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ABU DHABI CHAMBER

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# Education Services in Abu Dhabi

November 2019

In association with  IHS Markit



# Dear reader



Skills are the tools and key resources of a modern market economy. The more skills, and marketable skills in particular, are acquired, the more a country will be able to flourish and grow.

Abu Dhabi is facing a challenge as it transitions from an oil-dependent economy to a modern market economy that rests on the brains, skills, and innovations of its population. As this report will show, a formidable challenge in skill development and the educational sector is still waiting for Abu Dhabi.

Abu Dhabi has a relative abundance of high-skilled and low-skilled workers. However, medium-skilled workers—primary white-collar ones such as office clerks and support, legal, admin, social, cultural, health professionals, and medium-level technicians—are missing. This is particularly apparent if Abu Dhabi's development is projected into the future, with an eye on the realization of the Vision 2030. This report is doing exactly that.

On top of the decisions that have been taken, Abu Dhabi needs to support education and training of the medium-level segment of the labor force. Vocational training comes

to mind given the high share of nonresident workers in the Emirate.

A training program for qualified workers would raise the number of available workers—this would be tailored for the specific needs of an employed person. Moreover, recent decisions, such as the development of new schools by the Abu Dhabi Department of Education and Knowledge (ADEK), are moving in the right direction. The Abu Dhabi Center for Technical and Vocational Education and Training (ACTVET) has already taken the right steps and might need further support.

At the same time, though, Abu Dhabi must not lose focus on the high-potential, high-skilled innovators. New awards have been created, and universities are already competing with other countries for the brightest young talent. Collaboration with foreign universities should be further intensified.

The Abu Dhabi Chamber is also providing seminars and workshops to support training. With this report, the Abu Dhabi Chamber hopes to share what can be done so that Abu Dhabi's workers' skills match the needs of a modern market economy.

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Key Sector Permissions Coordinator  
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Fax + 971 2 6215867  
E-mail: [contact.us@adcci.gov.ae](mailto:contact.us@adcci.gov.ae)  
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### Education system

Abu Dhabi—and the UAE in general—is characterized by a rapidly rising population. Roughly 3 million people currently live in Abu Dhabi. Just one-sixth—about 500,000—are actual residents, and the rest—about 2.5 million—are foreign residents living and working in the Emirate (see chart 1).

The standard of living is high thanks to the abundance of natural resources. Abu Dhabi's economy still bears the characteristics of an emerging market in many ways, though, and its education system needs to develop further capabilities to produce the quality skills a modern market economy requires. In some areas excellence is already provided, but some are still lagging.

The Department of Education and Knowledge has spearheaded a number of new initiatives to improve primary, secondary, and tertiary education in Abu Dhabi. It recently launched a new initiative for charter schools with an American curriculum.

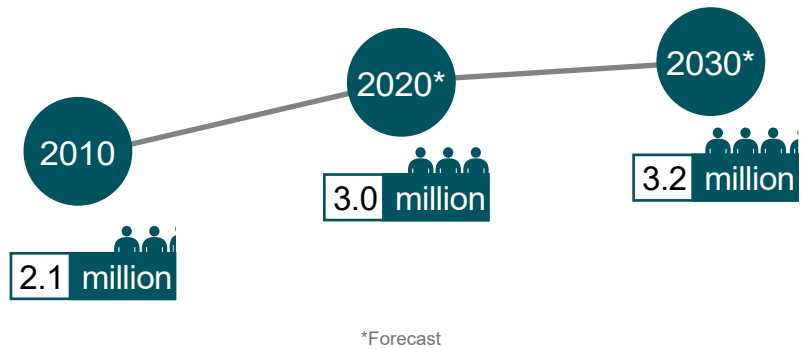
The project is part of the “Ghadan 21” initiative from the UAE government. Having started with a pilot project in 2018, 12 more charter schools will start operating in 2019–20 in Abu Dhabi city and Al Ain.

### Abu Dhabi's specific challenge

The core target group of Abu Dhabi's education policy are the residents of the country. An adult male and female's role in society, in the labor market, in politics, and in the household after leaving school remain unequal, with a 2:1 ratio of male to female citizens in the labor force. Labor force participation is an important measure of how women and men participate in the economy (see chart 2).

