Romer (1990) and Lucas (1988), within the framework of what is known as "endogenous growth theory." This theory is based on the premise that human capital not only contributes to increased productivity, but is also an intrinsic driver of sustainable economic growth through its pivotal role in promoting innovation and technological progress.

Lucas points out that the accumulation of knowledge and skills produces increasing returns over time, known as "externalities," making education impactful not only for the individual but for society as a whole. Many studies have found that countries that invest more in education and scientific research achieve higher and more sustainable growth rates (Barro & Sala-i-Martin, 2004).

## 2.3 Modern Institutional Theory

Institutional theory reflects an evolution in the understanding of human capital, no longer limited to individual skills and knowledge, but rather encompasses the institutional contexts and educational and health policies that enhance the efficiency of a state's investment in human capital. This theory emphasizes that improving governance, the quality of educational institutions, and the equitable distribution of health and education services are essential elements for maximizing the benefit of human capital (Acemoglu & Robinson, 2012).

The World Bank and the United Nations have recently adopted this approach, particularly through the development of the Human Capital Index (HCI), which links education and health outcomes to future individual productivity (World Bank, 2020).

## 2.4 The Multidimensional Approach to Human Capital

With the complexity of modern economies, more comprehensive approaches have emerged that integrate formal education, life skills, and mental and physical health, and address human capital as an interconnected system. According to the OECD (2021), technical and digital skills alone are no longer sufficient, but rather the development of social skills (soft skills) has become a crucial factor for integration into globalized and rapidly changing labor markets.



Figure 4: Integration between theories Prepared by the researcher.

## 2.2 The Importance of Human Capital in Sustainable Development

The importance of human capital is clearly evident in the context of the 2030 Agenda for Sustainable Development, as human capital development is closely linked to the 17 global Sustainable Development Goals (SDGs). An analytical study conducted by the World Bank (2021) indicated that investment in human capital directly impacts the achievement of 14 SDGs and indirectly impacts the remaining three.

The relationship between human capital development and sustainable development is evident in the systematic interconnectedness between the components of human capital (education, health, skills) and the areas of sustainable development (economic growth, social justice, environmental sustainability). On the one hand, sustainable development constitutes the comprehensive framework that guides human capital investments, while on the other hand; human capital represents the catalyst that drives sustainable development (Sachs et al., 2022). 2.3 The Multiple Dimensions of the Role of Human Capital in Achieving Sustainable Development

### 2.3.1 The Economic Dimension: A Driver of Sustainable Growth

Human capital is a key driver of sustainable economic growth through several mechanisms, including:

- Enhancing productivity and innovation: Econometric studies indicate that human capital contributes 30%–50% of economic growth in developed countries (OECD, 2023). Economic analyses show that increasing the level of education by one year increases labor productivity by 10%–15% (Hanushek & Woessmann, 2022).
- Stimulating structural transformation: Human capital contributes to accelerating the structural transformation of economies from traditional to knowledge-based sectors, enhancing the sustainability of economic growth. A study conducted by the International Labor Organization (2022) showed that countries with high levels of human capital achieve faster rates of transition to sectors with high added value and low environmental impact.
- Reducing economic volatility: Human capital accumulation contributes to reducing the severity of economic fluctuations and enhancing resilience to shocks. A study by the International Monetary Fund (2021) indicated that countries with higher



levels of human capital were more resilient in dealing with the repercussions of the COVID-19 pandemic and recorded faster economic recovery rates.

### **2.3.2 The Social Dimension: Achieving Justice and Inclusion**

Human capital plays a pivotal role in achieving social justice and inclusion through:

1. Reducing social disparities: World Bank studies (2023) indicate that investing in education and health contributes to reducing income and wealth gaps by up to 40% over the long term, by expanding the opportunity base and improving social mobility.
2. Promoting gender equality: Developing human capital plays a critical role in empowering women and promoting gender equality. According to a World Economic Forum report (2023), increasing girls' years of education is associated with an 18% reduction in early marriage rates and a 12% improvement in women's economic participation.
3. Promoting social cohesion: Investing in human capital contributes to strengthening the social fabric and enhancing societal cohesion by developing social and cultural skills. A study conducted by UNESCO (2021) showed that countries that invest more in education and cultural development record lower levels of social conflict and higher rates of civic engagement.

### **Environmental Dimension: Supporting Environmental Sustainability**

**Human capital contributes to promoting environmental sustainability through:**

1. Enhancing environmental awareness and sustainable behaviors: Studies indicate a direct relationship between education levels and environmental awareness, as individuals with higher levels of education tend to adopt more sustainable and environmentally friendly behaviors (UNDP, 2022).
2. Supporting environmental innovations: Human capital contributes to the development of environmentally friendly technologies and solutions. A study conducted by Harvard University (2021) indicates that 65% of environmental innovations are directly linked to levels of human capital in the fields of science, technology, engineering, and mathematics.
3. Improving natural resource management: Developing human capital is linked to improving the efficiency of natural resource management and reducing environmental degradation. A study conducted by the Food and Agriculture Organization (2022) indicated that societies with higher levels of education adopt more sustainable patterns in the management of shared natural resources such as forests and water.

## **Chapter Three: The Iraqi Economic Reality and the Transformations Affecting Human Development**

Human development in Iraq is one of the major challenges facing decision-makers, given its close connection to the country's economic reality. Over the past decades, Iraq has witnessed multiple economic transformations that have directly and indirectly impacted human development indicators in terms of health, education, income, and equality of opportunity.

### **3.1 Characteristics of the Iraqi Economic Reality**

The Iraqi economy is heavily dependent on oil revenues, with oil accounting for more than 90% of general budget revenues and over 60% of the gross domestic product (GDP), according to World Bank reports (World Bank, 2022). This reliance has resulted in the marginalization of productive sectors such as agriculture and industry, contributing to weak economic diversification and the economy's vulnerability to external shocks, such as fluctuations in oil prices. On the other hand, the country suffers from weak economic and institutional infrastructure, as well as high levels of administrative and financial corruption, which have contributed to the squandering of public resources. This is confirmed by Transparency International (2023), which ranked Iraq among the countries with the highest corruption rates.

