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THE STATE OF TECHNOLOGY IN FINANCE AND ACCOUNTING— MIDDLE EAST AND INDIA

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INTRODUCTION

Enabled by new and emerging technology, the role of the finance function is rapidly changing, and with it how it supports the larger organization. Most studies that have examined this change have been U.S.-centric, or at least focused on the state of the profession in the more developed economies. This report examines how technology is affecting finance in other parts of the world, specifically the Middle East (including Saudi Arabia, the United Arab Emirates, and Egypt) and India.

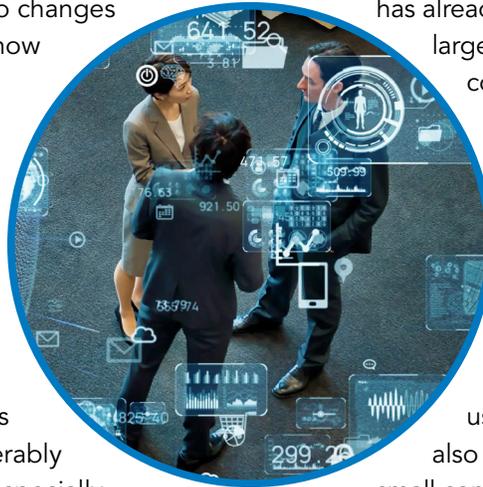
This report is based on three surveys conducted

in these regions during 2019 and 2020. The first two were surveys of IMA® (Institute of Management Accountants) members (“IMA” or “2019” respondents); the third survey utilized YouGov, an independent survey organization, respondents (“YG” or “2020” respondents) (see the appendix for additional details). These studies, along with others recently conducted by IMA, provide insights into the state of technology in the finance function in the Middle East and India, as well as insights into current trends and the impact of the COVID-19 pandemic. •