Since sustained growth is hardly possible without the labor force provided by nonresidents, though, there is also an

Chart 1: Rising population of Abu Dhabi



Source: SCAD; Department of Economic Development; IHS Markit

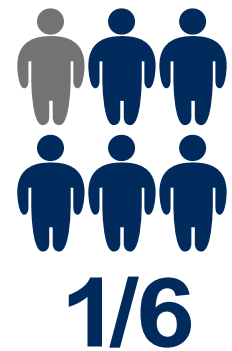
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incentive for the government to provide affordable education services to the nonresidential part of the population. The ratio of noncitizen males to females in the labor force is even higher at 3:1.

Abu Dhabi and the surrounding region is unique with its abundant stream of nonresident workers. While this provides an affordable labor supply, it also creates challenges for the provision of services. Residents and nonresidents don't only need building workers to develop living space, but also office clerks, vendors, shop assistants, lawyers, administration workers, logistics staff, IT experts, and other workforce.

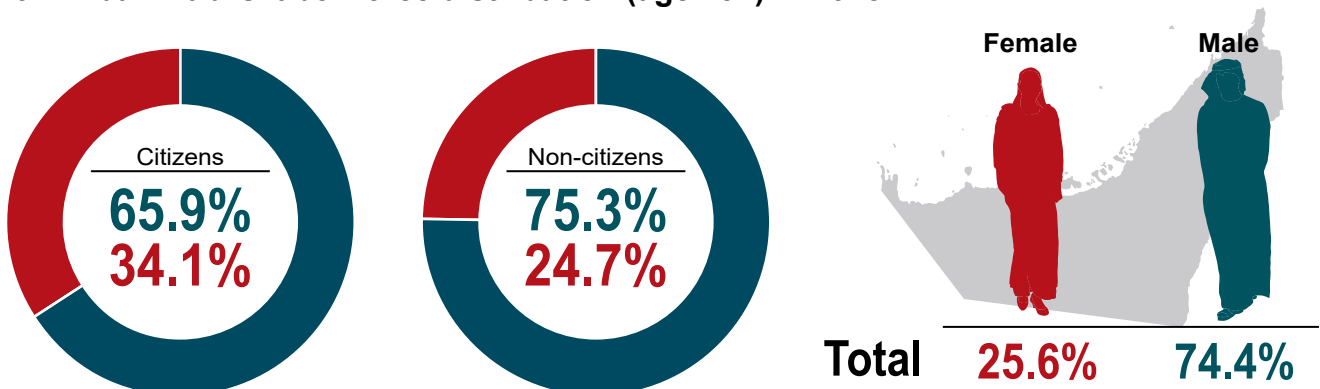
They also need a perspective for the longer term, so the creation of new job opportunities is important, especially in the private sector. Emulating successful ventures from abroad is important, but for Abu Dhabi to thrive, new jobs need to be created in spheres that are close to the frontier of current technologies. Novel ideas are in high demand. Abu Dhabi and the entire UAE are competing with other regions around the globe for the best brains.

Foreign workers are attracted by Abu



of all Abu Dhabi residents are citizens

Chart 2: Abu Dhabi's labor force distribution (age 15+) in 2018



Source: SCAD

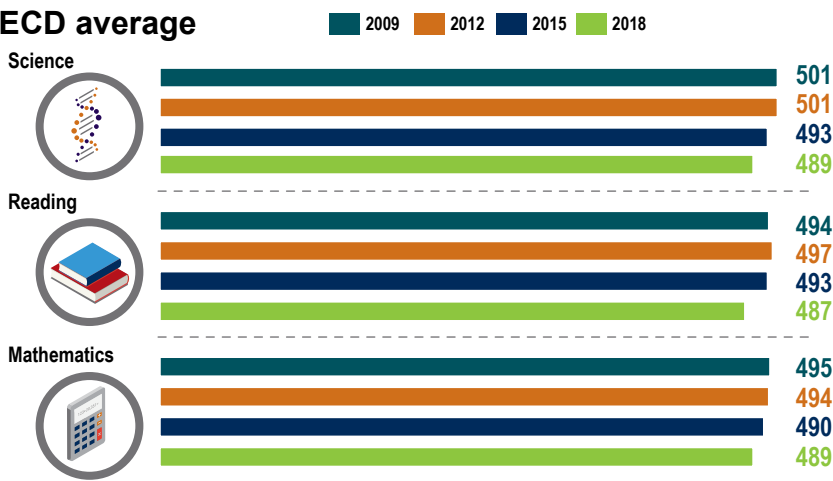
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### Chart 3: PISA results for UAE



