

Development of Human Capital Resources to Increasing Economic Growth and Innovation in the GCC Countries

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Abstract

Background: Innovation implies making better quality items and administrations, which together create a superior personal satisfaction. The purpose of this study is to clarify why the Gulf Cooperation Council (GCC) nations are as yet battling in the field of development despite the way that the committee is comprised of wealthy nations with high per capita pay. The point of this paper is to clarify the truth as to development in the GCC nations and to distinguish the fundamental snags and difficulties confronting these nations. Methodology of this empirical research embraced a systematic analysis method to control for the missing data. It utilized real GDP, employment rates, and capital stock data. Therefore, the study adopts a review of secondary data and analysis. Finding: in light of subjective exploration techniques, is that there are various impediments confronting GGC nations, hindrances like low interest in innovative work as a level of GDP, a low number of cutting edge sends out as a level of fabricated fares, and a low extent of laborers utilized in information serious exercises. Recommendations: These discoveries affirm that the GCC governments need to put forth incredible attempts to create development, particularly with respect to the markers referenced previously.

Keywords: Cryptocurrency, Legal, Environmental Challenges, Fintech, Economy

1. Introduction

The development of human capital is at the forefront of the issues that concern societies with different systems and levels of growth, as it has been proven that the human element is not only one of the factors of production and the determinants of productivity, but rather it is the main influence in all components of development so that it has become at the forefront of the main measures of the wealth of nations, and then the issue of caring for the development of human resources in the best and most feasible way has taken its place, considering that spending on this development is one of the most important and highest levels of investment. Current economies are based on a premise of logical examination, innovation, and inventive thoughts: Knowledge-based turn of events. It isn't feasible for states and social orders to keep on building up their economies in detachment from the streams of information and innovation. Innovation presently assumes an essential part in boosting economic development and social turn of events, it is adding to financial changes in numerous networks. Regardless of having the option to flaunt that their per capita pay matches that of the most exceptional nations of the world, the GCC nations have in any case neglected to stay aware of the fast innovation of logical and mechanical accomplishments that have occurred in different pieces of the world. Accordingly, the GCC has lingered behind equivalent nations on the planet regarding instructive progression, and the creation of information and exploration results.

The current time of innovation has presented new ideas in regards to the components of financial and social turn of events. One of these is that improved innovation will support improvement and secure success in the public arena thus help to accomplish practical financial development and to make new openings. This has driven various nations on the planet to re-evaluate their arrangements to zero in on the crucial variables of creation. GCC nations, as well, have followed a few approaches which backing specific organizations for spearheading and inventive exercises, however this innovation is as yet insufficient to have made a proper and compelling worldview around there, especially at the degree of joint Gulf economic activity.

GCC economies are characterized by their dependence on oil as the primary source, with revenues accounting for 90-95%. As the focus on clean energy has evolved, the GCC countries have realized the need to diversify their economic sources. They realized that relying on one resource alone is an undecided adventure, especially after the world oil markets have been subjected to volatility (Abdeldayem & al Dulaimi, 2020). This situation has led GCC countries to adopt a future development strategy to promote a knowledge economy and focus on entrepreneurship and innovation (Abdeldayem & Aldulaimi, 2020). With these changes, achieving sustainable competitive advantage depends on its capabilities and resources, whether physical, technical, organizational, or human. To create a vision that promotes knowledge and innovation, the central pillar of this is human capital. Human capital is one of the most critical resources in the enterprise. The institution can achieve its objectives only by relying on this source, which is its ability to

present new ideas or developments or develop previous ideas that help make the organizational objectives and gain its competitive advantage increasingly and sustainable in the labour market. The knowledge economy is a historical phenomenon that boils down to the increasing influence of intangible assets in producing value-added and in the economic value of organizations, communities, and states. This phenomenon becomes more pivotal as the economy has moved towards a knowledge-based economy. HC is a collective of physical resources that explain only a relatively small part of income growth in most countries (Abdeldayem et al., 2021). HC is one of the most important of these resources, and this is why contemporary organizations are beginning to pay more attention to them. They are a strategic resource that plays a vital role in acquiring and enhancing the organization's sustainable competitive advantage. Peter Drucker pointed out that in the future, information is the primary resource in the knowledge economy. The concept of a knowledge-based economy has emerged with an awareness of the developing role of production and distribution (Abou El-Seoud et al., 2017). The human resource is one of the most critical components of intellectual capital, which has evolved from machine to HC than other resources (Acemoglu, 2012).