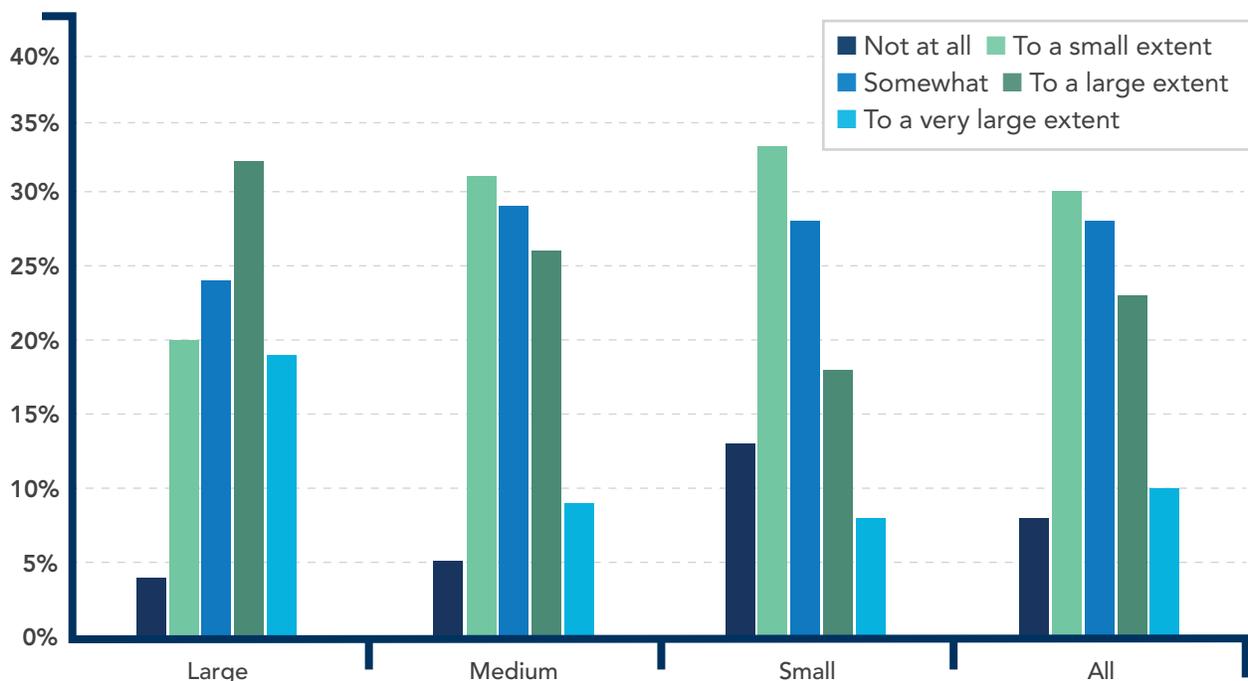
Digital Transformation of Finance

Digital transformation is the integration of digital technology into a business. When introduced, it leads to changes in how a business operates, how it makes and implements decisions, how it values its people, and, ultimately, how it delivers value to customers. To remain relevant and to help their companies compete, finance functions need to be part of this transformation. Yet the engagement of finance in this transformation varies considerably from company to company, especially when viewed by company size (see Figure 1).



For slightly more than half of the large companies (1,000 or more employees), digital transformation has already occurred to a large (or very large) extent. In contrast, for small companies (less than 50 employees), nearly half of their finance organization has not engaged in digital transformation or has only done so to a small extent. While this may reflect the greater potential for operational improvements that larger organizations can achieve using emerging technologies, it also reflects the more limited resources small companies have to devote to technological initiatives.

FIGURE 1: EXTENT TO WHICH DIGITAL TRANSFORMATION HAS OCCURRED IN FINANCE



Yet the digital transformation of finance is rapidly gaining speed across this region, propelled by normal business competition and accelerated by the COVID-19 pandemic. The percentage of finance functions at large companies that reported extensive digital transformations between 2019 and 2020 increased by nearly half. The change was even more dramatic among medium-size companies, which often struggle with tighter margins and more limited resources, with the percentage more than doubling. (See Table 1.)

Processes Impacted

Technology is impacting many of the processes performed by finance (see Figure 2). Foremost among those being changed is financial planning and budgeting. This is not surprising—our prior surveys have consistently shown this is the No. 1 “pain point” for CFOs. The process typically suffers from numerous problems, including being very time-consuming, only weakly linking resource allocation with organizational strategy, producing a budget that is quickly out of date, and more. The process has only become more difficult as the COVID-19 pandemic has rewritten the rules of business in many industries. By using technology to collect and analyze relevant data, companies can plan more efficiently and effectively. While companies of all sizes are using technology to improve the planning and budgeting process, this is more likely the case with larger organizations (59%) than smaller ones. This result, consistent across all countries in the study, is not surprising as larger companies have a

The digital transformation of finance is rapidly gaining speed across this region, propelled by normal business competition, and accelerated by the COVID-19 pandemic.

greater need for integrated, strategic planning and also greater resources to devote to it.