### OECD average



Source: SCAD; Department of Economic Development; IHS Markit

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and universities from other countries, notably the US.

The rationale for this decision is sensible. Abu Dhabi wants to benefit not only from having big names onsite, but also wants its own education institutions to flourish by cooperating and/or competing with the big foreign education brands.

Moreover, the benefit from cooperation and other close linkages with the home institution surely plays an important role. The attraction of research and development and eventually the creation of new companies in Abu Dhabi is also a main motivation for those efforts.

There are several country surveys out there which aim to rank countries in terms of success of their education systems. For this report, we will focus on two of them, which are reckoned the most comprehensive in their own category. This is the Programme for International Student Assessment, the so-called PISA-test from the OECD, covering 70 countries, and the Times Higher Education World University Rankings.

The UAE joined other rankings as well, such as the TIMSS (Trends in International Mathematics and Science Study)- and the PIRLS (Progress in International Reading Literacy Study)-survey provided by the International Association for the Evaluation of Educational Achievement (IEA). However, the PISA-survey from the OECD combines these two under one roof and is thus the most comprehensive single test worldwide.



# 79%

of emirate students attend public universities

Dhabi's wealth. To sustain the attractiveness, Abu Dhabi needs to make itself fit for the challenges of the global market. This includes an attractive, world-class education system. We will now focus on how attractive Abu Dhabi's education system is from the perspective of international rankings.

### Supply side of labor market: System of education in Abu Dhabi

Abu Dhabi's education system has a central role to play in the Emirate's transition away from an oil-dependent economy. The mission statement is clear: produce enough qualified, especially high-skilled workers and entrepreneurs which are needed of a modern market economy.

Now what exactly are these skills, and how can the education system facilitate them? Clues to that question are offered by international rankings of education institutions and the system of education.

Abu Dhabi compares itself with the best education systems of the world. It has made great efforts to lure highly-regarded schools

### International rankings of secondary education

The PISA test is taken by questioning 15-year-old students. They are examined with respect to their mathematical, science, and reading skills, and those skills are tested with respect to factors like gender and social status. The numbers, which are usually quoted in the press refer to the median student with respect to the quality of their answers, while the distribution of the sample around that median student varies from the country to country (see chart 3).

The UAE has taken part in the PISA study already four times: 2009, 2012, 2015 and 2018. The results for all four surveys have been published, with the most recent results for 2018 being published in December 2019.

The latest results signal that UAE's education sector backtracked slightly in two of the three aspects – reading and science – and improved in maths compared to the results from 2015. Putting the results in context with rest of the OECD though, reveals that the OECD average (and the average for other non-OECD countries) declined too.

This means that UAE's position in the country ranking was not fundamentally altered.

Among the 70 nations which took part in the PISA survey, the UAE has been categorized in the third country bucket out of three, reflecting that its education system still has some space to catch up with the high-performers. That being said, the UAE are still the best performing Arab country.

A salient feature of the UAE's recent PISA results is the fairly strong discrepancy between boys and girls. For the three main categories, girls always outperformed boys, by a stark margin in reading and a bit less so in science. Even in math, the median girl student was slightly better than the median boy.

Closing this gender gap in education is one of the key tasks for the UAE education officials. For the next survey, which will be published in 2022, the UAE aspires to be among the top 20 nations in the OECD ranking. This is a tall goal and will be achieved only if the gap between boys and girls is substantially narrowed.

There are several reasons why boys tend to trail girls in this gender gap. Teacher quality is important, but several factors contribute. Girls tend to be more focused, they mature quicker, and develop at different rates than boys. Putting together an engaging curriculum that is interesting to all students and takes into account different learning styles is essential in order to narrow the gap and bring boys up to speed.