With the development of modern management thinking due to the transition to a knowledge-based economy, institutions have changed. The importance of human capital must be best managed in the best way, and one of the methods that organizations use to manage their HC is to invest in it to develop their knowledge, skills, and expertise, and to ensure that they are not obsolete (Aganbegyan, 2017).

Investing in human capital in the development of employees can help develop and engage employees in the company, giving employees career advancement opportunities and investing in them gives them a reason to participate in the job. The fundamental pillars of HC are the quality of the education system and health the country's people received and is considered an important contributing factor to economic growth. The World Bank has called for measurement and annual reporting of human capital to track and motivate investments in health and education and enhance productivity (Ahmad & French, 2011).

Obviously, it is easy to measure tangible assets in the company through computational practices, most tangible assets have clear market value in measurement, but it is very difficult to measure assets from human capital. The research in human resources management is still to arrive at better and more valid measures for measuring human resources assets. And due to the difficulty in measuring those assets and their current and future valuation, it is often ignored when looking at companies facing financial-economic challenges. For example when working on restructuring the company, what is seen is the reduction of the company's workforce which allows the company to reduce costs in the short term leading to the loss of human assets that have value to the company, without regard to the long run of these losses when the company returns to its position in the labor market, where it realizes that it needs a new workforce in order to be able to meet the needs and desires of customers. Therefore, when restructuring the company, management must pursue clear strategies in the future on how to take advantage of the company's short- and long-term human asset value (Aldulaimi, 2016).

2. Theoretical Framework and Objective

Investment in HC is vital due to its central impact on microeconomic via individual level, education, gaining knowledge, and practical experience. On the other hand, its influence on the macroeconomic via productivity and promoting long term growth cannot be underestimated. Moreover, there is a large and growing body of evidence that demonstrates a positive connection between HC and performance development at both the individual and organizational levels (Aganbegyan, 2017); (Aldulaimi, 2018); (Aldulaimi & Abdeldayem, 2018); (Aldulaimi & Obeidat, 2016). The concept of economic growth is quantitative, reflecting the increase in production in the long term. And economic growth is defined as "the long-term increase in long-term production." Since growth reflects the increase in production, it considers per capita output. In economics, "the endogenous growth theory argues that economic growth becomes facilitated from inside the system, which flows from the existing processes within the system" (Alsamman et al., 2016). The quality of human capital nurtures innovation, and growth (Andrews et al., 2012). The significant increase in national product volumes in developed countries compared to the increase in natural resources, working hours, and productive capital can be largely explained by the high level of investment in money.

This study adopts endogenous growth theory as it perceives HC as a significant source of promoting economic growth (Armstrong & Taylor, 2020). The rest can be attributed to the human element's productive efficiency and the rise in economic development in the underdeveloped countries, despite their political independence. This study aims to assess the influence of human capital investment on economic growth in the GCC countries. Accordingly, this study raises the main question: how intangible resources represented by human capital contribute to implementing the transition from the production economy to the knowledge economy. Also, the study attempts to critically answer the following question: How well does human capital affect the blindness of economic growth?

3. Literature Review

The great economist Adam Smith, in his 1776 book the *Wealth of the Nation*, pointed out that education in the human element increases the chances of progress, reduces corruption and underdevelopment, and further increases development. Schultz defined HC as: "...all human abilities to be either innate or acquired, attributes and can be augmented by appropriate investment will be human capital" (G. Becker, 1964). According to human capital theory, "people become more productive due to their increase in knowledge and skills" (Aganbegyan, 2017). The most recent definitions of HC include the description of Thomas et al., who define HC as "people, their performance and their potential in the organization" (B. E. Becker et al., 2001). According to Baker, HC is similar to "material means of production", such as factories and machinery, and the individual can invest in human capital through education, training, and healthcare. Outputs depend in part on the blindness of the ratio of return on the available HC (Aganbegyan, 2017). Thus, HC is a means of production from which additional outputs are produced when the investment

increases. Feixue studied the relationship between promoting higher education and economic growth in China (G. S. Becker et al., 1990).

