Talent Gap:
Ten-Year Employment Trends, Costs, and Global Implications

June 2021
Introduction

This PMI report is a ten-year outlook of project management-oriented employment (PMOE). To understand the growth of project management as a profession and skill, we analyzed industries that rely heavily on project management skills. In the report, these industries are referred to as “projectized industries” and include manufacturing and construction; finance and insurance; information and publishing; management and professional services; oil and gas; and utilities.

Using available data, we projected the need for talent and the size of the talent shortage for PMOE. A methodology was also developed to estimate the global economic impact of such a talent gap.
Globally, a gap between the demand for project management skills and the availability of talent continues to persist. This opens up a host of new job opportunities in PMOE for project professionals and all changemakers—those who, regardless of their role, are inspired and equipped to drive change and turn ideas into reality.

PMI research reveals three reasons for the persistence of the talent gap since we first began analyzing the data in 2008:

- An increase in the number of jobs requiring project management-oriented skills
- Higher demand for project professionals in emerging and developing countries due to economic growth
- The rate of retirement from the workforce

Upskilling the workforce, and empowering a new generation of talent with the necessary project management skills, will be critical in narrowing the talent gap.
The global economy needs 25 million new project professionals by 2030. To close the talent gap, 2.3 million people will need to enter PMOE every year just to keep up with demand—this includes project managers and all changemakers.

While COVID-19 has caused a contraction in PMOE, better-than-average growth relative to many job categories is expected after the pandemic.

The urgent need for workers with project management skills was further reinforced by a recent PMI study\(^1\) that cited project management as one of the top-five areas business leaders would like to prioritize in 2021.

As more and more industries become project-oriented, organizations will need to ensure their employees can acquire the project management skills they need to succeed.
The talent shortage is a considerable risk to organizations that rely on professionals to implement strategic initiatives on time, and within budget. This talent gap is likely to impact every region, resulting in a potential loss of up to US$345.5 billion in global GDP by 2030.

GDP at Risk in US$ Billions 2019–2030

In Sub-Saharan Africa, increases in the total workforce of projectized industries will compensate for any GDP risk due to a talent shortage.
Leading Sectors

Many industries, such as publishing and professional services, are becoming increasingly project-oriented. Growth in all these sectors is leading to greater demand for project management skills, creating even more job openings in PMOE over the next ten years.

The growth rate of PMOE within projectized industries is expected to be higher than overall employment in these industries. This indicates a higher demand for positions – and qualified people to fill them.

<table>
<thead>
<tr>
<th>Global PMOE in Projectized Industries</th>
<th>2019</th>
<th>2030</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing &amp; Construction</td>
<td>54,237,834</td>
<td>61,414,110</td>
<td>13.2%</td>
</tr>
<tr>
<td>Information &amp; Publishing</td>
<td>17,110,254</td>
<td>19,706,016</td>
<td>15.2%</td>
</tr>
<tr>
<td>Finance &amp; Insurance</td>
<td>9,657,125</td>
<td>11,091,517</td>
<td>14.9%</td>
</tr>
<tr>
<td>Management &amp; Professional Services</td>
<td>8,481,757</td>
<td>9,436,704</td>
<td>11.3%</td>
</tr>
<tr>
<td>Utilities</td>
<td>925,123</td>
<td>1,042,746</td>
<td>12.7%</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>159,551</td>
<td>159,348</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Total</td>
<td>90,571,644</td>
<td>102,850,442</td>
<td>13.6%</td>
</tr>
</tbody>
</table>
PMOE Occupation Growth

According to an analysis of U.S. Bureau of Labor Statistics data, the largest and fastest PMOE growth will be in software development—a projected increase of 14% between 2019 and 2030. Much of this growth will come from the development of mobile applications, IT security, and a rise in healthcare technology. Occupations in project management and business operations will also see a steady increase over the next ten years, despite a pandemic-related dip.

