

TOTAL WORKFORCE INDEX™

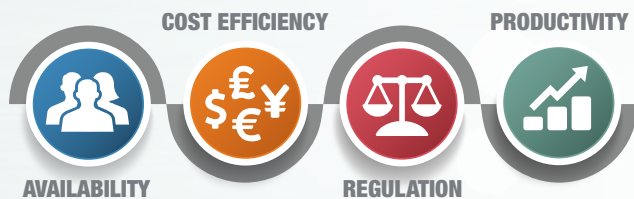
2018 GLOBAL ANALYSIS



ManpowerGroup®
Solutions

The Total Workforce Index™

The ManpowerGroup Solutions' Total Workforce Index™ measures the relative ease of sourcing, hiring and retaining a workforce in competing labor markets around the world. The Total Workforce Index™ scores each market on more than 90 unique factors which are tracked for 75 global workforce markets and updated by ManpowerGroup Solutions' analysts periodically throughout the year. Each of these statistical factors is carefully weighted and grouped under one of four categories that provide the best indicator for talent: Availability, Cost Efficiency, Regulation and Productivity. At that point, the categories are given an equal weighting to determine the annually released Total Workforce Index™ market rankings. A higher Total Workforce Index™ ranking indicates that a market is likely to support higher volumes of hiring – whether contingent, permanent or a combination of both – based on workforce quality and productivity.



The Total Workforce Index™ is unique because it segments its data by contingent and permanent workers rather than clustering into a broad demographic analysis. This segmentation introduces a new level of visibility, and enables the review and analysis of a more macro view of the workforce, while still enabling each segment to be pulled out individually. Drawing on over 70 years of experience, ManpowerGroup Solutions' proprietary formula assigns a numerical value to each market, comparing the relative opportunities and potential challenges of investing in one labor market versus another.

Just as the GDP of a market is used as an economic indicator, the Total Workforce Index™ can be used as an indicator of workforce potential. Total Workforce Index™ rankings provide important perspectives and insights that can influence both short- and long-term strategies involving workforce procurement, including:

- | | |
|--------------------|------------------------------|
| Capacity Planning | Mergers and Acquisitions |
| Cost Savings | Organizational Restructuring |
| Market Investments | Workforce Mix |

Introduction

Today's business environment is as complex as it is unpredictable. Technological disruption opens new opportunities for businesses to grow and create value, provided they transform and have the skills needed to remain competitive today and tomorrow.

The emergence of new skills and new talent pools, together with fresh ways of working and getting work done, mean companies have more options than ever when identifying where and how to build their contingent and permanent workforces. Yet, shifting regulatory frameworks, overwhelming amounts of workforce data and changing skill requirements add layers of complexity to decision-making. The right combination of data and insights enables companies to make better and faster choices about where to locate their workforces with greater market transparency.

The Total Workforce Index™ is the only tool of its kind to use big data strengthened by fresh insight to influence both short- and long-term growth strategies. In a global analysis across 75 markets of more than 90 factors, the Total Workforce Index™ evaluates skills availability, cost efficiency, regulation and workforce productivity of both permanent and contingent labor types. The result is a comprehensive report ranking countries where skills, productivity and labor laws make it most favorable to do business.

The Total Workforce Index™ is adaptable so organizations can customize and prioritize their most pressing workforce questions. The tool can provide a broad perspective from answering “How will shifting regulation and changing wages in a specific location impact our business?” to “Where can I find workers with the skills my organization needs as technology advances?” It also offers specificity: “Where should we put our next call center?”, “What should our workforce mix be in this country?” and “Where is the right location in my market to offer flexible work schedules?”

Company expectations will continue to evolve as they demand more data-based people decisions; the playbook is changing and basic concepts of scale, value and competition are being redefined. Through real-time, robust data and tested insight, the Total Workforce Index™ turns complexity into opportunity and shifts HR from an art to a science so businesses can execute a precise talent strategy aligned to their unique needs, and more importantly, the needs of talent.