Economic growth means a higher flow of economic productivity in a given country, through higher production of goods and services in a specified period, excluding economic inflation (Bishara, 2006). Economic growth depends on natural resources available within a country such as oil, land, agriculture, minerals, and raw materials. It leads to increased potential natural growth, which needs to be made available to reach higher levels of economic growth, but provided they are used efficiently and optimally, as the requirement for the availability of natural resources is linked to their user's efficiency (Crook et al., 2011).

Also, human resources as the size and availability of the labour force are among the primary sources of economic growth. A country can increase its labour force by increasing its population. It should be noted that the amount of employment alone is insufficient to ensure an increase in economic growth rates, but rather the quality of the labour force and the vocational training, scientific and skills of work. Further, physical capital is linked to savings and includes various assets such as machinery, factories, offices, shops, cars, etc. Economic growth in any country needs a good quality infrastructure. It requires a financial, legal, and social institutional framework commensurate with expectations of a high economic growth rate for achieving the growth (Darwish, 2014).

Knowledge economy as a "direct-based economy" is defined as a sophisticated economic pattern based on the widespread use of informatics and internet networks in various economic activity aspects, particularly in e-commerce, firmly based on knowledge. Known as the ability to create and deposit new ideas, new ways of thinking, new processes and new products, and turn that into economic value and wealth (Diebolt & Hippe, 2019).

4. Methodology

Utilizing the social capital theory, this empirical research embraced a systematic analysis method as specified in the literature to control for the missing data (Diks & Panchenko, 2006); (Erosa et al., 2010). It utilized real GDP, employment rates, and capital stock data, as sourced and adopted from Penn World Table 9.0 data. In this context, secondary data are being collected and archived all over the world for research that is becoming more widespread (Gylfason & Zoega, 2006). Therefore, to achieve the objective of this study, we adopt a review of secondary data and analysis. Diverse publications from international bodies' websites such as UN, IMF, World Bank, GII, etc.), were used. The key benefits of the study of secondary data are cheaper and faster to access. Secondary data provide researchers with opportunities to work efficiently to assessment new ideas and models (Hatch & Dyer, 2004); (Hossain & Al- Amri, 2010). The research study's topic is assessing the impact of HC on economic growth, and the nature of the problem is theoretical and descriptive. To conduct the research study, we believe that the type of research suitable is descriptive research only. The research relied on the methodology of the Cobb-Douglas production function as considered in the endogenous growth model in their significant contribution to the theory of economic growth. To measure the impact of human capital investment on the economic growth of GCC countries. The study adopted the following form Cobb-Douglas production function as following:

$$Y = a K^{\alpha} L^{\beta} t \quad (1)$$

Y is total output, and a, K, t, and L are total factor productivity, the stock of physical and human capital, and the amount of labor employed.

$$G(y) = \alpha G(K) + \beta G(L) \quad (2)$$

It represents G(y) GDP growth rate, the Growth rate of total fixed money g (K) configuration growth. The growth rate of quantitative chimes. The multivariate nonlinear Granger causality test is applied to measure the dependencies between human capital and growth in the context of GCC (Kim, 2018) software implementation of the proposed method is provided in SPSS. Additional data obtained from the World Bank to measure the Human capital index. In measuring the HC, they involve several factors such as soft skills and health capabilities. Also, this study uses secondary data extracted from the Penn World Table (WPT.9.1) database with information on relative levels of income, output, input, and productivity. Economic growth data extracted from the database of World Bank 2019. Also, the data for Purchasing Power Parity (PPP). For this study, the economic variables data is real GDP, real physical stuck, and human capital index.

5. Data Analysis Results

The concept of investing in the human capital can be based on developing the productive aspect of this element, in other words, investing in human resources means trying to create them to achieve particular objectives related to the productive issue of these resources. There are many definitions of the concept of investment in HC, where there are multiple definitions of the economics interested in this subject and dealt with research and analysis because this topic has many economic and non-economic dimensions in which the views differ significantly.

We plotted the cross-sectional association between GDP per capita and expected human capital. The C-D production function estimates dealt with three elements the human capital, Employment; Real Capital stuck and Real GDP. Table 1 shows the variance results of the GCC countries. However, all countries achieved an essential level of employment and high gross domestic production because, as we mentioned before, it is depending on the oil industry. Respectively, figure 1 demonstrates the GDP for each country, and the World Bank attributed the expected continued growth of GDP to several factors, most notably the commitment to implement economic reforms and the implementation of capital spending plans for non-oil projects on the ground. Besides, countries are focused on achieving a vision to promote economic diversification and economic reforms. Noticeably, Saudi Arabia and UAE always make an enormous escalated scale on economic growth.