Growth of Top PMOE Occupations in the United States in Thousands

- Software Developers, Software QA Analysts, Testers: 1,469.2 → 1,678.4 (+209.2, +14%)
- Project Management/Business Operations Specialists: 1,361.8 → 1,355.3 (-6.5, 0%)
- Personal Services, Entertainment, Recreation Managers: 1,182.2 → 1,097.6 (-91.6, -8%)
- Management Analysts: 876.3 → 912.1 (+35.9, +4%)
- Lawyers: 813.9 → 795.7 (-18.2, -2%)
- Market Research Analysts and Marketing Specialists: 738.1 → 816.4 (+78.3, +11%)
- Financial Managers: 697.9 → 757.8 (+59.9, +9%)
- Computer Systems Analysts: 632.4 → 638.4 (+6.0, +1%)
- Construction Managers: 476.7 → 486.2 (+9.5, +2%)
- Computer and Information Systems Managers: 461.0 → 478.7 (+17.7, +4%)
Regional Trends

Project talent is at the forefront of a substantial opportunity in every region. An increase in the number of jobs requiring project management skills is particularly prevalent in developing and emerging countries.

Annual PMOE Job Openings by Region 2019-2030

PMOE is estimated to grow from 3.0% of global employment in 2019 to 3.2% in 2030.
In sheer numbers, the annual demand for PMOE is highest in China, followed by South Asia. In fact, four-fifths of PMOE growth will occur in China and South Asia alone. These two regions will have the two largest PMOE workforces by 2030, with South Asia moving past Asia Pacific and Europe.

**Regional PMOE in Projectized Industries in Millions**

- **China**: 33.4M (2019), 38.8M (2030)
- **South Asia**: 12.1M (2019), 16.4M (2030)
- **Asia Pacific**: 13.5M (2019), 14.2M (2030)
- **Europe**: 12.8M (2019), 13.8M (2030)
- **North America**: 9.3M (2019), 8.7M (2030)
- **Latin America**: 5.9M (2019), 5.2M (2030)
- **Sub-Saharan Africa**: 2.8M (2019), 2.0M (2030)
- **MENA**: 2.6M (2019), 1.9M (2030)
Sub-Saharan Africa and MENA are the smallest regions of growth for PMOE. But the potential for economic expansion in the long term is encouraging as these economies transform. The projected rate of PMOE growth also indicates the development of these regions is ramping up.

### Percentage Growth of PMOE in Projectized Industries 2019–2030

<table>
<thead>
<tr>
<th>Region</th>
<th>Growth Rate</th>
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<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>40%</td>
</tr>
<tr>
<td>MENA</td>
<td>37%</td>
</tr>
<tr>
<td>South Asia</td>
<td>36%</td>
</tr>
<tr>
<td>Latin America</td>
<td>13%</td>
</tr>
<tr>
<td>China</td>
<td>13%</td>
</tr>
<tr>
<td>North America</td>
<td>7%</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>5%</td>
</tr>
<tr>
<td>Europe</td>
<td>-7%</td>
</tr>
</tbody>
</table>

*Europe will see a decline in the PMOE workforce. However, this region provides an opportunity for new entrants into the profession.*
Youth Advantage

The rate of workforce expansion in PMOE due to economic growth in sub-Saharan Africa, MENA, and South Asia, opens up a number of opportunities for the next generation of talent.

With two-thirds of the population in MENA under the age of 35, and with high youth unemployment, the demand for project talent also presents a significant career path for new entrants in the region.

In developed regions such as Europe and China, the impending retirement of large populations aged 55–64 will create a greater need for youth to fill the talent gap.

Source of Annual Projectized Job Openings 2019–2030

Retirement rates are a larger source of job openings for more developed economies.
Projects, and their successful management, are essential to industry and economic growth. **The total GDP of projectized industries is estimated to increase from US$24.7 trillion in 2019 to US$34.5 trillion in 2030.**

Interestingly, our findings also show that the benefits of increased productivity correlate with a higher GDP. The share of GDP increase due to productivity improvement in projectized industries is projected to be greatest in Europe, China, and North America.

