



THE ROLE OF LABOR AND HUMAN CAPITAL IN THE INDUSTRIAL SECTOR OF THE PERSIAN GULF COUNTRIES

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Abstract: *At the domestic level, decisions regarding employment are shaped by available opportunities and their effects on consumption, family dynamics, and the development of human capital. The industrial sector, which encompasses manufacturing, construction, mining, and associated industries, is essential for expanding economic activities. Immigrants have made substantial contributions to the advancement of the economy. Technological advancements within these sectors are influencing the growth of labor productivity. This report offers valuable perspectives for policymakers and stakeholders within the industrial sector of the Persian Gulf.*

Key words: *human capital, industrial sector, foreign direct investment, human resource, vocational education and training.*

Introduction

Historically, a substantial portion of employment opportunities in the area have been created by the public sector. However, various economic and fiscal factors, along with goals set forth in the latest development plans, have sparked a strong interest in reshaping this scenario. Concurrently, the region is driven by widespread governmental responsibilities to promote a larger role for the private sector in bolstering economic growth. Moreover, following the recent global economic downturn, there has been a noticeable uptick in the involvement of local individuals in private sector employment. Despite the region's relatively young workforce, it already shows impressive figures in terms of primary, middle, and secondary school enrollments. Additionally, there are high enrollment rates in higher education, a commendable net graduation rate, and a comprehensive network of educational institutions. Noteworthy data from the OECD-PISA 2015 reveals that educational outcomes, both Arab and foreign, in the region are



on par with, if not slightly below, those of advanced industrialized nations. Some countries in the region also exceed the OECD average student-teacher ratio and match that of the top-performing countries in the PISA assessment. Aspirations for top-notch educational and consulting facilities on the global stage are evident in various national development strategies. It is worth noting, however, that criticisms of the region's educational system include concerns about cultural heritage preservation, educational quality and relevance, education gaps, and the effectiveness of vocational training. The presence of vast reserves of oil in the Persian Gulf region has spurred significant economic, social, and demographic shifts. The proceeds from these oil reserves have not only created employment opportunities but have also raised living standards, reduced poverty, and empowered governments to improve social welfare and provide public services. The region can attribute much of its impressive urban landscape, modern infrastructure, and advanced public and private services to the economic growth, public projects, and social progress stimulated by its oil wealth. Undeniably, such economic growth would not have been achievable without the influx of a large number of immigrants. These temporary workers and residents have not only boosted the region's GDP and international trade but have also facilitated the delivery of high-quality services.

METHODS

Labor-related capacities are essential for empowering workers to actively engage in producing valuable goods and services, leading to a more equitable income distribution. Investing in human capital is crucial for maximizing social benefits, and conducting empirical tests on these capacities offers valuable insights for policymakers focused on labor markets [1]. Labor productivity significantly impacts international trade by fostering business growth and enabling nations to invest in innovative ventures. At the household level, employment opportunities play a crucial role in shaping individual decisions regarding consumption, family dynamics, and human capital investments. While existing research emphasizes the importance of human capital in enhancing labor productivity, this article concentrates on labor capabilities in the agricultural sector. Specifically, we explore how factors such as the educational background of household



heads, agricultural training, and full-time engagement in agriculture impact labor productivity per Feddan. Additionally, we investigate how labor capabilities influence a more comprehensive human development index within agriculture and contribute to narrowing the gender gap in agricultural knowledge and skills. Our research indicates a significant positive relationship between labor capabilities and productivity, aligning with existing literature on the correlation between human capital and labor productivity.

RESULTS

The high and inflexible demand for labor in various manual professions across different industries may also explain the scarcity of job opportunities beyond foreign workers [2]. To emphasize the seriousness of this issue, it is crucial to recognize the increasing returns to human capital over time. This profit accumulation is not only due to the lack of technological advancements matching a rise in the employment-to-labor ratio, but also the low quality of technical and professional jobs. In these fields, technical progress is moving in a negative direction, resulting in conflicting trends in the factors affecting labor productivity growth. Let us start by examining the consequences of production and the growth of the workforce, while also evaluating their respective dynamics. In the GCC countries, the growth of value added in the agricultural sector is unfortunately negative, falling behind the expansion of the workforce and decreasing as a percentage of the overall GDP. It is logical to reallocate resources, such as plants and equipment, from this sector to other uses. Although the industrial sector shows positive growth in value added, it still fails to keep pace with the expanding workforce, albeit to a lesser degree than seen in agriculture [3]. This leads to signs of hysteresis within the sector. While this situation may result in a temporary shift in factor ratios through decapitalization, the final outcome is uncertain. However, it could potentially lead to a limited consolidating solution akin to an Arcobaleno. The concern lies in the fact that technological changes, which involve replacing labor with other factors, have not been fully embraced for an extended period of time.