Becky Frankiewicz
President, ManpowerGroup North America

TOP 10 – Overall

The markets that rank highest in the Total Workforce Index™ are those with the best relative performance across all four categories: Availability, Cost Efficiency, Regulation and Productivity.

The top overall markets, based on the rankings of the Total Workforce Index™, are led by three Asian Pacific (APAC) markets: Hong Kong, New Zealand and Singapore. Rounding out the top five are the United States and United Kingdom. The top five markets changed only slightly year-over-year. However, the biggest change is between the top two global markets, with Hong Kong rising to secure the first position from New Zealand. Until 2018, New Zealand held the first ranked position globally since 2015. The move to second position in the global rankings is due to a significant drop in score in the Cost Efficiency category and a slight decrease in the Availability score year-over-year.

Top 10 Markets with Score by Category



Availability



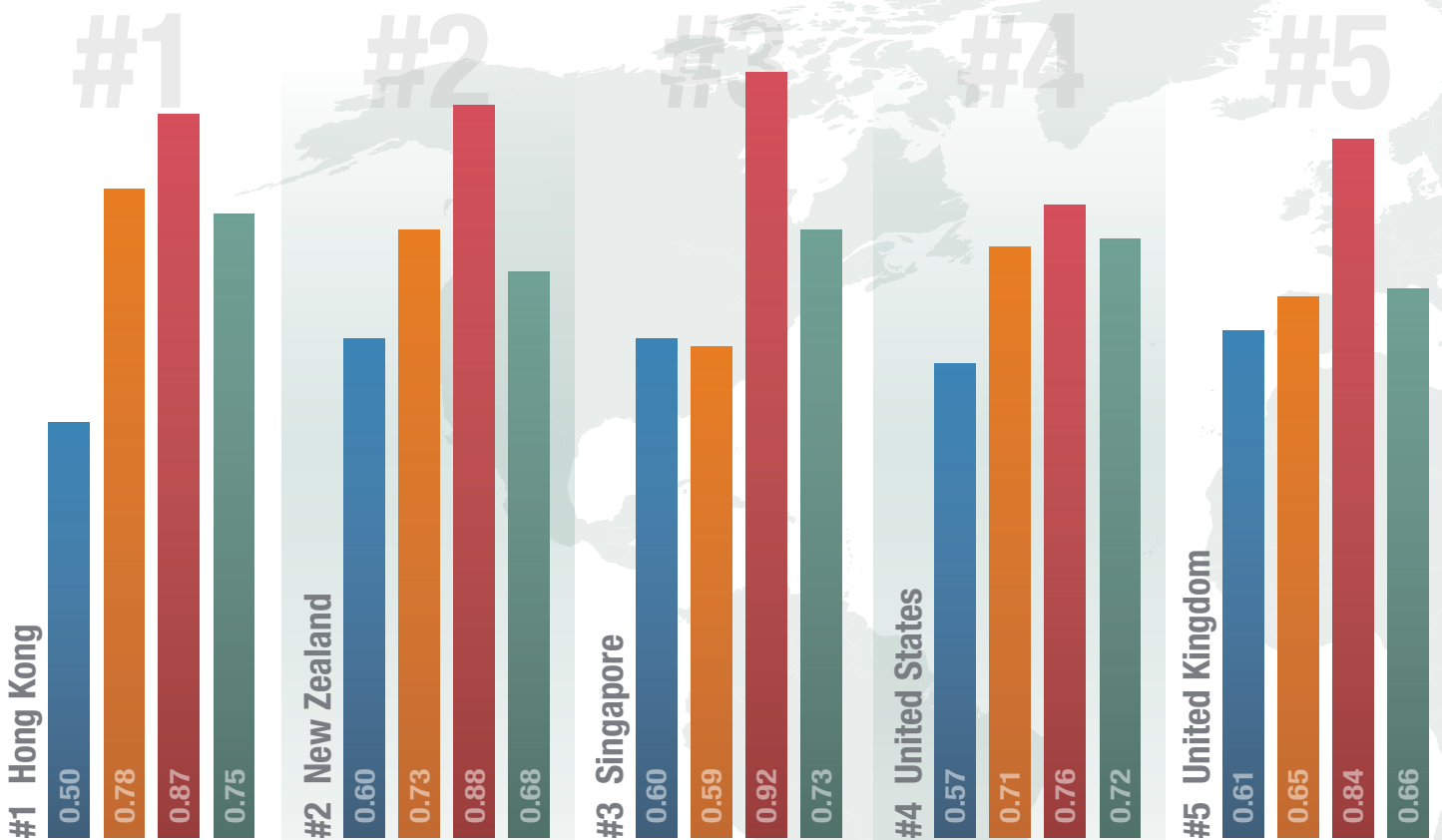
Cost Efficiency



Regulation



Productivity



Top 10 Over the Years

Over the past five years, only one market has been featured in the top five year after year. New Zealand has consistently secured a place in the top five despite the addition of more than 50 unique factors to the Index over time. Changes