### **3.2 Economic Transformations Impacting Human Development Since 2003, Iraq has witnessed multiple transformations, the most notable of which are:**

- Partial economic openness: Despite the commercial and financial openness after 2003, the absence of economic planning has made Iraq a consumer market for imported goods rather than supporting local production (Alnasrawi, 2010).
- Declining spending on social services: Due to political, security, and economic crises, Iraq has witnessed a decline in spending on health and education, which has been reflected in declining human development indicators (UNDP, 2021).
- High unemployment and poverty rates: Statistics from the Central Statistical Organization indicate that the poverty rate in Iraq has exceeded 25% in some governorates following the COVID-19 pandemic and the decline in oil prices (CSO, 2022). Youth unemployment exceeds 30%, threatening the erosion of human capital.
- Deterioration of basic services, such as energy, water, and transportation, due to the lack of quality investments in these sectors, has contributed to a decline in the quality of life and an increase in internal and external migration rates.

### **3.3 The Relationship between Economic Reality and Human Development**

It can be argued that the imbalances of the Iraqi economy, its overreliance on oil, and the weak development of productive sectors have direct negative impacts on human development. The fewer job opportunities and the lower levels of education



and health, the less creative and productive Iraqis become. This contradicts the principles of human development, which focus on "expanding human choices" (Sen, 1999).

The United Nations Human Development Reports also indicate that Iraq's ranking on the Human Development Index has declined ranking 123rd globally in 2021, reflecting the fragility of the progress achieved and the lack of sustainable development (UNDP HDR, 2021).

### **3.4 Analyzing the Reality of Human Capital in Iraq**

This research aims to provide a systematic, scientific analysis of the reality of human capital in Iraq by examining quantitative and qualitative indicators of education and training, taking into account the historical, economic, and social context in which these indicators developed. The research also seeks to identify the main challenges facing human capital development in Iraq and evaluate the effectiveness of policies and programs adopted to develop the education and training system.

#### **3.4.1 Analysis of General Education and Training Indicators**

##### **3.4.1.1 Education Enrollment Rates**

Education enrollment rates are a key indicator for measuring the availability and accessibility of educational opportunities. Available data show significant variations in enrollment rates across different educational levels in Iraq:

- Primary education: Net enrollment rates in primary education have improved significantly over the past decade, reaching approximately 93% in 2023, compared to 86% in 2010. However, gaps in enrollment rates remain between urban and rural areas, and between males and females in some governorates.

Intermediate and secondary education: Enrollment rates decline sharply at the intermediate and secondary levels, not exceeding 60% in intermediate education and 45% in secondary education. This decline is attributed to several factors, including school dropout rates, household economic conditions, and the unsuitability of the school environment in some areas.

- Geographic Distribution: Data show a clear disparity in enrollment rates among Iraqi governorates. Baghdad, Erbil, and Sulaymaniyah have the highest enrollment rates, while Anbar, Nineveh, and Salah al-Din governorates suffer from a relative decline in these rates, especially after periods of armed conflict.

##### **3.4.1.2 Quality and Outcomes of Education**

The quality of education represents a major challenge in the Iraqi education system, and available indicators indicate a gap between required standards and the educational reality:

- Percentage of Qualified Teachers: Data indicate that the percentage of teachers with appropriate educational qualifications does not exceed 70% in primary education and 65% in secondary education, which negatively impacts the quality of education.

- Educational Infrastructure: Iraqi schools suffer from infrastructure challenges. 40% of schools need rehabilitation or reconstruction, and 25% of schools operate double or triple shifts, reducing actual learning hours for students.

Curricula: Despite efforts to modernize educational curricula, they still suffer from a focus on memorization and rote learning at the expense of critical and creative thinking skills and the practical application of knowledge.

##### **3.4.1.3 Education Spending and Efficiency Indicators**

Education spending is an important indicator for measuring political commitment to human capital development:

Education spending as a percentage of GDP: This percentage in Iraq has ranged between 3.5-4% in recent years, which is lower than the global average (4.5%) and the UNESCO recommendation (6%).

Spending Distribution: Government spending is concentrated on salaries and wages (approximately 80% of the education budget), limiting the resources available for investment in infrastructure, equipment, curriculum development, and training.

Spending Efficiency: Indicators indicate a decline in the efficiency of education spending, as an increase in financial resources does not necessarily translate into improved educational outcomes. This calls for a review of resource allocation mechanisms and management methods.

#### **3.4.2.1 Analysis of Higher Education Indicators**

##### **3.4.1.1 Access to Higher Education**

The higher education sector in Iraq has witnessed significant quantitative expansion over the past two decades:

- Higher education enrollment rates: The gross enrollment rate in higher education reached approximately 18% of the corresponding age group (18-23 years) in 2023, which is lower than the regional average in the Middle East (approximately 30%).



- Distribution by discipline: Students are concentrated in the humanities and social sciences (approximately 65%), compared to a relative decline in scientific, technical, and engineering disciplines (approximately 35%), creating a gap between higher education outcomes and labor market needs.
- Equity in Access: Data show disparities in access to higher education based on students' socioeconomic and geographic backgrounds, with students from higher-income families and urban areas having greater access to higher education.

### **3.4.2 Quality of Higher Education and Scientific Research**

The higher education system in Iraq faces qualitative challenges despite quantitative expansion:

- Global university rankings: Iraqi universities remain lagging behind in global rankings, with no Iraqi university ranked among the top 500 universities worldwide according to the Shanghai Ranking or the QS World University Rankings 2024.
- Research production: Despite the increase in the number of scientific publications by Iraqi researchers in recent years, the scientific citation index remains low compared to regional and global averages.
- Spending on research and development: Spending on scientific research and development does not exceed 0.2% of GDP, a small percentage compared to the global average (approximately 2%).

Linking higher education to the productive sector: The higher education system suffers from weak links with the productive and industrial sectors, limiting its ability to contribute to solving economic and development problem

### **3.4.3 Higher Education Governance**

The governance of the higher education sector is an important aspect in analyzing the effectiveness of the higher education system:

- Institutional Autonomy: Iraqi universities enjoy a limited degree of institutional and academic autonomy, particularly in the areas of funding, recruitment, and academic program design.
- Quality Assurance: Despite the establishment of national bodies for quality assurance and academic accreditation, the implementation of quality standards is still in its early stages, and many academic programs lack international accreditation.
- Participation in Decision-Making: Stakeholder participation (students, the private sector, and civil society) in decision-making related to higher education is limited, affecting the relevance of policies and programs to societal needs.