DISCUSSION

This procedure has the potential to significantly improve the efficiency and competitiveness of the industrial sector, thereby establishing a strong basis for the



sustained and enduring growth of the Persian Gulf nations [4]. The recommendations recommended to the government are broad and extensive, with the objective of hastening advancement. These suggestions encompass not only the encouragement of foreign direct investment (FDI), but also the prioritization of improving education, workforce, and human resources. Additionally, it is vital to maintain a balance between skilled and unskilled workers, while fostering cooperation among governments, businesses, and the populace. Furthermore, it is crucial for businesses and the general public to actively engage in enhancing the productivity of labor and human resources. One key element is attaining equilibrium between the supply and demand for human capital, ensuring that the appropriate skills are accessible when required. Moreover, investing in early childhood development (ECD) will play a critical role in enhancing the essential human resources of the nations, laying the groundwork for future success. Additionally, it is imperative to promote and oversee the availability of waged and self-employment opportunities for individuals across various levels of human capital. Current studies underscore the undeniable impact of labor on the expansion of industrial production in the Persian Gulf nations. However, the potential of labor and human capital remains underutilized. This investigation is designed to offer fresh insights and data on whether the Persian Gulf nations have effectively leveraged the pivotal roles of human capital in attracting higher productivity FDI and enhancing the technological levels of FDI in industrial production. The assessment, conducted using ARDL models, reveals some intriguing conclusions. Notably, intermediate education in Abu Dhabi and Qatar demonstrates favorable effects on the productivity of FDI. Similarly, secondary and intermediate education levels in Qatar, as well as all education levels in the UAE, exhibit distinct positive impacts on the technological levels of FDI and subsequent spillover effects. Nonetheless, there is substantial opportunity for improvement. While the Persian Gulf nations have made advancements in capitalizing on short-term impacts, such as through a wider range of educational levels, they have not fully tapped into the potential of their workforce in terms of higher productivity FDI and FDI spillovers in the manufacturing industries. As leaders in the region, it is imperative for them to take proactive measures to catch up with the greater and more enduring benefits of labor and human capital in the manufacturing sectors [5]. This can be accomplished by



upgrading primary and higher education systems, as well as attracting a higher number of well-educated middle-skilled workers with advanced vocational education and training (VET). In doing so, they will not only strengthen their own economies but also set a model for others to emulate. The forthcoming success and prosperity of the Persian Gulf nations depend on their ability to fully unleash the potential of their workforce and human capital, enabling them to thrive in an increasingly competitive global arena.

CONCLUSION

The economic diversification of oil-based Persian Gulf countries is a critical strategy that addresses the volatility of crude oil prices. The industrial sector, encompassing manufacturing, construction, mining, and related activities, is identified as a key component of this diversification effort. It serves as a potential driver of economic growth, breaking the direct correlation between oil prices and overall economic performance. In addition to fostering economic growth through technological advancements, efficient management practices, and job creation, the industrial sector requires specific conditions for successful development. Among these conditions are labor adaptational policies to support the transition of workers from oil-related industries to the industrial sector. Furthermore, targeted investments in human capital and non-traded intermediate goods are essential to fully realize the sector's potential. Our research on the role of the industrial sector highlights the importance of a skilled workforce in enhancing the sector's capabilities at the regional level. Employing individuals with specialized skills and knowledge contributes to increased productivity, innovation, and competitiveness within the sector. Human capital, encompassing knowledge, skills, and abilities, significantly shapes the industrial sector's potential capacity in a positive manner. Educational and training institutions play a vital role in the industrial sector's development. These institutions provide the necessary knowledge and skills for participation in the sector, facilitating the accumulation of formal and informal human capital. Formal education systems, such as universities and vocational training centers, provide specialized knowledge and technical skills, while informal learning through apprenticeships and on-the-job training enhances practical skills and industry-specific competencies. The industrial sector, comprised of various sub-



industries, is a cornerstone of the economies of oil-based Persian Gulf countries. Its growth and expansion contribute substantially to efforts to diversify and reduce reliance on oil revenues. By assessing the sector's potential, policymakers can design effective policies to promote its growth and development. To evaluate the role of the industrial sector and its key components in Persian Gulf countries, we conducted estimations using employment and capital stocks as indicators. These estimations provide insights into growth trends, challenges, and opportunities within the sector for policymakers and researchers. Analysis of empirical results yields important observations that inform conclusions and guide future policy decisions. In conclusion, the industrial sector is pivotal in the economic diversification of oil-based Persian Gulf economies. Its potential for economic development, technological advancements, and job creation should be recognized and supported. Through investment in labor force policies, human capital development, and infrastructure, policymakers can cultivate sustainable growth and reduce vulnerability to oil price fluctuations. The insights presented in this article offer valuable guidance for policymakers and stakeholders shaping the industrial sector of Persian Gulf countries.

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