to the weightings of specific factors, indicating that they became a higher priority to employment organizations in a particular year, also have a strong impact on rankings, yet New Zealand managed to remain consistently in the top five each year.

Markets featured in the top five, four times over the past five years include Hong Kong, the United States and Singapore. This trend is indicative of a mature, stable and valuable workforce market because, despite changes to the factors and weightings attributed to each market by the Total Workforce Index™, these markets continue to show that they are good investments in workforce engagements (i.e., acquisition or retention of talent) due to strong skills and positive hiring dynamics.

	2014 TOP 10	2015 TOP 10	2016 TOP 10	2017 TOP 10	2018 TOP 10
1	Hong Kong	New Zealand	New Zealand	New Zealand	Hong Kong
2	United States	United States	Singapore	Hong Kong	New Zealand
3	China	Canada	Philippines	Singapore	Singapore
4	New Zealand	Hong Kong	Israel	United States	United States
5	Singapore	Israel	India	Canada	United Kingdom
6	India	Singapore	United States	Ireland	Canada
7	Canada	Philippines	Canada	United Kingdom	Ireland
8	United Arab Emirates	Malaysia	Ireland	United Arab Emirates	Estonia
9	Malaysia	India	United Kingdom	Israel	United Arab Emirates
10	United Kingdom	Ireland	Hong Kong	Denmark	Philippines