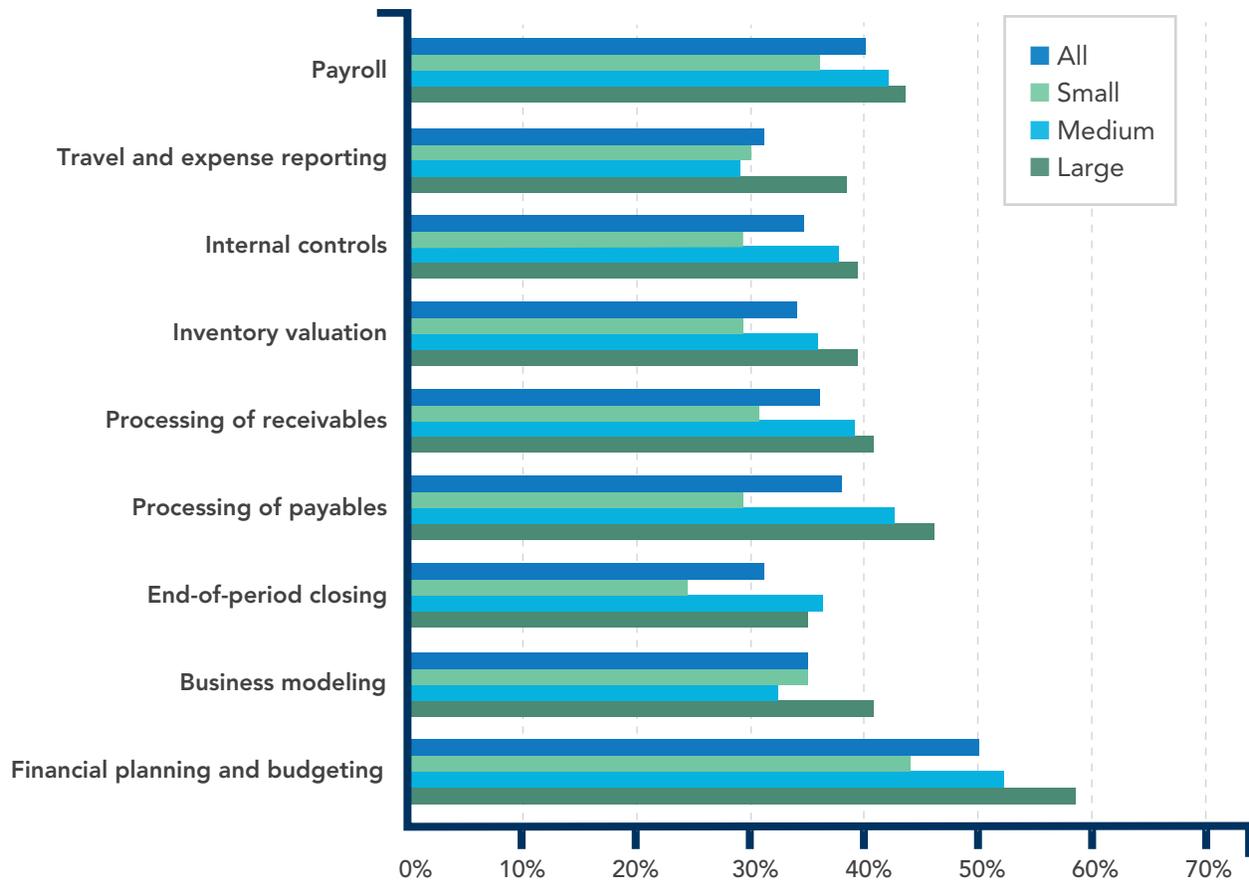
The digital revolution is having its greatest impact on processes that require the performance of routine, repetitive tasks. Many processes performed by finance consist of such tasks and are likely candidates for transformation. Our survey, consistent with a prior IMA study, bears this out: Across all the finance processes studied, approximately one-third of respondents indicated the process had been impacted by technology.¹ As with financial planning and budgeting, and consistent across all the countries in this study, larger companies’ processes tended to have been impacted the most and smaller companies were impacted the least.

TABLE 1: FINANCE FUNCTIONS WITH EXTENSIVE DIGITAL TRANSFORMATION

	Large	Medium	Small
2019	14.3%	4.3%	6.7%
2020	21.3%	9.3%	7.7%

¹ IMA and Deloitte, *From Mirage to Reality: Bringing Finance into Focus in a Digital World*, 2020, bit.ly/3gCjhmC.

FIGURE 2: FINANCE PROCESSES IMPACTED BY TECHNOLOGY (PERCENT OF ORGANIZATIONS)



Challenges Faced by Finance

Finance is more likely to be viewed as a business leader/partner in the organization when it has assumed or shared a leading role in digital transformation.² Yet while finance may desire to play an influential role in determining an organization’s digital strategy, it may encounter several impediments. Chief among these is the need to continue to focus on core finance responsibilities, which reduces the ability to focus on new, emerging ones (see Figure 3). This challenge, while most prevalent among large companies, was the most common impediment for other sized companies as well.