Table 1: Data analysis statistics

Country	Rank of HCI-2020	Value	GDP/ 2020	Population
Bahrain	2	0.65	38,574	1,701,575
UAE	1	0.67	421,142	9,890,402
Oman	3	0.61	76,332	5,106,626
KSA	4	0.58	792,967	34,813,871
Kuwait	5	0.56	134,629	4,270,571

Source: World Bank report of The Human Capital Index (HCI), 2020

There is no doubt that there is a positive and expelled relationship between investment in human capital and improvement in economic growth, and this is what this study has shown, like the rest of the studies in previous literature in this field (Lim et al., 2018); (Bishara, 2006); (Malamud & Zucchi, 2019a). Table 2 present the results of the correlation coefficient is very high for the whole GCC countries, which is not surprising results where it agrees with many other studies (Malamud & Zucchi, 2019b).

Table 2: Pearson correlation between human capital and GDP

	Bahrain	Kuwait	Saudi Arabia	UAE	Oman
In level	68.6%	58%	89.5%	90.1%	74.5%
In deference	-46.7%	-19.4%	-3.3%	-18.1%	-12.5%

The more apparent results lie in table 3, which manifesting the Granger casualty tests for Human capital and GDP. The casualty relationship between HC and GDP is evident, as is the case in Bahrain, Kuwait, UAE, and Oman. While in Saudi Arabia, the results show causality runs both ways, which means there is a reverse effect from GDP on HC. This study was not limited to analysing secondary data, but also addressed data and reports from the Human Capital Index in the 2018 report. The World Bank launched the Human Capital Index (HCI) in 2018. The index measures the next generation's human capital, defined as the amount of HC that a child born today can expect to achieve, given the risks of poor health and poor education currently prevailing in the country where that child lives. The HCI has three components: the first component reflects that children born today need to survive healthily until five years old. Second, the expected years of learning-adjusted school. Third, the indicators for a country's overall health environment (Onyimadu, 2015). The objective of the HC Project is to promoting interest in the development of human capital because of its great importance in achieving sustainable economic growth and poverty reduction.

In an article by World Bank President Jim Y Kim, he states, "with the right measurements, an index ranking the human capital in countries will be hard to ignore. It can help galvanize much more—and more effective—investments in people" (Ousama et al., 2019). Table 4 demonstrates the rank of each country in the GCC. Bahrain and UAE in ahead and achieve a prominent position over the world.

Table 3: Schooling and population surviving

Country	Probability of Survival to Age 5	Expected Years of School	Adult Survival Rate	GDP/ per capita/2020
Bahrain	0.99	12.8	0.93	23,504.0
UAE	0.99	13.5	0.94	43,103.3
Oman	0.99	12.8	0.91	15,343.1
KSA	0.99	12.4	0.92	23,139.8
Kuwait	0.99	12.0	0.94	32,000.4

Source: World Bank report of The Human Capital Index (HCI), 2020

To illustrate HCI's nature, Table 5 explains the main components and metrics of the Human Capital Index.

To achieve this study's purpose, we use extra data from diverse sources to provide real evidence of testing the relationship between HC and economic growth. Therefore, the Global Innovation scale used to investigate the GCC countries rank in human capital contribution to knowledge and innovation. The Global Innovation prepared by three international bodies, Cornell University, INSEAD, WIPO, and aims to provide detailed metrics about the innovation performance. Its 80 indicators explore a broad vision of innovation, including political environment, education, and infrastructure, and business sophistication. Table 5 illustrate the score of the GCC countries

Table 4: GCC Results of HC on Global Innovation Index (GII) 2020

Country	GII 2018	GII 2019	GII 2020	Score (0–100)
UAE	36	38	34	41.79
Kuwait	60	60	78	28.40
Saudi Arabia	61	68	66	30.94
Oman	69	80	84	26.50
Bahrain	72	78	79	28.37