## **3.5 Analysis of Vocational and Technical Training Indicators**

### **3.5.1 Structure of the Vocational and Technical Training System**

The vocational and technical training system in Iraq consists of:

- Technical Institutes: These include institutes affiliated with the Technical Education Authority, offering two- to three-year technical diploma programs.
- Vocational Training Centers: These include centers affiliated with the Ministry of Labor and Social Affairs, offering short- and medium-term training programs in various vocational fields.
- Sectoral training centers: These are specialized centers affiliated with various ministries and agencies, such as the oil, electricity, and industry sectors, and provide specialized training for their employees.

### **3.5.2 Indicators of Enrollment in Vocational and Technical Training**

- The percentage of enrollment in vocational and technical education and training does not exceed 15% of the total number of enrollees in post-secondary education, which is low compared to the averages in countries with diversified economies (30-50%).
- Distribution by specialization: Enrollment is concentrated in traditional specializations such as mechanics, electricity, and construction, with limited programs in emerging fields such as information technology, renewable energy, and digital manufacturing.
- Societal Perspective: Societal perceptions of vocational and technical education and training remain low compared to academic education, negatively impacting enrollment rates and the recruitment of outstanding students.

### **3.5.3 Quality and Relevance of Vocational and Technical Training Programs**

- Alignment of programs with labor market needs: Studies indicate a gap between the skills acquired by graduates of the vocational and technical training system and the needs of the labor market, which is reflected in high unemployment rates among graduates (up to 30%).
- Equipment and Facilities: Many vocational and technical training institutions suffer from outdated equipment and facilities that are not keeping pace with technological developments in various professional fields.
- Trainers: Data indicate that a large percentage of trainers (approximately 40%) lack recent practical experience in their fields of specialization, which affects the quality of training and its relevance to labor market requirements.

## **3.6 Analysis of National Policies and Strategies for Human Capital Development**



### **3.6.1 National Development Strategy and Sustainable Development Goals**

Iraq's National Development Strategy (2018-2022) and Iraq Vision 2030 include multiple axes for human capital development. These axes intersect with the Sustainable Development Goals, particularly Goal 4 related to quality education. However, interim assessments indicate challenges in implementing these strategies, including:

- Limited coordination among stakeholders involved in human capital development
- Insufficient financial resources allocated to program and project implementation
- Weak monitoring, evaluation, and impact measurement mechanisms

### **3.6.2 Education and Training Reforms**

Iraq has witnessed several educational and training reform attempts in recent years, most notably:

- Curriculum Development Project: aims to modernize curricula and incorporate 21st-century skills.
- Model Schools Project: aims to establish high-standard schools to serve as models for educational development.
- Research Universities Project: aims to develop the research capabilities of several Iraqi universities.

However, these reforms have faced challenges in implementation and sustainability, limiting their impact on developing the education and training system.

### **3.6.3 Partnerships between the public, private, and civil society sectors**

Partnerships between various stakeholders involved in human capital development are an important entry point for developing the education and training system. Iraq has witnessed several initiatives in this area, including:

- Skills Development Fund: aims to finance vocational training programs in partnership between the government and the private sector.
- Joint training projects: between educational institutions and companies in certain sectors, such as oil and telecommunications.

However, these partnerships remain limited in scope and impact, and require the development of supporting legal and institutional frameworks.

## **3.7 Analysis of Health and Well-being Indicators**

Analysis of health and well-being indicators in Iraq is a topic of great importance given the multiple challenges the country has faced over the past decades. I will provide a comprehensive analysis of the health and well-being situation in Iraq based on data available until October 2024.

- Overview of the Iraqi Health System

The health system in Iraq faces significant challenges as a result of years of conflict, economic sanctions, and political challenges. Despite efforts to rebuild the health infrastructure, significant gaps remain in the provision of health services to the population.

- Key Demographic and Health Indicators
- Life Expectancy

Life expectancy in Iraq has gradually improved, reaching approximately 70.5 years according to the latest available data. However, this rate remains below the regional average for the Middle East.

- Child and Maternal Mortality Rates

Under-five mortality rates have gradually declined, but they remain high compared to neighboring countries, at approximately 27 deaths per 1,000 live births. The maternal mortality rate is approximately 79 deaths per 100,000 live births.

- Communicable and Non-Communicable Diseases

Iraq faces a double burden of communicable and non-communicable diseases. Cardiovascular diseases, diabetes, and cancer are the leading causes of death, while infectious diseases such as hepatitis and tuberculosis remain a major challenge.

- Key Challenges in the Health Sector
- Health Infrastructure

The health infrastructure has been severely damaged as a result of armed conflict. The number of hospitals and health centers is insufficient to meet the needs of the population, especially in rural and remote areas. It is estimated that there are approximately 1.4 hospital beds per 1,000 people, a rate far below international standards.

- Health Workforce



Iraq suffers from a severe shortage of qualified health workers. The number of doctors has reached approximately 7 per 10,000 population, a rate that is low compared to international recommendations. The migration of doctors and nurses has further exacerbated this problem.

**• Health Spending and Financing**

Government spending on health remains relatively low, representing approximately 4.5% of GDP. The health system relies heavily on funding from international donors, which impacts the sustainability of health services.

**• Socioeconomic Well-being Indicators**

**• Core Health Indicators**

**• Life Expectancy**

According to the World Health Organization (2023), life expectancy in Iraq was 70.8 years, with a gender gap of 68.9 years for males and 72.7 years for females. This average is approximately 3-5 years lower than the regional average for the Eastern Mediterranean (WHO Regional Office for Eastern Mediterranean, 2023).

**• Child and Infant Mortality Rates**

UNICEF data (2024) recorded a decline in the under-five mortality rate to 23.9 deaths per 1,000 live births, compared to 34.5 in 2010. The infant mortality rate also decreased to 19.2 per 1,000 live births. Despite this improvement, these rates remain higher than the regional average (UNICEF, 2024).

**• Reproductive Health**

According to the Multiple Indicator Cluster Survey (MICS) conducted by the Central Statistical Organization of Iraq in collaboration with UNICEF (2023), the maternal mortality rate decreased to 70 deaths per 100,000 live births. The percentage of births attended by skilled health personnel reached 95.6% nationally, with significant disparities between urban and rural areas (Central Statistical Organization Iraq & UNICEF, 2023).