#6 Canada



#7 Ireland



#8 Estonia



#9 United Arab Emirates



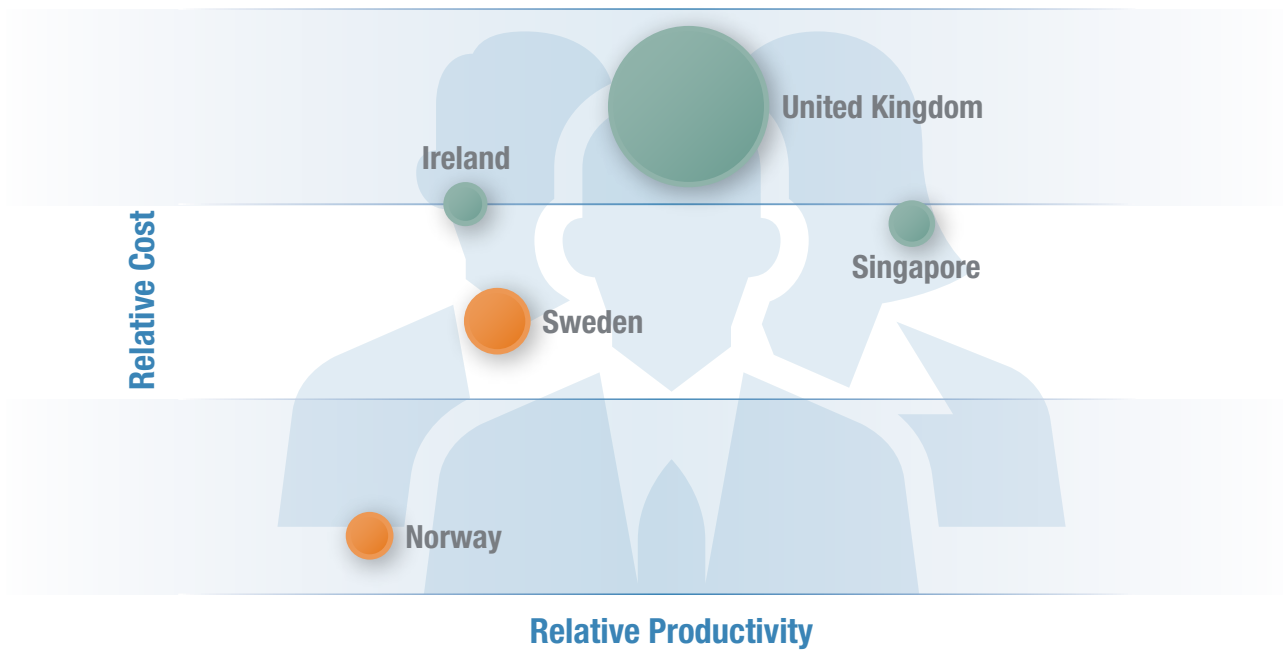
#10 Philippines




TOP 5 – Availability

Markets scoring favorably in the Availability category are those with the highest availability of skilled workers with a high level of English proficiency along with other indicators, such as gender disparity and education. The weightings assigned to English proficiency and tertiary education were substantially increased based on input from industry-leading global organizations. This creates a top five where language skills and educational advancement are favored as these skills closely align to the roles organizations are seeking to fill. Though these markets have scored most positively in the Availability category, they are not necessarily the largest or most mature markets as defined by Total Workforce Index™.

Comparison of the Top Five Markets for Workforce Availability



Size of the bubble reflects the Relative Availability of each market, while the color reflects Relative Regulation:

-  Minimal Regulatory Impact
-  Moderate Regulatory Impact
-  Restrictive Regulatory Impact

Compared to 2017, there are some significant changes to the top five markets in availability. While Ireland continues to hold the top ranking in the category, New Zealand and the United States drop out of the top five this year. Sweden and Singapore claim fourth and fifth, up from sixth and seventh in 2017, respectively.

The United States experienced a significant decrease in Availability score between 2017 and 2018, partly due to an aging workforce. The score in Availability for New Zealand decreased just enough to allow a small increase for Sweden to propel this market into the top five. Singapore's score remained unchanged year-over-year, but the market benefited from the scores decreasing in both New Zealand and the United States to move up one spot to fifth.

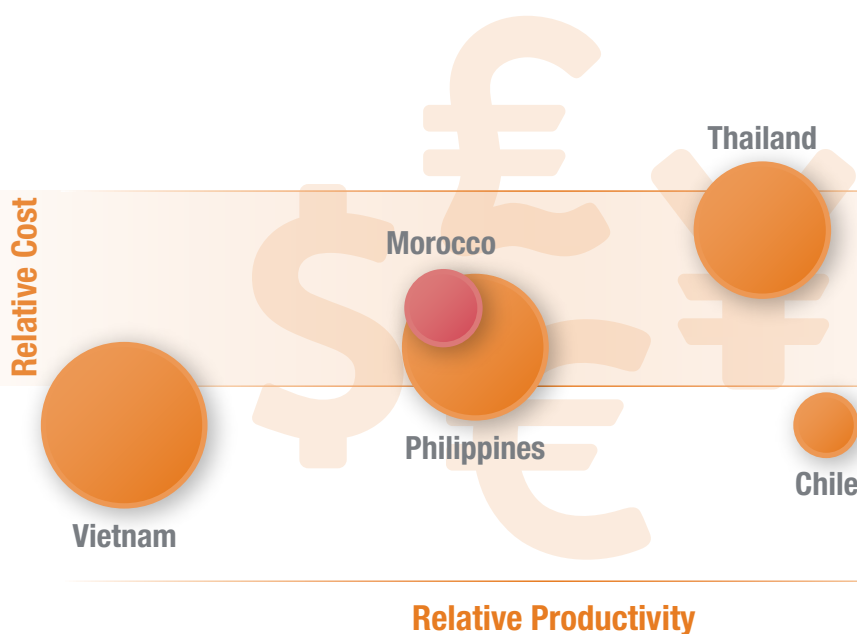
2017 TOP 5	
1	Ireland
2	United Kingdom
3	Norway
4	New Zealand
5	United States