The United Nations Development Program (UNDP) launched its Global Knowledge Index, where Switzerland topped the world countries with a value of 73.6 on the list. The index measures the knowledge performance of the world's countries in 7 areas: pre-university education, technical education and vocational training, higher education, research, development and innovation,

information and communication technology, economics, and enabling environments. The index, which is issued annually and launched in 2017, covers 138 countries around the world, and its results provide an insight into the performance of each country in terms of its knowledge infrastructure, to guide and inform policy-makers, researchers, civil society and the private sector to cooperate in various aspects of policies to strengthen knowledge-based societies and fill gaps. Knowledge, according to what the United Nations Development Program knows. Among the countries in the region, the United Arab Emirates ranked 15th on the list globally, and first in the Arab world, followed by Saudi Arabia in the 42nd and Bahrain 43 place globally as shown in

Table 5: GCC Results of HC on GK Index & GE index 2020

Country	Global Knowledge Index 2020		Global Entrepreneurship Index 2020	
	Value	Rank	Value	Rank
UAE	66.1	15	53.5	26
Kuwait	45.8	65	42.8	39
Saudi Arabia	50.9	42	40.2	45
Oman	47.5	58	46.9	33
Bahrain	50.9	43	45.1	35

Global Entrepreneurship Index 2020 deals with the development of entrepreneurship in various countries, and the report is the largest study on entrepreneurship and its activities in the world, as it includes a summary of the research that the observatory conducts on global economies to measure the extent of their "entrepreneurship". The report's methodology focuses on achieving three main objectives: Measuring differences in entrepreneurial activity business across world economies, understanding the entrepreneurship ecosystem, uncovering the factors affecting it, and proposing policies that can help boost the level of entrepreneurial activity in the participating countries.

The index is based on measuring the rank of the participating countries on many sub-indicators within a flexible structure that includes axes such as finance, government policies, government programs directed to entrepreneurs, research and development and knowledge transfer, teaching entrepreneurship skills in school and university education, the dynamism of the labour market, and the supportive infrastructure. And the culture and societal outlook in support of entrepreneurship, and others. UAE achieved the top rank in the GCC country and 26 globally, while Oman and Bahrain 33 and 35 respectively as shown in Table 5.

6. Discussion

In the last decade, media, communication and informatics technology has affected economic sectors and various aspects of human life, and the development witnessed by the world is most often attributed to what each country possesses knowledge in the field of economic sciences, and knowledge has become the main factor in contrast to labour and capital workers, which led many to interpret what It happens that it enters a new economic arena based on knowledge as an important element in the economy and the key to the success of development and economic programs. The investigation of the data indicates that the GCC countries give a great interest in education and health, which is evident in these countries' progress in the human capital index as shown in Table 3. But this does not necessarily have to make a positive contribution to countries' economic growth that depends heavily on oil revenue in their economies. Three of the co-cooperation countries, Saudi Arabia, Kuwait, and the UAE, were among the first to join the World Bank's Human Capital Project, demonstrating their commitment to improving their human capital.

This study's findings revealed a stable relationship between HC and economic growth as it has a substantial impact on economic growth by developing the economy by applying the knowledge and skills of individuals in various aspects of the economy to knowledge capital. This relationship can be measured by looking at the proportion of investment in people's education. So the interest in higher education was through the development of its strategy, outputs, missions, and work on regulations because the state is well aware that the knowledge that people gain through education helps develop the economy and leads to economic growth.

Schultz tried to find more adequate explanations for the increase in income, seeking to divert attention from little attention to the money-generating assets of interest in those fewer material assets, which is the human capital finances (Ranis et al., 2000). Schultz has been fortunate to neglect social wealth researchers and avoid any systematic analysis of this revolution. His concept of investing in human capital is a significant contribution to the economy. He noted the need to consider the skills and knowledge of the individual as a form of capital that can be invested. A creative learner trained to understand, absorb, transfer, localize and develop the world of innovation and research and development is the only force that can produce a diverse, reliable, and cohesive knowledge economy (Schultz, 1961). Well-established sufficient information infrastructure in the education system in GCC countries includes libraries, information centers, and electronic libraries, providing information sources, knowledge bases, and the necessary technology, helping to communicate, generate, breed, and grow knowledge.

Also, the existence of a robust electronic architecture structure includes computers, information networks, particularly the Internet, expert systems, and others, and published studies have shown that investment in ICT has boosted development. Productivity and the contribution of IT investments to productive growth outweigh those of other investments, provided that significant organizational changes. Besides, accompany it, modern communication technology increases the

ability to share knowledge across the boundaries of specialized, educated organizations more easily and access information from far-flung locations more quickly and effectively.