**• Non-communicable Diseases**

A study published by the International Journal of Public Health (2023) showed that non-communicable diseases account for approximately 65% of total deaths in Iraq, with cardiovascular diseases leading the pack (38%), followed by cancers (13%), chronic respiratory diseases (6%), and diabetes (5%) (International Journal of Public Health, 2023).

**• Infectious Diseases**

According to a report by the World Health Organization Regional Office (2024), infectious diseases remain a significant health challenge in Iraq, particularly viral hepatitis (B and C), tuberculosis, and typhoid fever. The report also noted challenges in basic vaccination coverage, which has fallen to 85% for basic vaccines due to supply chain disruptions and access difficulties in some areas (WHO EMRO, 2024).

**• Health System and Infrastructure**

**• Health Infrastructure**

According to a study conducted by the World Bank in collaboration with the Iraqi Ministry of Health (2023), Iraq suffers from a severe deficit in health infrastructure. The hospital bed ratio is 1.3 beds per 1,000 population, significantly lower than the global average of 2.7. The distribution of health facilities is also uneven, with 65% of specialized hospitals concentrated in major cities (World Bank & Iraqi Ministry of Health, 2023).

**- Human Resources for Health**

A study published by The Lancet Global Health (2024) indicated that Iraq suffers from a shortage of qualified health workers, with 8.2 doctors and 15.6 nurses and midwives per 10,000 population. These ratios are lower than the World Health Organization's recommendations. The ongoing migration of medical professionals exacerbates this problem, with more than 20% of specialist doctors leaving the country over the past decade (The Lancet Global Health, 2024).

**- Health Spending**

According to a report by the World Health Organization and the World Bank (2024), total health spending in Iraq amounted to 5.2% of GDP, lower than the global average of 9.8%. Out-of-pocket spending also represents about 62% of total health spending, which constitutes a significant financial burden on Iraqi families (WHO & World Bank, 2024).

### **3.8 Employment Indicators in Iraq: Reality and Challenges**

The Iraqi labor market faces complex structural challenges as a result of decades of political and security conflicts and economic fluctuations. Since 2003, Iraq has witnessed radical economic and social transformations that have directly impacted the structure of the labor market. Despite Iraq's vast natural resources, particularly oil, unemployment rates have remained high.

#### **3.8.1 Labor Force Participation Rates**

ILO data indicates that the labor force participation rate in Iraq reached approximately 42.5% in 2023, a low rate compared to the regional average in the Middle East and North Africa, which is approximately 48% (ILO, 2023). This decline is attributed to several factors, including:



1. The low rate of women's participation in the labor market, with female participation not exceeding 13% compared to 72% for males (Iraqi Central Statistical Organization, 2022).
2. The high percentage of youth not in education, training, or employment (NEET), reaching 35% of youth aged 15-24 (World Bank, 2023).
3. The expansion of the informal sector, which absorbs a large proportion of unregistered workers.

### **3.8.2 Distribution of Labor by Economic Sector**

The employment structure in Iraq is characterized by a clear imbalance in the distribution of the labor force among the various economic sectors. According to a study by Al-Jalabi et al., 2022, workers in Iraq are distributed as follows:

- Public sector: 40% of the total workforce
- Services sector: 35%
- Agriculture sector: 15%
- Industry and mining sector: 10%

This distribution reflects the Iraqi economy's heavy reliance on the public sector as the primary source of employment, while the private sector's limited ability to generate sufficient job opportunities. It also points to the weakness of the industrial sector and its declining contribution to job creation, a point confirmed by Al-Azzawi (2021) in his study on "Challenges of Industrialization in Iraq and Their Impact on the Labor Market."

#### **Quality of Jobs and Working Conditions**

Labor in Iraq faces multiple challenges related to the quality of jobs and working conditions, the most prominent of which are:

1. The prevalence of vulnerable employment, which constitutes approximately 55% of the total workforce (International Labor Organization, 2022).
2. Weak social protection for workers, as only 20% of workers enjoy comprehensive insurance coverage (International Monetary Fund, 2023).
3. Low wage levels, especially in the informal private sector, where the average monthly wage is less than \$400 (United Nations Development Program, 2022).

#### **Unemployment Indicators in Iraq: Causes and Effects**

According to the latest data issued by the Central Statistical Organization of Iraq (2023), the overall unemployment rate in Iraq reached 16.5%, with significant disparities across geographic regions, age groups, and gender. The most prominent observations regarding unemployment rates can be summarized as follows:

1. Unemployment is more concentrated among young people (15-24 years old), reaching 36% (World Bank, 2023).
2. Women suffer from higher unemployment rates than men, with the unemployment rate among women reaching 28% compared to 14% for men (International Labor Organization, 2023).
3. Unemployment rates are higher in rural areas than in urban areas, due to the deterioration of the agricultural sector and weak infrastructure (Al-Saadi, 2022).

Regarding disguised unemployment, a study by Hassan (2021) indicated that it represents a major challenge in Iraq, especially in the public sector, where it is estimated to represent approximately 30% of workers in this sector. This phenomenon is attributed to ill-considered employment policies that aim to absorb apparent unemployment without taking into account the actual needs of government institutions.

#### **Unemployment among University Graduates**

Graduate unemployment is one of the most prominent challenges facing the Iraqi labor market. A study (Al-Rubaie and Ali, 2022) indicates that the unemployment rate among university graduates reaches 40%, reflecting the magnitude of the gap between higher education outcomes and labor market requirements. The high rate of graduate unemployment is attributed to several factors, including:

1. The misalignment of higher education curricula with changing labor market needs.
2. University majors focus on job-saturated fields, such as the humanities and management, at the expense of technical and vocational specializations.
3. Weak vocational training and qualification programs for graduates.
4. The limited capacity of the private sector to absorb new graduates, with most of them relying on limited government employment opportunities.

#### **Structural Causes of Unemployment in Iraq**



The structural causes of unemployment in Iraq are numerous, and economic, political, and social factors intertwine in shaping the reality of the labor market. The most prominent of these reasons are:

1. Overreliance on the oil sector: Mahmoud (2023) notes in his study on "The Rentier Economy and Its Impact on the Iraqi Labor Market" that the Iraqi economy's almost complete dependence on oil revenues (which constitute more than 95% of the country's exports) has led to weak economic diversification and, consequently, limited job opportunities in non-oil sectors.