### Tertiary education

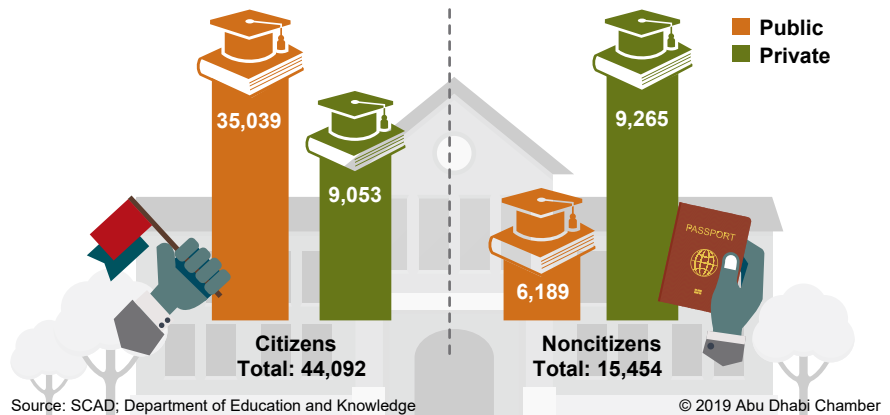
Higher education in Abu Dhabi is available in several forms including public schools, private universities, and global partnerships, both for Emirati and expat students (see table 1).

### Public vs private institutions of higher education

Public Universities, also referred to as government institutions, offer quality education free to Emirati students with competitive admissions. There are three public institutions of higher education in Abu Dhabi: United Arab Emirates University (UAEU), Zayed University, and the Higher Colleges of Technology.

Private universities are popular for expat students, as well as Emirati students. There are several private universities with campuses in Abu Dhabi. International accreditation is recognized by several of Abu Dhabi's private schools. The Ministry of Education is responsible for the accreditation of private institutes through its Commission of Academic Accreditation. Private institutes play an important role across the UAE.

**Chart 4: Higher education students by sector in 2017–18**



Source: SCAD; Department of Education and Knowledge

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According to the Statistics Center – Abu Dhabi (SCAD), total enrollments in higher education were 59,564 during the academic year 2017-18. 79% of emirate students attended public universities, most likely the percentage is so high since government institutions offer education is free of charge to citizens. Meanwhile, 40% of expat and non-citizens attended public universities while the remaining 60% opted for private (see chart 4).

**Table 1: Tertiary education**

Local public universities	
Higher Colleges of Technology	
United Arab Emirates University	
Zayed University	
Private universities	
Khalifa University	
Al Ain University	
Abu Dhabi University	
Khawarizmi International College	
Fatima College of Health Science	
Emirates College of Technology	
Abu Dhabi School of Management	
Emirates College for Advanced Education	
Abu Dhabi Polytechnic	
Mohammed V University Abu Dhabi	
European International College	
International branch campuses	Home country
INSEAD	France
New York Film Academy	United States
New York Institute of Technology	United States
New York University Abu Dhabi	United States
Paris-Sorbonne University	France
Technical or vocational training	
Abu Dhabi Vocational Education and Training Institute (ADVETI)	
Emirates Institute For Banking And Financial Studies	
Petroleum Institute	



### #1 ranking

for UAEU in the UAE and

### #301–350

in the world, in the 2020 World University Rankings

### Global partnerships

Higher education institutions in the United States, France, and other countries are expanding internationally. Abu Dhabi hosts five international branch campuses (IBC) in the Emirate through global partnerships. These branch campuses also benefit by being recognized by the school's host country.

Abu Dhabi would benefit by having more global partnerships, with more branch campuses offering more variety. The choice to setup an IBC is primarily made by the international institution. However, Abu Dhabi as the host country has the ability to create regulatory policies that will impact IBCs.