2018 TOP 5	
1	Ireland
2	Norway
3	United Kingdom
4	Sweden
5	Singapore

TOP 5 – Cost Efficiency

Traditionally, the lowest cost markets also tend to be some of the least mature and generally have less restrictive regulation and availability. The Philippines is an exception. Last year, the Philippines passed legislation to ban subcontracting and enforce restrictions on contract terminations. This speaks to another common trend among emerging markets, as investment increases in a market so too does the regulatory impact in that market.

Comparison of the Top Five Markets for Workforce Cost Efficiency



Size of the bubble reflects the Relative Availability of each market, while the color reflects Relative Regulation:

- Minimal Regulatory Impact
- Moderate Regulatory Impact
- Restrictive Regulatory Impact

These and other changes in the Philippines have resulted in a decrease in cost efficiency overall. This held the Philippines at third and allowed Morocco to rise from fourth to second place in the top five markets for cost efficiency this year. Despite being very appealing from a cost perspective, markets such as Morocco do not present a significant opportunity for investment due to a lack of skilled and English-proficient talent, a small workforce and a restrictive regulatory climate.

Chile dropped from second to fourth due to an increase in the factors related to average wages and the inclusion of factors like business startup costs in the weightings of the Total Workforce Index™ metrics for this category. Vietnam makes its way into the top five this year due to a significant decrease in wages, despite a small increase to the minimum wage.

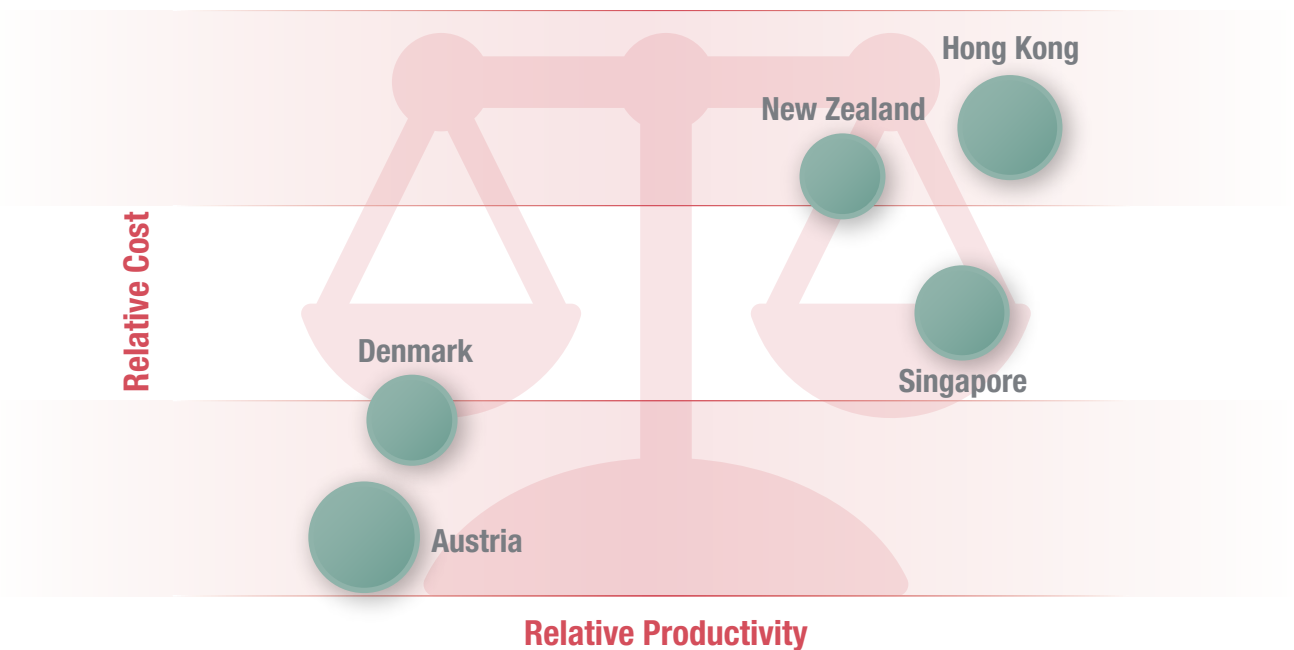
2017 TOP 5	
1	Thailand
2	Chile
3	Philippines
4	Morocco
5	Guatemala