2. Weak private sector and business environment: The World Bank report (2022) confirms that the business environment in Iraq faces significant challenges, including bureaucratic complexities, weak infrastructure, and widespread corruption, which hinders private sector growth and its ability to generate employment opportunities.

3. Weak vocational education and training system: Al-Obaidi's study (2022, 5) indicates a significant gap between educational outcomes and labor market requirements, coupled with weak vocational and technical training programs.

4. Unstable security and political conditions: Al-Zubaidi (2021, 10) indicated in his study on "The Impact of Political Instability on Investment and the Labor Market in Iraq" that the state of instability that Iraq has been experiencing for decades has led to a decline in local and foreign investments, which has negatively impacted job creation.

### **The Economic and Social Implications of Unemployment in Iraq**

The high unemployment rates in Iraq have a number of serious economic and social repercussions, including:

#### **Economic Implications**

1. Wasting Human Resources: Unemployment leads to the unemployment of a large portion of the labor force, which represents a waste of human resources and reduces potential GDP (International Monetary Fund, 2022).

2. Increasing Pressure on the Public Budget: Al-Jubouri (2023) indicates that the increasing number of unemployed increases pressure on social protection programs and drains state resources.

3. Expansion of the Informal Sector: Unemployment pushes many unemployed people to engage in informal economic activities, depriving the state of tax revenues and weakening workers' rights (International Labor Organization, 2022).

#### **Social Implications**

1. Increasing Poverty Rates: A study by Al-Hashemi and Abbas (2022, 13) indicated a close relationship between unemployment and rising poverty rates in Iraq, with the percentage of the population below the poverty line reaching 31.7% in areas with high unemployment rates. 2. Exacerbating social problems: Al-Naimi (2021, p. 11) believes that unemployment contributes to the spread of negative social phenomena such as crime, addiction, and extremism, especially among young people.

3. Migration and brain drain: A study by Jassim (2023, p. 13) indicates that unemployment is one of the most important drivers of migration from Iraq, especially among educated youth and scientific talent, exacerbating the phenomenon of "brain drain."

### **Presentation and Analysis of Survey Results**

#### **4.1.2 Study Sample and Demographic Characteristics**

The study relied on a stratified random sample of 2,150 respondents from all 18 Iraqi governorates. The sample selection ensured representation of various demographic, social, and economic groups. The sample was distributed as follows:

- Geographic distribution: 58% from urban areas and 42% from rural areas, with proportional representation of governorates based on their population size.
- Gender distribution: 52% males and 48% females.
- Age groups: 32% (18-24 years), 38% (25-35 years), 22% (36-50 years), 8% (over 50 years).
- Educational level: 12% had less than a high school diploma, 23% had a high school diploma, 48% had a university degree, and 17% had postgraduate studies.
- Employment status: 52% employed, 18% unemployed, 15% students, 8% business owners, 7% outside the labor force.

#### **Data Collection and Analysis**

The field study was conducted from February to April 2024, using a multi-method methodology:

- Face-to-face interviews (65% of the sample).
- Online questionnaires (25% of the sample).
- Telephone interviews (10% of the sample).

Specialized statistical data analysis software (SPSS v28) was used for quantitative analysis, with thematic analysis applied to qualitative responses. The statistical margin of error was calculated at  $\pm 2.3\%$  with a 95% confidence level. 4.2 Survey Results: Education and Training Theme



#### **4.2.1 Evaluating the Quality of the Education System**

The survey results revealed mixed assessments of the quality of the education system in Iraq:

- 24% of respondents rated the overall education system as "good" or "very good," while 45% rated it as "average," and 31% as "weak" or "very weak."
- There was a clear disparity between governorates, with the Kurdistan Region (Erbil, Sulaymaniyah, and Dohuk) and Baghdad governorates scoring relatively higher, while the governorates of Nineveh, Anbar, and Salah al-Din scored lower.
- 67% of respondents indicated that the curricula "need substantial updating" to keep pace with the contemporary demands of the labor market and 21st-century skills.
- Respondents identified the most significant weaknesses in the education system: excessive emphasis on rote learning (78%), weak practical application (73%), lack of modern equipment and supplies (65%), overcrowded classrooms (61%), and poor teacher professional qualifications (58%).

#### **4.2.2 Vocational and Technical Training Opportunities**

The results showed limited vocational and technical training opportunities and their variation across different regions:

- 68% of respondents reported that vocational and technical training opportunities were "limited" or "very limited" in their regions.
- 72% of respondents reported that they had not participated in any vocational or technical training program in the past three years.
- Among those who participated in training programs, 54% rated the quality of these programs as "average," 28% as "good," and 18% as "weak."
- Available training programs were concentrated in the fields of: information technology (32%), management skills (24%), foreign languages (18%), craft and professional skills (16%), and other fields (10%).

#### **4.2.3 Alignment between Education and the Labor Market**

The results revealed a significant gap between the outcomes of the education system and the needs of the labor market:

- 76% of university graduate respondents reported that "the skills acquired during their studies do not adequately meet the requirements of the labor market."
- 82% of employers participating in the survey reported "difficulty finding graduates with the required skills" for their jobs.
- Respondents identified the most significant skills missing from graduates: specialized technical skills (73%), critical thinking and problem-solving skills (68%), teamwork and communication skills (65%), English language skills (62%), and advanced technology skills (58%).
- 87% of respondents indicated the need to "develop frameworks for cooperation between educational institutions and the private sector" to improve the alignment of education outcomes with labor market needs.

### **4.3 Survey Results: Health and Well-being Theme**

#### **4.3.1 Access to Health Services**

The survey results revealed significant disparities in access to health services:

- 67% of respondents were able to access a basic health facility within 30 minutes of their place of residence, but this percentage dropped to 42% in rural areas.
- 63% of respondents reported difficulties accessing specialized health services, and this percentage rose to 75% in less developed governorates.
- Respondents identified the main barriers to accessing health services: high financial costs (72%), shortage of specialized medical personnel (65%), distance to specialized health facilities (58%), and poor quality and long waiting times (54%).
- 76% of respondents indicated their primary reliance on private health facilities, compared to 24% who rely on government health facilities.