### Rankings of higher education

The Times Higher Education World University Rankings 2020 ranks almost 1,400 universities across 92 countries. The two Abu Dhabi universities recognized in the 2020 global rankings are United Arab Emirates University (UAEU) and Khalifa University. UAEU ranks in the 301–350 grouping, placing it in the top 23% of internationally ranked universities. UAEU has steadily increased its global presence in the past few years, moving up from the bottom half (55%) in 2018 to the top 23% in 2020. Khalifa University has steadily ranked in the top 300–400, placing it in the top 27% of all globally ranked universities (see chart 5).

The Times Higher Education World University Rankings study is recognized as the largest university ranking to date. Its methodology includes assessing 13 performance indicators covering topics such

as teaching, research, citations, international outlook, and industry income.

A regional ranking performed by QS Top Universities is worth noting, ranking the top 130 Arab universities in the region. In the 2020 Arab Region University Rankings, UAEU ranks high at 5th place, closely followed by Khalifa University at 12th in the region. Zayed University, with campuses in Abu Dhabi and Dubai, came in at 20th. Two other local universities placed in this study: Abu Dhabi University at 27th and the Al Ain University in the 101–110 grouping. This Arab region study was created to reflect regional challenges and priorities, taking several indicators into account.

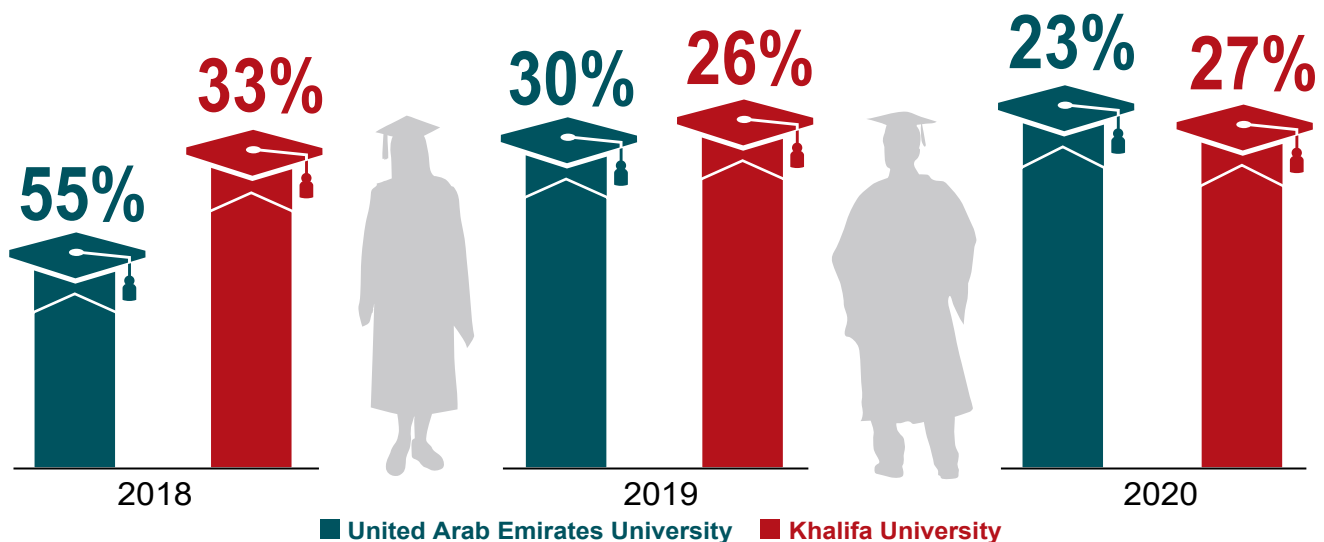
### Vocational training

In addition to tertiary education offered by local and international universities—public or private—another option is technical or vocation training. These schools prepare students for jobs requiring specialized training. Examples include technical qualifications such as car mechanics, electrical and electronics engineering, travel and tourism, fashion design, and information technology.

According to a 2014 study by Deloitte, vocational education represents only 1–3% of academic enrollments in the UAE, compared with the global average of 10%. Vocational training is critical to the society as it teaches real life transferable skills. Increasing on-the-job training or vocation training will partly help to mend the skill gap that the region will encounter in the next 10 years.