A related concern, perhaps ironically, is the need to spend too much time on low-value-added processes. By automating low-value-added processes, finance can increase its efficiency and focus greater attention on its new, emerging role.

Robotic Process Automation

As finance seeks to enhance its value offering and reduce operating costs, many are turning to robotic process automation (RPA) to aid in transformation.³ (See Figure 4.) The use of RPA increased tremendously over the study period. In 2019, 57% of companies indicated they had not implemented RPA. A year later, only 28% of respondents had not begun their RPA journey.

² Raef Lawson, Toby Hatch, and Denis Desroches, *The Data Analytics Implementation Journey in Business and Finance*, IMA, January 2019, bit.ly/2pXlenB.

³ For more on RPA, see Loreal Jiles, *Transforming the Finance Function with RPA*, IMA, July 2020, bit.ly/3bWWQcn.

FIGURE 3: CHALLENGES FACED BY FINANCE

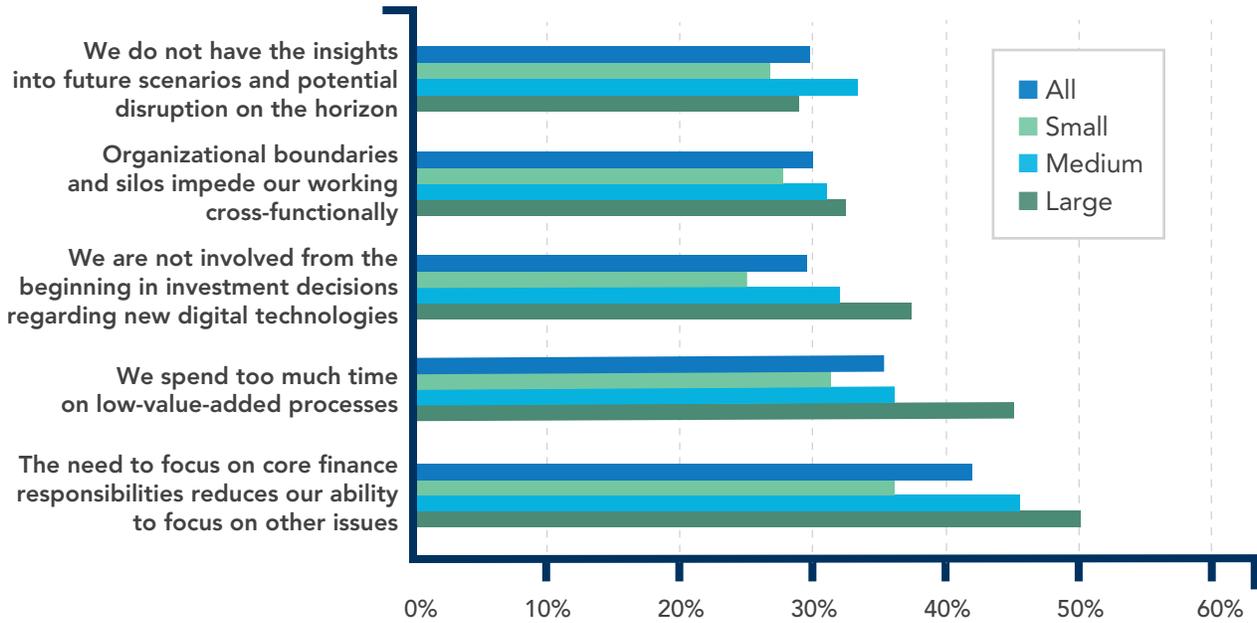
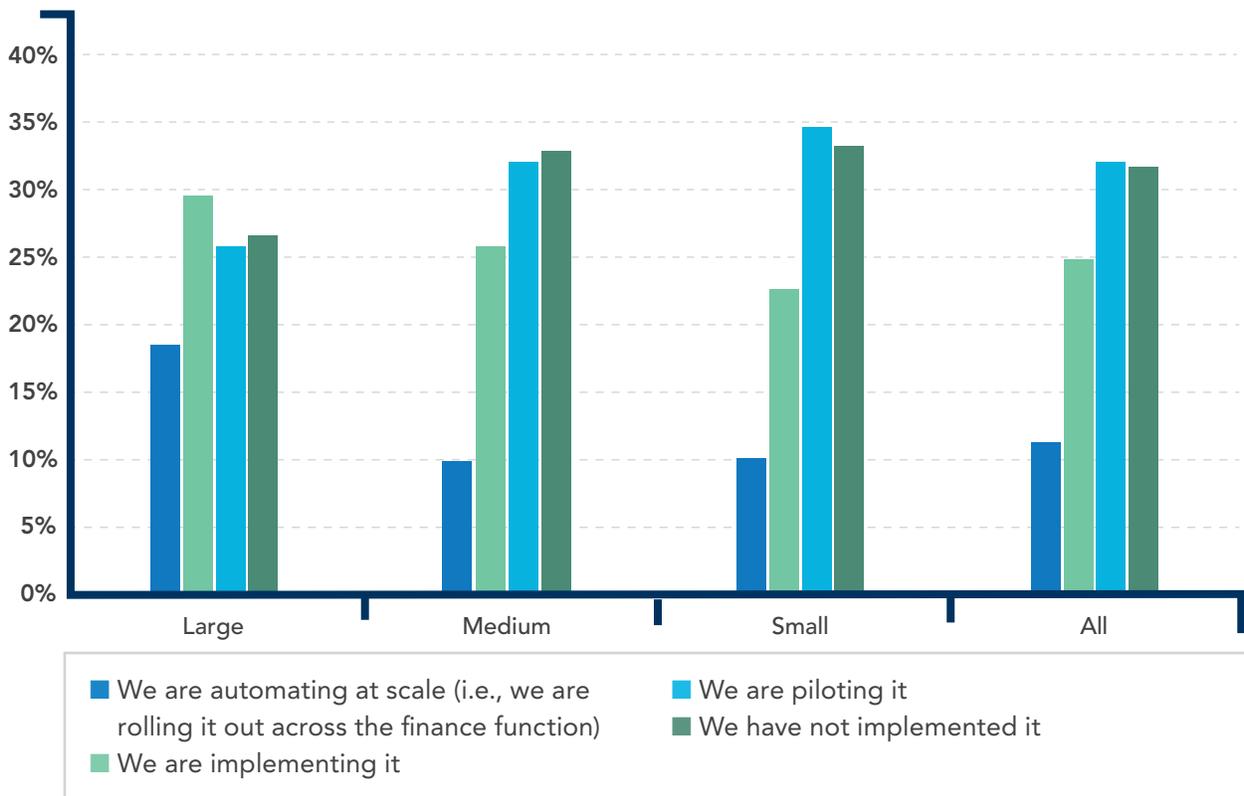


FIGURE 4: ADOPTION OF RPA BY COMPANY SIZE



These results are even more astounding considering the former sample was much more heavily weighted to large companies, which are more likely to have adopted RPA than the latter sample. The onset of the COVID-19 pandemic between the times of the two surveys provided a great motivation for finance organizations to become more efficient and in a hurry.