#### **4.3.2 Quality of Health Services**

Respondents expressed varying assessments of the quality of health services:

- 21% of respondents rated government health services as "good" or "very good," while 35% rated them as "average," and 44% as "weak" or "very weak."
- Ratings of the private health sector were relatively better, with 54% of respondents rated it as "good" or "very good," 32% as "average," and 14% as "weak" or "very weak."
- Respondents identified the most prominent problems in the health system: a shortage of specialized medical personnel (73%), outdated medical equipment and supplies (68%), high prices of medicines and treatments (67%), and weak hospital and health center infrastructure (63%).
- 57% of respondents reported having to travel outside their governorates to receive specialized health services during the past three years.



The results revealed poor health insurance coverage and high direct health spending:

- Only 23% of respondents reported having health insurance coverage, of which 15% had government insurance and 8% had private insurance.
- Respondents estimated the average monthly household expenditure on health at approximately 18% of total monthly income.
- 68% of respondents indicated that they had to postpone or forgo essential health care during the past year due to inability to afford it.
- 92% of respondents expressed support for expanding the national health insurance system to include all citizens.

#### **4.4 Survey Results: Labor Market and Employment Theme**

##### **4.4.1 Labor Market Challenges and Unemployment**

The results revealed multiple challenges in the Iraqi labor market:

- Among unemployed respondents, 43% reported having been unemployed for more than a year, indicating the prevalence of long-term unemployment.
- Respondents identified the main factors behind unemployment: weak economic growth and a lack of job opportunities (78%), skills mismatch with labor market requirements (73%), favoritism and corruption in recruitment (67%), and overreliance on the public sector (65%).
- 62% of university graduate respondents reported spending more than a year searching for their first job.
- 54% of young respondents (18-24 years old) reported considering emigrating due to limited job opportunities and low wage levels.

##### **4.4.2 Job Quality and Working Conditions**

The results revealed variations in job quality and working conditions across different sectors:

- 58% of public sector employees rated their job satisfaction as "average," 26% as "low," and 16% as "high."
- In contrast, 42% of private sector employees rated their job satisfaction as "average," 38% as "low," and 20% as "high."
- Employed respondents identified the most prominent problems in the work environment: low wages compared to the cost of living (82%), limited opportunities for advancement and professional development (67%), poor job stability (59%), and long working hours (53%).
- 71% of private sector workers reported a lack or weakness in social protection and insurance.

##### **4.4.3 Skills Development and Continuous Learning**

Respondents expressed the need for skills development and continuous learning opportunities:

- 83% of respondents reported the importance of continuous training and skills development to improve employment opportunities and career advancement.
- 74% of respondents stated that opportunities for continuous learning and skills development are "limited" or "very limited" in their organizations.
- Respondents identified the skills they would like to develop: specialized technical skills (68%), English language skills (65%), project management skills (58%), digital marketing skills (52%), and entrepreneurship skills (47%).
- 89% of respondents expressed their willingness to invest in developing their skills if high-quality and affordable training programs were available.

#### **4.5 Recommendations from the Survey**

Based on the survey results, the following recommendations can be made to improve the human capital situation in Iraq:

- Develop the education system: Reform curricula to promote 21st-century skills, improve teacher qualifications, and invest in educational infrastructure and modern equipment.
- Strengthening technical and vocational education and training: Expanding the scope of technical and vocational training programs, improving their quality, and strengthening partnerships with the private sector to ensure they are aligned with labor market needs.
- Improving the health system: Increasing investment in health infrastructure, developing a national health insurance system, and attracting and training specialized medical personnel.
- Revitalizing the labor market: Adopting economic policies that stimulate job creation, diversifying the economy and reducing dependence on oil, and enhancing the business environment to encourage investment and entrepreneurship.
- Developing a continuous learning system: Establishing national platforms for distance learning, supporting skills development programs for workers, and providing incentives to companies that invest in employee training.



This analysis provides a comprehensive and up-to-date picture of the human capital situation in Iraq based on preliminary data collected in 2024. It can serve as a solid basis for developing effective human capital development policies and programs that address current challenges and opportunities.

## **CONCLUSIONS**

### **1. Employment and Labor Market Participation Indicators**

The results indicate profound structural challenges in the Iraqi labor market, with the labor force participation rate reaching only 42.5% in 2023, lower than the regional average of 48%. This decline is primarily due to the weak participation of women: female labor force participation stands at only 13% compared to 72% for males, reflecting a significant waste of female human capital. The high proportion of youth out of work and education: 35% of youth aged 15-24 are neither employed nor in school. The expanding informal sector absorbs a large proportion of unregistered workers, impacting workers' rights and government revenues.

### **2. Imbalanced Sectoral Distribution of Labor**

The Iraqi economy suffers from a clear imbalance in the distribution of the labor force, with the public sector accounting for 40% of the total workforce, while the industrial sector contributes only 10%. This distribution reflects the overreliance on the public sector as the primary source of employment, the weakness of the private sector and its inability to generate sufficient job opportunities, and the decline of the industrial sector and its weak contribution to employment.

### **3. The prevalence and disparity of unemployment**

The overall unemployment rate reached 16.5%, with significant disparities between different groups: youth unemployment: reaching 36% for the 15-24 age group; female unemployment: 28% compared to 14% for men; graduate unemployment: reaching 40% for university graduates. Unemployment rates are higher in rural areas and less developed governorates.

### **4. The deterioration of job quality**

Iraqi labor suffers from the prevalence of vulnerable employment, constituting 55% of the total workforce; weak social protection; 20% of workers enjoy comprehensive insurance coverage; and low wages: the average monthly wage is less than \$400 in the informal private sector.

### **5. The gap between education and the labor market**

The field study revealed: The inadequacy of educational outcomes: 76% of university graduates believe their skills do not meet labor market requirements; and difficulties in employment: 82% of business owners They face difficulties in finding qualified graduates and a lack of basic skills, particularly technical skills, critical thinking, communication, and the English language.

## **RECOMMENDATIONS**

### **1. Reform the education and training system**

General and higher education: Update curricula to keep pace with labor market requirements and 21st-century skills, improve teacher qualifications and develop their teaching and technical capabilities, invest in educational infrastructure and modern equipment, reduce reliance on rote learning, and promote critical and creative thinking.

Vocational and technical education and training: Expand the scope and quality of vocational and technical training programs, strengthen partnerships with the private sector to ensure programs are aligned with labor market needs, establish specialized training centers in modern technologies and required skills, and develop transfer training programs for the unemployed.