2018 TOP 5	
1	Thailand
2	Morocco
3	Philippines
4	Chile
5	Vietnam

TOP 5 – Regulation

Favorable regulatory environments are created when many types of workforce engagement are available to organizations and maximum contract lengths, notice periods and severance requirements are minimal or not required. The regulatory factors measured by the Total Workforce Index™ include topics such as severance and pension ages, geopolitical factors, contract limits and notice periods.

Comparison of the Top Five Markets for Workforce Regulation



Size of the bubble reflects the Relative Availability of each market, while the color reflects Relative Regulation:

-  Minimal Regulatory Impact
-  Moderate Regulatory Impact
-  Restrictive Regulatory Impact

The top five markets in the regulatory category remain unchanged year-over-year which indicates stability in the regulation of each of the global workforce markets. Similar geopolitical factors in the top five markets allow them to maintain their previous rankings year-over-year. Some markets in the remainder of the top 10, however, did shift in ranking but not enough to impact the rankings in the top five.

More relaxed regulatory factors make these and similar markets more competitive for future investment in local employment. This is especially important in markets where the competition for certain skills, such as IT and engineering sector skills, is high. Some of these markets also have legislation that gives preferential visa treatment to foreign workers with skills considered desirable in the current hiring market.

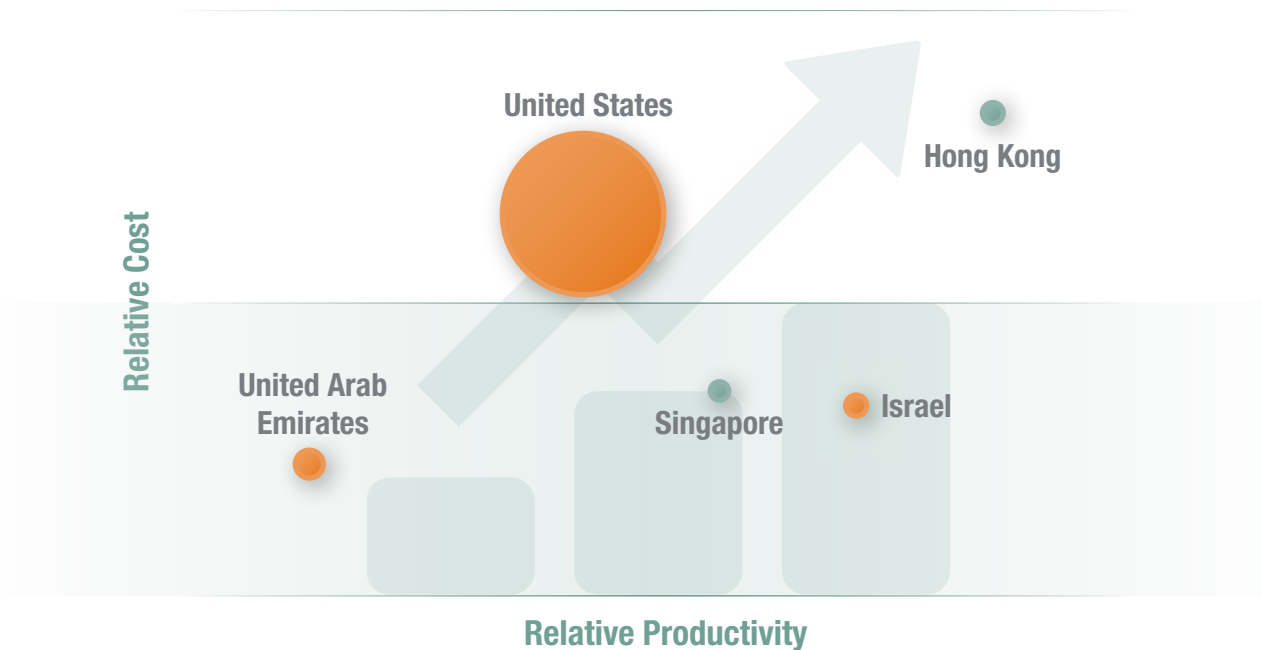
2017 TOP 5	
1	Singapore
2	Denmark
3	New Zealand
4	Hong Kong
5	Austria

2018 TOP 5	
1	Singapore
2	Denmark
3	New Zealand
4	Hong Kong
5	Austria

TOP 5 – Productivity

Productivity is a category influenced by all three of the other categories. When the perfect mix of availability, cost efficiency, and regulation align with workforce planning initiatives, optimal productivity goals can be met or in some cases exceeded. However, the top five markets in Productivity may not necessarily be the most productive markets for organizations in all industries and sectors of business.

Comparison of the Top Five Markets for Workforce Productivity



Size of the bubble reflects the Relative Availability of each market, while the color reflects Relative Regulation:

- Minimal Regulatory Impact
- Moderate Regulatory Impact
- Restrictive Regulatory Impact

Changes in the top five rankings year-over-year include a ranking swap between Israel and Singapore to second and third, respectively. Influencing this change are improvements in technology infrastructure and wider adoption of technology in Israel. In addition, subtle changes to the factors that influence Productivity rankings were significant enough to add up to a shift in the ranked position of these two markets. A standard workday of nine hours and no major restrictions on night work, among other Productivity factors, influence a higher ranking for Israel compared to similar markets.

Canada drops out of the top five this year, with the United Arab Emirates rising into fifth place. Improvements to infrastructure efficiency and the number of standard work hours per week boosted the United Arab Emirates score in Productivity, while Canada remained unchanged year-over-year across all productivity metrics. The shifts seen in the top markets for productivity year-over-year are indicative of the fact that a combination of several seemingly insignificant changes to multiple factors can have a greater overall effect on the market rankings within a category.

2017 TOP 5	
1	Hong Kong
2	Singapore
3	Israel
4	United States
5	Canada

2018 TOP 5	
1	Hong Kong
2	Israel
3	Singapore
4	United States
5	United Arab Emirates

Conclusion

This excerpt of the 2018 Total Workforce Index™ contains only a small portion of the insights available. Visit www.totalworkforceindex.com for access to more comprehensive global workforce data.

The 2018 Total Workforce Index™ suggests that there is increased investment by employers seeking certain skill sets when hiring in developing markets. Regardless of whether markets are seeing an influx of admin/clerical hiring, manufacturing or technical skills, the Total Workforce Index™ indicates which markets are increasing in workforce engagement and contractor utilization. Results from the Total Workforce Index™ suggest that, over time, increased hiring activity leads to tighter regulation and higher cost. However, this year, as in past years, we have identified several emerging markets that still offer high availability of skilled workers.