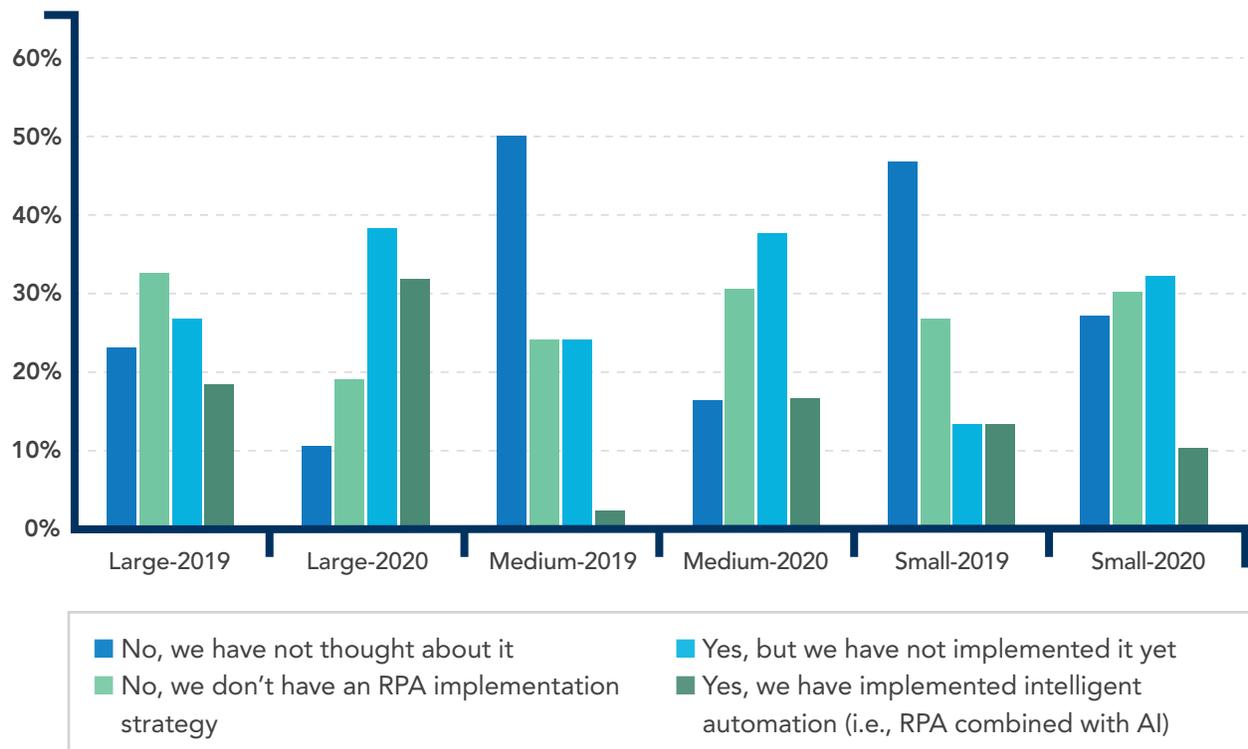
Finance is at the forefront of RPA implementation efforts in most organizations. In nearly one-quarter (22%) of organizations, finance is leading the implementation of RPA. In another 43%, it is partnering with IT to progress the implementation. Only in 26% of organizations does finance have a limited role (where IT is leading the implementation and finance is only being consulted), and in 9% it has no role. This finding was consistent across all countries in the study.

The past year has seen a jump in the level of RPA implementation sophistication among companies in the region, especially among large

The use of RPA increased tremendously over the study period.

and medium-size companies (see Figure 5). The percentage of large companies that have implemented intelligent automation (i.e., RPA combined with artificial intelligence or AI) rose from 18% to 32%. Medium-size companies, which were initially lagging in this regard, are now also advancing their RPA implementations, with intelligent automation implementation rising from 2% to 16%. Smaller companies, however, still lag behind their larger counterparts, which raises concerns regarding their ability to compete in this increasingly Digital Age.

FIGURE 5: USE OF AI WITH RPA BY COMPANY SIZE



Barriers to Adoption of RPA

Much has been written about the shortage of staff with the new technological skills needed today and the need for organizations to upskill their staff in order to be able to implement them, especially in the post-COVID-19 era.⁴ While that certainly is true, when it comes to introducing process automation technologies in finance, our survey respondents noted bigger challenges (see Figure 6).