The excellent support to the Research and Development aims to develop and update the graduates with products and services, thereby increasing their demands in the labour markets and finding quick solutions to technical, administrative, and financial problems that may affect their annual revenue and profits (Schultz, 1993).

The Kingdom of Bahrain topped the first edition of the World Bank's Human Capital Index in the Middle East and North Africa, which focuses on the health and education sectors and measures new-borns' productivity by the age of 18. Bahrain has achieved outstanding performance in education, with the GCC countries ranked first in academic achievement, and Bahrain ranked first in the world in the number of years a student spends academic performance, with an average of 13.3 years per person during the first 18 years of life. In parallel with education, Bahrain was ranked first in terms of key health measures, such as adult survival rates (proportion of 15-year-olds living up to the age of 60) and child survival rates (percentage of children living up to the age of five). These findings are similar to recent studies where they reported that government expenditure on education has a positive influence on the output (Shih et al., 2010); (Stam & Garnsey, 2008).

The findings also confirm a strong relationship between human capital and economic growth as it has a substantial impact on economic growth by developing the economy in applying the knowledge and skills of individuals in various aspects of the economy to knowledge capital. Over the past few years, the Kingdom of Bahrain has witnessed significant developments in the health and education sectors, with the UNDP Human Development Index now ranking it among countries with very high human development, improving the kingdom's ranking by 13.4% between 1990 and 2017. The World Bank's Human Capital Index is further evidence of Bahrain's outstanding performance following basic economic and social sustainability standards. Bahrain recognizes that improving the skills and health of the population and developing their knowledge and culture is an essential pillar for the country's future development. Those efforts reflect positively on Bahrain's results in this indicator. Comparing the results of the Human Capital Index in Bahrain with its counterparts in the region, the Bahrain Index shows higher levels of females than males due to their higher educational achievement. In contrast, the index results for females and males appear almost identical in the health field. Investment in human capital is even more critical as scientific and technological developments are changing people's lifestyles and work worldwide, with Bahrain's ranking rising by 6% on the index since the launch of this research project five years ago, specifically in 2012.

The UAE has outperformed regionally in the Human Capital Index, recently released by the World Bank. This indicator measures the human capital that a citizen is expected to achieve from birth to the age of 18. More precisely, the index measures the productivity of a citizen at the age of 18. In this index, the UAE received 66%, outperforming all countries in the Middle East and North Africa region. The index consists of four sub-indices so that each country's balances are grouped into all four indicators to calculate its final balance. For the first indicator, the probability of survival to the age of five, 99% of the UAE's children are at this age. In the second indicator, which is the

expected years of study that a citizen will achieve at the age of 18, it was found that the UAE national is 13.1 years of research. In the fourth indicator, the probability of a 15-year-old surviving citizen until the age of 60, the UAE achieved 93%. The World Bank's report indicated that economic growth in the UAE rebounded last year with ongoing transactions continued to recover, while measures to facilitate public finances are currently being implemented to facilitate non-oil growth. According to the report, the UAE's 2019 budget indicates increases in spending, while the federal budget of AED 60 billion is 17.3% higher than the 2018 budget, the largest in the UAE's history. Although oil prices in 2019 are expected to be lower than earlier forecasts, VAT revenues are expected to offset the decline in oil revenues partially.

The report of entrepreneurship, issued by the Washington-based Global Entrepreneurship and Development Institute (GEDI), includes the Entrepreneurship Index which ranks 137 countries in the world and provides a detailed view of the entrepreneurial and entrepreneurial system in these countries, by combining individual data and institutional components. The index aims to measure the quality and size of the entrepreneurship process in the target economies. The index provides a deep understanding of entrepreneurship by assessing the entrepreneurial and commercial attitudes, capabilities and aspirations. The report noted the GCC's ongoing reforms to improve the business environment in the region, but achieving more sustainable economic growth requires the GCC. The UAE's Global Technology Center is working to achieve the common goals of both the UAE and the World Bank and achieving inclusive economic growth by providing a platform for sharing experiences and best practices in advisory services and technical support and encouraging the adoption of the latest technologies.