As workforce markets enter the top rankings for their region or category for the first time, they offer a short-term workforce opportunity to capitalize on limited competition. This year, the Index also suggests that while base wages remain the largest component of total labor costs, they are no longer the majority of those expenditures. Globally, ManpowerGroup Solutions has observed increased payroll taxes, insurance costs, and other statutory burdens that, when coupled with turnover and training, often exceed base wages themselves. Individual factors, such as average wages, are critical to monitor, but should not be taken out of context within their category – more and more, markets show increased costs relative to another country based on non-wage factors as opposed to wages themselves.

Global workforce engagement and productivity remain on the rise, despite increasing retirement of aging workforces. At a market level, the Index tracks the rate at which workers are aging out and entering the workforce in various skilled categories to enable organizations to better balance the sustainability of their global operations. While there is much speculation on how employers should adjust strategies to accommodate generational trends within their workforce, the Index focuses on the quantitative impact that these demographics have on a business at a market level.

While the Index is intended to support all organizations in their workforce planning, it is important to note that how an employer prioritizes the factors tracked by the Index is of critical importance to determining which countries represent the greatest opportunity for their hiring initiatives. For example, an organizations prioritization of cost or availability compared to the individual considerations related to regulation and productivity can substantially impact which markets are most opportune at any given time. As with any index, it is the trending quarter-over-quarter and year-over-year of the factors monitored by the Total Workforce Index™ that provides the greatest insight into future opportunity.

Sources and Disclosures

The primary data sources for this Index are all based on statistics from the ministries of labour for the 75 markets within the scope, the Central Intelligence Agency (U.S.), World Data Bank, Trading Economics, and internal data collected as part of ManpowerGroup global reporting efforts.

Disclaimer

This report is intended to provide an overview of general business information relative to global employment conditions and considerations. It should not be interpreted as legal advice. Please consult with legal counsel to ensure that you are in compliance with all applicable laws.

The Total Workforce Index™ in Action

How a Global Technology Giant Found the Best Location for Game Development and Production

Business Issue: A gaming industry leader had expansion plans for its technology centers and wanted to find markets that could support increased development and production capacity. It engaged ManpowerGroup Solutions for a comprehensive market and competitive analysis of all locations with available talent and few competitors.

Solution: Using the Total Workforce Index™, ManpowerGroup Solutions created profiles for viable cities that quantified the prospective value of each market from an employment perspective and provided comparative analytics on market value. These profiles looked at:

AVAILABILITY

- Number of available software development skills
- Identifying training opportunities at local universities
- Identifying sectors of the workforce with lower-level experience and the potential for upskilling and additional training
- Competition for those skills by competitor
- Emerging workforce opportunities

REGULATION

- Regulations that would affect total workforce costs (overtime, paid sick leave, taxes, other ancillary costs in addition to wage, etc.)

COST EFFICIENCY

- Cost for the necessary skills in each city

PRODUCTIVITY

- Real estate cost and availability for a new potential hub
- Logistics such as how close the locations are to airports, cost of travel from local headquarters to an airport, etc.

Results: This assessment of each market's competitive landscape, real estate and legal implications pinpointed cities with the greatest market potential. The effort narrowed 120 options down to five potential locations. Analysts then conducted a detailed and quantified analysis of how each city compared to one another as well as the client's existing hubs, ultimately recommending a location for the new development center. The recommendation site would establish an opportunity to expand and capitalize on a more flexible hiring environment with:

- Less competition
- 3.5 times the candidate availability
- 30% larger pool of emerging workers through university programs
- Cost savings driven by market selection that offered different regulatory dynamics impacting both statutory burdens and workforce productivity

The client followed the recommendation to exceed their goals for cost savings and access to talent and competitive advantages.

Visit www.totalworkforceindex.com for access to more comprehensive global workforce data.



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