One factor regarding the gender-gap in

Chart 5: Global performance of Abu Dhabi's internationally ranked universities



Source: The Times Higher Education World University Rankings; IHS Markit

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schools is there are few low-skilled jobs available for young women, so women pursue higher education in universities. While female careers are recognized and women matter in the workforce, it can be considered dishonorable for women to work alongside men in service jobs. Meanwhile, men have additional opportunities outside of university study within vocational training, such as the police or military.

The Abu Dhabi Center for Technical and Vocational Education and Training (ACTVET) has stepped up to this challenge and has opened several centers in order to expand its vocational training system. However, more is needed to accommodate the growing numbers. The goal of the center is to increase the number of skilled young Emiratis, while providing training and educational opportunities.

### Demand side of labor market

The International Labour Organization (ILO) publishes an estimate of the occupational structure for the workforce of countries globally (based on ISCO 08-classification—the internationally accepted norm for occupations). Estimates are available by country, and for the UAE (albeit not for Abu Dhabi), an annual estimate is produced as well, including a forecast of occupation demand running until 2022 (see chart 6). The breakdown can be used to assess future labor demand by occupation for the UAE economy. It reveals what has been known for quite some time: the UAE and Abu Dhabi need more skilled white-collar employees and smart technicians, while low-skilled workers are already abundant.

The comparison with the labor demand in 2030 visualizes the challenge. The year 2030 was chosen because it is the target year of Vision 2030, which aims to transform the Abu Dhabi economy into a modern market economy that is much less dependent on carbon-based resources. In other words, an average western economy would be a good model case.

Based on what the typical G7 economy currently employs and using ILO and IHS Markit forecasts for the UAE labor force, we thus derived an estimated breakdown of labor demand for the UAE economy in 2030.

The share of managers—this includes all sorts of employees at different managerial levels and sectoral background—is broadly the same between how the UAE looks now and what is required in 2030. Still, since the UAE economy will continue to expand and the population will continue to grow, a higher absolute number is required.

“The real asset of any advanced nation is its people, especially the educated ones, and the prosperity and success of the people are measured by the standard of their education.”

- His Highness Sheikh Mohamed bin Zayed Al Nahyan

The most needed occupations in the UAE will be professionals, technicians, and clerical staff. Professionals, which include highly skilled persons in science and engineering; health professionals; teachers; business and administration professionals; IT experts; and legal, social, and cultural professionals will need to add nearly 500,000 individuals.

The group of technicians and associate professionals, including low-to-medium-skilled science workers and engineers, health professionals, etc. need to grow by roughly the same amount.

Most needed is clerical support workers, which will have a discrepancy for the UAE in 2018 and 2030 of nearly 600,000 workers. This is the part of the workforce that in most economies runs the daily business and obtains average pay but is in relatively short supply in the UAE.

Sales staff and other service workers will also be in higher demand, but much less compared with the professionals, technicians, and clerical staff. Meanwhile, craft workers, plant and machine operators, and workers on elementary occupations and in the primary sector are less needed in the future.

These numbers should not be applied in an overly strict sense. The numbers are an estimate, and the structure of occupation in the UAE will likely look different from the picture of the UAE economy that is painted here. Technological changes, which cannot be foreseen, will demand new jobs and entirely new occupations. Although there is still value in these results since they clarify where the issues are, and the size of the problem.

To put it simple—the UAE needs to educate and train about 1.5 million predominantly white-collar employees to perform a successful and sustained transition to a modern market economy.

### Investment opportunities

Abu Dhabi needs to continue emphasizing education, especially tertiary education, and the cooperation between local universities and companies. While everyone agrees this is necessary, there is still a lack of qualified local MBAs, engineers, lawyers, and other staff needed to run a company. A shortage