However, no matter how high the economy's indicators and expenditures on education and health can clearly show the readiness of human resources to work and perform in general. But what is difficult to determine in the light of the indicators used is the extent to which human capital contributes to economic growth or, rather, the effectiveness of people working in the government and private sector in achieving the knowledge economy in particular. This study uses an indicator of the Global Innovation Index GII for this purpose. The essential fact that the development of education systems in the GCC countries is a fundamental component of the knowledge-based economy infrastructure, such as supporting and financing schools and universities, disseminating information technology, and improving teachers' quality in various stages of education. And the development of policies based on clear strategies to change and encourage creativity and innovation. Also, independence and freedom to think are all requirements for these systems to provide the services they want in the new economy. The creativity in teaching methods and the exploitation of technology in access to and generating knowledge become an integral part of the education process.

In this regard, Boisselier refers to some definitions of moral elements to the analogy of technical

capital to the combination of material (Stolz et al., 2011). Non-material factors are produced and used, which can increase the productivity of human labour. Therefore, the moral elements can be integrated into the technical capital to attribute it (generally) the characteristics of physical capital. The enormous spending on HC may seem unnecessary, but this investment is essential and fruitful in terms of its motivation and impact on labour productivity. The direct spending on health, education, and programs of localization of jobs to get better jobs and indirect or implicit spending on the HC. Linking the concept of an intangible investment of Human capital to information and the significant transformation of production systems, he defined it as a deviation from intellectual production that can permanently integrate into things, individuals, and organizations (Storey, 2005). HC, such as the implicit incomes that students give up for full-time study and implicit incomes that work during their training periods, and the use of rest time to improve skills and knowledge - all these types of spending. Implicit or indirect leads to improving the quality of the human element and maximizing its productivity, coming out of this with the result that such investment in human capital is the main reason for most increases in each factor's real receipts.

7. Conclusion and Recommendations

Human capital is considered an essential and important factor in economic development. However, the process of preparing it requires an effective educational and training system in order to prepare entry to the labour market and contribute to the creation of wealth. And the importance of the size of its outputs or the structures and facilities equipped for it, to the extent that it is measured by the extent of its ability to provide the labour market with trained, qualified and specialized workforce according to the requirements of labour market and economic development.

Diverse studies have affirmed that innovation has a crucial job in economic turn of events. The GCC innovation area faces various snags that hinder its improvement, like little variety of the economy, the low extent distributed to spending on innovative work as a level of GDP, the low degree of high innovation trades as a level of made fares, the low portion of the labour force utilized in information serious exercises and challenges in gaining admittance to reserves. While GCC has begun to zero in additional on the improvement of the development and pioneering climate through semi-administrative offices and through setting up scholarly free-zones, the general climate is as yet loaded with various issues that frustrate the accomplishment of this objective. GCC nations additionally still need to put more exertion in innovation and business to close the hole to created nations. Regardless of these hindrances, Bahrain and the U.A.E have a decent worldwide positioning in development and related lists since they have put forth more prominent attempts, and have focused on this area than the other GCC States.

The HC is becoming a basis for the management of present and future investments. Consequently, there is growing interest in human resources and work to create and develop the best ways and mechanisms to invest its energies for competition and employ its mental and creative abilities in new and superior services and technologies. This situation has forced institutions that are mainly dependent on individuals with knowledge. The great challenge and vacancies have become a priority for individuals with knowledge, skills, and experience, called human capital.

This study tried to find an answer to the current question, how intangible resources represented by human capital contribute to implementing the transition from the production economy to the

knowledge economy. Previously, we explained that HC is characterized as the aggregate levels of education, training, skills, and health in a population (G. Becker, 1964). Thus, the GCC governments invest wealth to make an important foundation for stimulating investment expansion. In the field of scientific and practical knowledge and in the technology used, to honour knowledge capital directly contributes to increasing cognitive productivity, and increasing exports of knowledge products and to an important degree. In a knowledge economy, investing in knowledge and the technology used is to strengthen relations with customers, suppliers, users, and shareholders, and these relationships are the foundation of economic success. Its contribution to transforming the guidance of contemporary organizations from the intensity of investment in information technology to the concept of the organization Organizations realize that to be a cognitively intensive Learning Organization or an educated organization. This competition must benefit from what you know and what you learn.

HC is the key to achieving goals, developing ideas at work, and gaining a competitive advantage. This continuing competitive advantage is achieved through investing in human capital that helps create value and cannot be replaced or imitated because of its valuable skills and knowledge (Tang et al., 2008).