In order for regions with a lower GDP to sustain growth, higher levels of productivity held up by PMOE will be vital to their future.

### Percent of Projectized Industry GDP Increase Due to Productivity Improvement 2019–2030

<table>
<thead>
<tr>
<th>Region</th>
<th>GDP Increase (%)</th>
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<tbody>
<tr>
<td>Europe</td>
<td>123%</td>
</tr>
<tr>
<td>China</td>
<td>106%</td>
</tr>
<tr>
<td>North America</td>
<td>94%</td>
</tr>
<tr>
<td>South Asia</td>
<td>73%</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>66%</td>
</tr>
<tr>
<td>Latin America</td>
<td>53%</td>
</tr>
<tr>
<td>MENA</td>
<td>30%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>-22%</td>
</tr>
</tbody>
</table>

*Sub-Saharan Africa shows a negative GDP share for productivity due to workforce growth outpacing productivity.*
Upskill Your People

*The global demand for project management talent is unlikely to be filled by 2030 unless organizations promote a culture of continual learning.* Reimagined employee capability-building will be a core focus for the most resilient organizations.

In a recent McKinsey study, nearly 80% of business leaders cited capability building as “very” or “extremely” important to their organization’s growth, compared with 59% before the pandemic.³

To foster their own talent, organizations will need to champion new learning initiatives and explore partnerships to equip employees with the necessary project management skills. These capabilities include power skills such as collaboration and leadership; business acumen to create well-rounded employees; and mastering new ways of working, like increased usage of tech-enhanced problem-solving tools.
Career Opportunity

There are many paths to becoming a project professional. In a post-pandemic future, project leaders and all changemakers have the chance to drive real change. It is also a financially rewarding profession. In 2019, salaries in the United States for PMOE in projectized industries were far higher on average than the wages of non-PMOE—a premium of 78%.

On a global level, the Project Management Professional (PMP)® certification has been shown to bolster salary levels. In the 11th edition of PMI’s *Earning Power: Project Management Salary Survey*, respondents with a PMP certification reported higher median salaries than project professionals without a PMP certification — 22% higher on average across the 42 countries surveyed.

<table>
<thead>
<tr>
<th>Average salary for PMOE occupations in projectized industries in the U.S.</th>
<th>Average salary for non-PMOE occupations in projectized industries in the U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>US$111,399</td>
<td>US$62,572</td>
</tr>
</tbody>
</table>
About PMI

Project Management Institute (PMI) is the world’s leading professional association for a growing community of millions of project professionals and changemakers worldwide.

As the world’s leading authority on project management, PMI empowers people to make ideas a reality. Through global advocacy, networking, collaboration, research, and education, PMI prepares organizations and individuals to work smarter so they can drive success in a world of change.

Building on a proud legacy dating to 1969, PMI is a “for-purpose” organization working in nearly every country around the world to advance careers, strengthen organizational success, and enable changemakers with new skills and ways of working to maximize their impact. PMI offerings include globally recognized standards, certifications, online courses, thought leadership, tools, digital publications, and communities. Visit us at PMI.org, ProjectManagement.com, facebook.com/PMInstitute, and on Twitter @PMInstitute.

About the Report

Talent Gap: Ten-Year Employment Trends, Costs, and Global Implications 2021 is the fourth assessment of project management employment and industry activity conducted for PMI by the Anderson Economic Group.

The regional data in this report is modeled on selected countries, factoring data from other countries in the regions. Asia Pacific (Indonesia, Japan), China (Mainland China), Europe (Germany, United Kingdom), Latin America (Brazil, Colombia), MENA (Egypt, Saudi Arabia), North America (Canada, United States), Sub-Saharan Africa (Nigeria, South Africa), and South Asia (India).

Sources

1 Make Reality Global Survey 2020-2021 consisted of two surveys and 8,750 respondents, PMI.