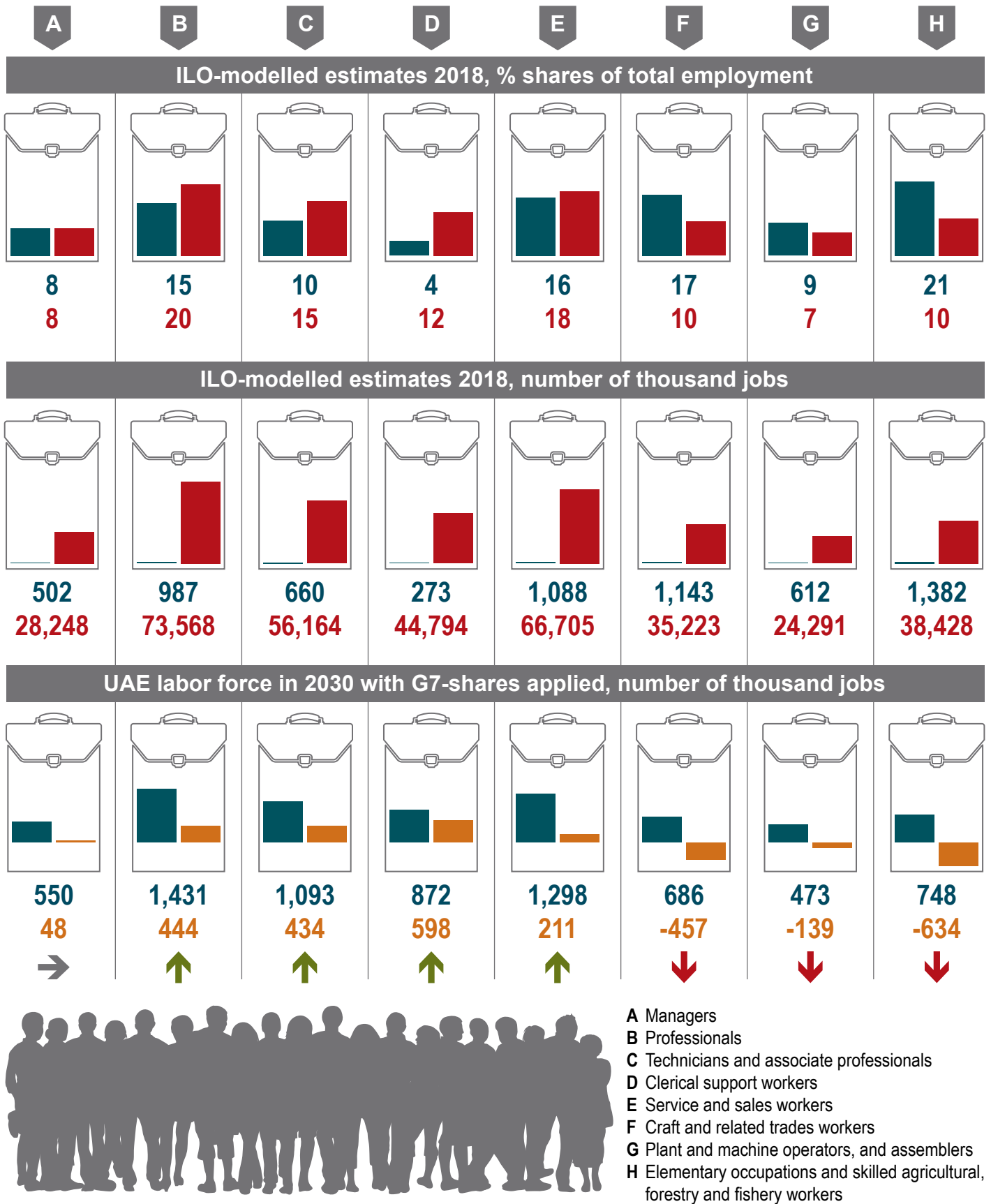
1–3%

of academic enrollments in the UAE are vocational



Chart 6: Employment by occupation

KEY: UAE G7 member states Jobs needed



Source: ILO estimates; IHS Markit

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of skilled manpower, particularly engineers, provides an opportunity for improvement. Investments that target career relevant programs will be well-received, especially in the vocational training segment.

Significant investment opportunities are open to the private sector owing in part to growth in student populations and because of consumer preference for private education. Enrollment growth supports opportunities to establish new schools, and private schools are critical to educational development. ADEK is committed to facilitating investment in the private sector.

Investing in education will also attract and retain the best innovators. To facilitate innovation, a strong base of STEM (science, technology, engineering, and mathematics)-related programs are needed to attract undergraduates. Programs should emphasize diversification. New industry partnerships will encourage R&D activities as investing in R&D will further enhance the education sector.