When transferring this knowledge, skills, work experience, and the production of new products, this helps to create added value for the enterprise through (new customers - more success - creativity and product improvement). Thanks to our investment in human capital, this will increase productivity, achieve excellent performance, increase customer satisfaction and maintain it by providing new and useful services, working on innovation, creating new knowledge, and recruiting this knowledge. Economic growth is used as a benchmark for comparing countries during the same period. It is also a method that enables countries to make evolutionary efforts that can include economic measures to address imbalances promptly. Contemporary business organizations live in a highly competitive environment, and adapting to this environment requires that they value their diverse resources. To overcome their capabilities and adapt to the increasing dynamics of the competitive environments in which they operate.

This study proposes several recommendations to enhance human capital in the GCC countries. Increase the investment in early childhood learning and preparing young people for the demands of the future by improving their learning outcomes, linking education to the needs of the labour market, and reducing key health risk factors such as smoking and inactivity. Also, emphasizing HC lifelong learning, increasing female labour participation, reducing the disparity between skills and labor market requirements. Although the report praises ongoing reforms for improving the region's business environment, it believes that more sustainable economic growth requires GCC to continue to support fiscal consolidation measures, diversify economic activity and promote private sector-led jobs, particularly for women and young people (Thomas et al., 2013). Besides, implementing a series of education reforms to ensure the demand for the knowledge-based

economy (Tok, 2018). On a related level, the great transition, particularly after the Covid-19 procedures, confirmed a virtual economy. As information technology and the internet have helped create virtual organizations, and these organizations are an example of the transition from physical-work to virtual work, it has become possible with digitization and networking. The knowledge economy is also characterized as being more abundant than a scarcity economy, and this is unlike resources that are diminished by consumption while, in fact, knowledge of practice and use increases and is spreading by market participation. Virtually and digital organizations where there are no time and space constraints, high efficiency, and accelerated transaction scoring across the globe.

Supporting and advancing the human resources limit with regards to innovativeness and development in GCC nations is fundamental. To this end a bunch of strategies ought to be followed, to establish a positive climate and give the suitable abilities to energize and animate the imagination and activities of people, gatherings, organizations and of the private area. The interest of gifted and innovative individuals ought to likewise be animated, particularly in logical fields care and innovation, and to serious conditions ought to be made to persuade them. The private area should support and fund designers and trailblazers. Components ought to be made which will pull in skilled makers and trailblazers and offer them impetuses to work in research habitats. The foundation of little and medium endeavours ought to be energized through their appropriation by economic and specialized hatcheries. Consideration ought to be paid to the scholarly creation of researchers and trend-setters. They ought to be spurred to showcase their work, and fitting channels for distribution ought to be given. Logical social orders ought to be upheld and fortified and their job in the limit innovation and in public inventiveness and innovation ought to be created. Means should be found to vitalize the part of instructive foundations, the family, and society in the revelation of the talented and of trend-setters.

As the nations of the Gulf Cooperation Council (GCC) endeavour to contend in the 21st century, they face various difficulties, including fluctuating oil and gas costs, financial enhancement, and the need to develop human resources and make occupations for GCC nationals. To address these difficulties, the Arab Gulf states are leaving on information based financial turn of events. To improve human resources, GCC states have made liberal interests in financing instruction at all levels, telecom foundation and administrations, and Science, Technology, and Innovation (STI). There is room, notwithstanding, to augment profits by these ventures, and there are numerous chances for GCC states to profit by information based economic turn of events. A business-accommodating climate, including straightforward guidelines, financing components, and investment, is needed to make occupations for GCC nationals and to empower youthful business people and pioneers to market demonstrated exploration yield and imaginative thoughts. This paper will feature and survey information based economy, the data society, innovation environment, and key STI pointers for chose nations, including the GCC states, and contrast them and the BRICS gathering of nations: Brazil, Russia (Russian Federation), India, China, and South Africa. Also, it will investigate a correlation of execution of GCC and BRICS nations as far as The Networked Readiness Index 2020, The Global Innovation Index 2020, Key STI Indicators, and the "Working together 2020: Going Beyond Efficiency." Finally, the paper will audit GCC states' new activities and accomplishments toward information based turn of events and blueprint future difficulties and openings.

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