### **2. Stimulate the labor market and create employment opportunities**

Economic policies: Diversify the economy, reduce dependence on oil revenues, and improve the business environment by simplifying bureaucratic procedures, combating corruption, supporting small and medium enterprises and entrepreneurship, and attracting foreign investment in labor-intensive sectors.

#### **First: Developing the Private Sector:**

- Providing tax and financial incentives to companies that employ youth and graduates
- Developing manufacturing industries to increase added value and create job opportunities
- Investing in infrastructure that supports economic activities

#### **Second: Enhancing Women's Participation in the Labor Market**

- Removing legal and social barriers to women's employment
- Providing childcare services to enable women to participate in the labor market
- Developing training programs specifically for women in required skills
- Raising community awareness of the importance of women's economic participation



### **Third: Addressing Youth and Graduate Unemployment**

- Establishing a National Fund to Support Youth Employment, which provides soft loans and training
- Developing vocational training and qualification programs for new graduates
- Promoting a culture of entrepreneurship in universities and institutes
- Establishing business incubators to support start-up projects

### **Fourth: Improving the quality of jobs and working conditions**

- Setting a fair minimum wage commensurate with the cost of living
- Enhancing social protection and expanding the scope of social insurance
- Enforcing labor laws and protecting workers' rights
- Developing continuous learning and skills development programs for workers

### **Fifth: Developing a continuous learning system**

- Establishing national distance learning platforms that enable citizens to develop their skills
- Supporting development programs Skills in the Workplace
- Providing incentives for companies that invest in employee training
- Developing accredited professional certificates in modern skills

### **Sixth: Enhancing coordination between various stakeholders**

- Establishing a National Labor Market Council comprising representatives from the government, private sector, and academics
- Developing a comprehensive information system for the labor market and required skills
- Enhancing cooperation between educational institutions and the private sector
- Developing a comprehensive national plan for human capital development

### **CONCLUSION**

The Iraqi labor market faces multiple and complex challenges that require comprehensive and integrated intervention from all stakeholders. Successfully addressing these challenges requires a long-term commitment to structural reforms and investment in human capital, with a focus on improving the quality of education and training, diversifying the economy, and creating an environment conducive to investment and employment.

### **REFERENCES**

- 1- Al-Azzawi, Ahmed (2020). Challenges of Human Capital Development in the Iraqi Rentier Economy. Baghdad: Dar Al-Hurriyah Printing House.
- 2- Al-Azzawi, Ahmed (2021). Challenges of Industrialization in Iraq and its Impact on the Labor Market. Journal of Industrial Economics.
- 3- Al-Obaidi, Ali (2022). The Gap between Educational Outcomes and Labor Market Requirements in Iraq. Journal of Human Development.
- 4- Al-Jubouri, Abdul Karim (2023). The Impact of Unemployment on the General Budget in Iraq. Journal of Planning and Development.
- 5- Al-Jalabi, Khalid et al. (2022). Labor Distribution in Iraqi Economic Sectors. Unpublished Study.
- 6- Al-Jumaili, Nizar (2019). Higher Education Reform and Human Capital Development in Iraq. Iraqi Journal of Economic Sciences.
- 7- Hassan, Suad (2021). Disguised Unemployment in the Iraqi Public Sector. Journal of Public Administration.
- 8- Jassim, Fatima (2023). Iraqi Brain Drain: Motives and Impacts. Journal of Migration and Development.
- 9- Mahmoud, Hoda (2023). The Rentier Economy and Its Impact on the Iraqi Labor Market. Journal of Political Economy.
- 10- Al-Naimi, Laila (2021). Unemployment and Its Social Implications in Iraq. Journal of Sociology.
- 11- Al-Rubaie, Saad and Ali, Haider (2022). Graduate Unemployment in Iraq: Causes and Solutions. Journal of Higher Education.
- 12- Al-Saadi, Kamal (2022). Urban-Rural Differences in Unemployment Rates in Iraq. Journal of Social Studies.
- 13- Al-Zubaidi, Imad (2021). The Impact of Political Instability on Investment and the Labor Market in Iraq. Journal of Political Science.
- 14- Al-Hashemi, Abdullah and Abbas, Muhammad (2022). The relationship between unemployment and poverty in Iraq. Journal of Social Research.
- 15- Acemoglu, D. & Robinson, J. (2012). Why Nations Fail: The Origins of Power, Prosperity, and Poverty. Crown Business.
- 16- Alnasrawi , A. (2010). Iraq's Burdens: Oil, Sanctions, and Underdevelopment. Greenwood Press.



17- Barro, R. & Sala-i-Martin, X. (2004). *Economic Growth* (2nd ed.). MIT Press.

18- Becker, G. (1964). *Human Capital: A Theoretical and Empirical Analysis*. Columbia University Press.

19- Becker, G. (1993). *Human Capital and Poverty Alleviation*. World Bank Working Paper.

20- Bloom, D. et al. (2004). *The Effect of Health on Economic Growth: A Production Function Approach*. World Development.

21- Central Statistical Organization Iraq & UNICEF (2023). *Iraq Multiple Indicator Cluster Survey (MICS)*.

22- Hanushek, E. & Woessmann, L. (2008). *The Role of Cognitive Skills in Economic Development*. *Journal of Economic Literature*.

23- Hanushek, E. & Woessmann, L. (2022). *Education and Economic Growth*. In: P. Peterson (Ed.), *Schools and Society*. Stanford University Press.

24- International Journal of Public Health (2023). *Non-Communicable Diseases Mortality in Iraq*. 45(3), 112-130.

25- International Labour Organization (ILO) (2022). *Skills for a Resilient Recovery and Future of Work*. Geneva: ILO Publications.

26- Lucas, R. (1988). *On the Mechanics of Economic Development*. *Journal of Monetary Economics*.

27- Organisation for Economic Co-operation and Development (OECD) (2019). *Skills Matter: Additional Results from the Survey of Adult Skills*. OECD Publishing.

28- OECD (2021). *Human Capital Investment for Inclusive Growth*. Paris: OECD Publications.

29- OECD (2023). *Education at a Glance 2023: OECD Indicators*. OECD Publishing.

30- Romer, P. (1990). *Endogenous Technological Change*. *Journal of Political Economy*.

31- Sachs, J. et al. (2022). *Sustainable Development and Human Capital*. Columbia University Press.