Investment in education institutions is one possibility for the private sector to help close the skills gap. However, offerings should be extended to current employees since most of them will continue spending their working life in Abu Dhabi for another decade or more, and companies have every interest in investing in their skill set.

Companies in Abu Dhabi can thus contribute their own share to mend the gaping skills need. Facilitating easy access to in-service training and enabling existing colleagues to acquire new and much-needed skills is probably the best way to fill the lack of qualified personnel. Investing in on-the-job training will be critical to satisfy the growing need in the coming years, and there is probably nothing better for future employees than training with the possibility of direct application of the subjects learned.

For example, a scheme could be created where an employee spends half of the working time at a training facility and the other half working in the company for a finite timeframe. The government and ADEK could incentivize such initiatives with accompanying measures.

### Policy recommendations

Abu Dhabi could continue to diversify and expand its economy by promoting education and training. The government's policies should continue to incentivize innovation, research and development, and skills upgrades. These policies can be implemented through various grants and fiscal incentives.

Given the relative abundance of low-skilled workers, and the gap for medium-level skills

in the Abu Dhabi labor force, it would be wise to further strengthen efforts for training and in-service education. This should build on the efforts done by ACTVET. Incentives for in-service training should be given to employers and employees.

Another recommendation is to improve collaboration between universities and industry. Universities recruit students with bright minds who often provide industry research. One way to improve collaborations is to promote, fund, and facilitate partnerships. Training programs can be set up to provide experiences and expand opportunities.

Abu Dhabi should continue to communicate the value of diversity. While the labor force weighs more favorably to men, more females access higher education in Abu Dhabi compared with men for many reasons including school, family, and society. As a result, two issues become clear:

- Women need more access to higher paying jobs where they can utilize their higher education degrees. Attitudes toward women in the labor force are positive, but there is still room for progress.
- Boys and men need to be better motivated to maximize schooling opportunities that are available. Increasing focus on STEM-related subjects will help keep all children engaged in active learning. Emphasis on team work, problem solving, creative thinking, innovation, and technology will prepare students with the skills they need in the work force.

### Role of Abu Dhabi Chamber

Institutions like the Abu Dhabi Chamber play a key role for shaping the skill needs of the Abu Dhabi economy. Through its members, the Abu Dhabi Chamber has one of the best approaches to the skill demand of the economy, which will invariably change over time—the skill set demand of 2010 is clearly different from the one that will prevail in 2020, and that will again be different from the skill set of 2030.

The Abu Dhabi Chamber can provide its share of business education and training. However, more steps and a comprehensive approach need to be taken in order to support business education and on-the-job learning.

The size and skill set of the Abu Dhabi labor force can be forecast with reasonable certainty. Absent of major waves of migration or crises, the gap in the medium-level segment of skills will likely hurt the Abu Dhabi economy unless the right steps are taken. Recent policy decision point toward the right direction. ■



**1.5 million**

students needed to transition to a modern market economy

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## Contacts

**IHS Global GmbH**  
Friedrich-Ebert-Anlage 35-37, 60327 Frankfurt, Germany

**Dr. Ralf Wiegert**  
Associate Director Consulting – IHS Economics  
& Country Risk  
Ralf.Wiegert@ihsmarkit.com  
+49 (0)69 20973 320  
+49 (0)151 42628 143

**IHS Markit**  
300 Brickstone Square, Suite 500, Andover, MA 01810, US

**Janice Branco**  
Principal Consulting – IHS Economics & Country Risk  
Janice.Branco@ihsmarkit.com  
+1 781 301 9018

**Abu Dhabi Chamber**  
P.O. Box 662, Abu Dhabi, U.A.E

**Mohamed A. Rahim Sid Ahmed**  
Economic Consultant – Abu Dhabi Chamber  
m.sidahmed2@adcci.gov.ae  
www.abudhabichamber.ae  
+971 2 6177532  
+971 508101754

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**Address:** Main Building of Abu Dhabi Chamber, Corniche Road, P.O.Box: 662  
**Phone:** 00971-2-6214000, **Email:** contact.us@adcci.gov.ae

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