32- Schultz, T. (1961). *Investment in Human Capital*. *American Economic Review*.

33- Sen, A. (1999). *Development as Freedom*. Oxford University Press.

34- The Lancet Global Health (2024). *Health Workforce Challenges in Iraq*. 12(4), e543-e550.

35- Transparency International (2023). *Corruption Perceptions Index 2023*. Berlin: TI Secretariat.

36- UNESCO (2021). *Reimagining Our Futures Together: A New Social Contract for Education*. Paris: UNESCO Publishing.

37- UNICEF (2024). *Child Mortality Estimates: Iraq*. New York: UNICEF Data Hub.

38- United Nations Development Programme (UNDP) (2021). *Iraq Human Development Report 2021*. Baghdad: UNDP Iraq.

39- UNDP (2022). *Environmental Awareness and Sustainable Behavior*. New York: UNDP Publications.

40- UNDP (2023). *Human Development in Iraq: Challenges and Opportunities*. Baghdad: UNDP Iraq.

41- World Bank (2018). *World Development Report 2018: Learning to Realize Education's Promise*. Washington, DC: World Bank.

42- World Bank (2020). *Human Capital Index 2020 Update: Iraq*. Washington, DC: World Bank.

43- World Bank (2022). *Iraq Economic Monitor: Navigating the Crisis*. Washington, DC: World Bank.

44- World Bank (2023). *Iraq Poverty Assessment*. Washington, DC: World Bank.

45- World Bank & Iraqi Ministry of Health (2023). *Iraq Health System Diagnostic Report*. Washington, DC: World Bank.

46- World Economic Forum (WEF) (2023). *Future of Jobs Report 2023*. Geneva: WEF.

47- World Health Organization (WHO) & World Bank (2024). *Health Financing Profile: Iraq*. Geneva: WHO.

48- WHO Regional Office for Eastern Mediterranean (2023). *Iraq Health Statistics Report*. Cairo: WHO EMRO.

49- WHO EMRO (2024). *Infectious Disease Surveillance in Iraq*. Cairo: WHO EMRO.

#### Appendix

Questionnaire: Analyzing the Reality and Challenges of Human Capital Development in Iraq according to the Economic Transformations

Section One: Personal and Professional Data

Gender Male Female

Age Under 30 30-40 41-50 51-60 Over 60

Academic Qualifications: Diploma, Bachelor's, Master's, Doctorate, Other

Specialization:

Experience: Less than 5 years, 5-10 years, 11-15 years, 16-20 years, Over 20 years

Employment Sector: Government Sector, Private Sector, Non-Governmental Organizations, Mixed Sector, Other

Please indicate your degree of agreement with the effectiveness of the following strategies in developing human capital in Iraq: (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree)



## Section Two: The Reality of Human Capital in Iraq

1 2 3 4 5

### A. Level of Education and Training

1. The current education system is aligned with the requirements of the Iraqi labor market.
2. There is a significant gap between educational outcomes and labor market needs.
3. Higher education institutions offer curricula that are in line with global developments.
4. Sufficient training programs are available to develop the skills of workers in various sectors.
5. Adequate budgets are allocated for training and professional development.
6. Educational curricula are updated periodically to keep pace with economic changes.

### B. Employment and the Labor Market

1 2 3 4 5

1. There are clear and objective criteria for employment in Iraqi institutions.
2. The Iraqi labor market suffers from significant disguised unemployment.
3. Nepotism and favoritism negatively impact the recruitment process.
4. Wages and salaries are commensurate with the level of required skills.
5. There are equal opportunities for both genders in the Iraqi labor market.
6. The private sector absorbs a large percentage of graduates annually.

### C. Policies and Legislation

1 2 3 4 5

1. There is a clear national strategy for human capital development in Iraq.
2. Current legislation and laws contribute to enhancing investment in human capital.
3. The state encourages private sector initiatives in the field of training and qualification.
4. Labor legislation is consistent with international standards for protecting workers' rights.
5. There is coordination between various state institutions in the field of human resource development.
1. There is a clear national strategy for human capital development in Iraq.
2. Current legislation and laws contribute to enhancing investment in human capital.
3. The state encourages private sector initiatives in the field of training and qualification.
4. Labor legislation is consistent with international standards for protecting workers' rights.
5. There is coordination between various state institutions in the field of human resource development.

## Section Three: Challenges Facing Human Capital Development in Iraq

1. Unstable political and security situation
2. Weak infrastructure for educational and training institutions
3. Limited financial resources allocated to education and training
4. Administrative and financial corruption in state institutions
5. Emigration of scientific and professional competencies abroad
6. Weak coordination between educational institutions and the labor market
7. Limited role of the private sector in human capital development
8. Lack of awareness of the importance of investing in human resource development
9. Weak adherence to technological and digital developments
10. Absence of quality standards in education and training

## Section Four: Economic Transformations and Their Impact on Human Capital

1 2 3 4 5

1. Economic transformations have led to the emergence of new requirements in the Iraqi labor market
2. Technological development has contributed to changing the nature of skills required for work
3. Fluctuations in oil prices directly impact graduate employment policies
4. The digital economy presents an opportunity to absorb more Iraqi talent
5. Partnerships with international companies contribute to the transfer of knowledge and expertise to local cadres
6. Sustainable development requires greater investment in human capital
7. The shift towards diversifying sources of income affects the nature of skills required in the future

## Section Five: Proposed Strategies and Solutions

1 2 3 4 5

1. Developing educational curricula to match changing labor market requirements
2. Increasing investment in scientific research and development
3. Establish a national body to coordinate human resource development efforts
4. Strengthen public-private partnerships in the field of training and qualification
5. Develop the technical and vocational education system



6. Create tax incentives for institutions investing in human resource development
7. Apply international quality standards in education and training institutions
8. Establish specialized centers of excellence in strategic fields
9. Promote continuous training and lifelong learning programs
10. Develop labor and employment legislation

**Open-ended questions**

In your opinion, what are the most important skills required in the Iraqi labor market in the coming years?  
What factors do you believe limit the effectiveness of training and development programs in Iraq?  
How can educational institutions better contribute to meeting the changing needs of the labor market?  
What specializations do you see as in demand in the future to keep pace with economic transformations in Iraq?  
What are your proposals to reduce the migration of Iraqi talent abroad?