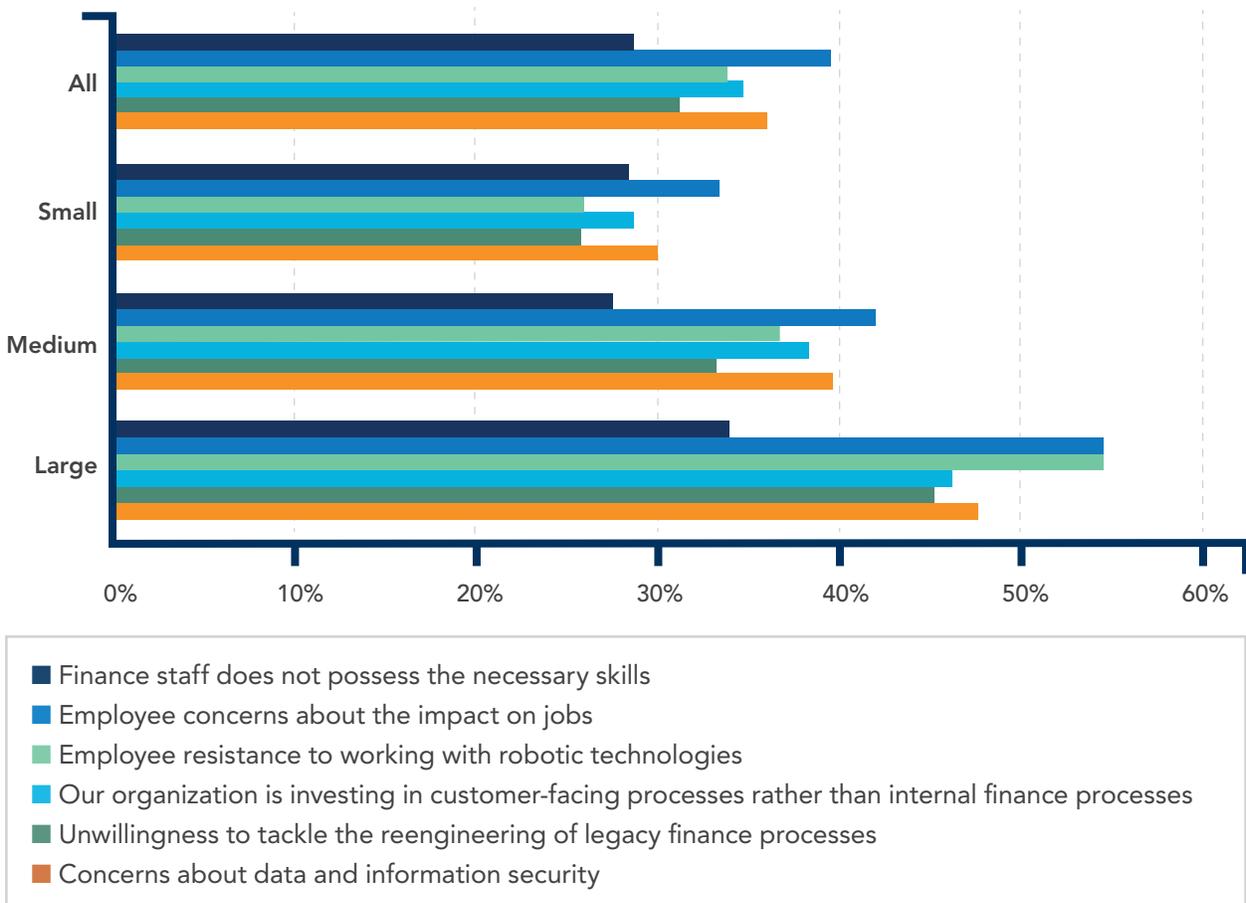
The largest barrier—regardless of company size—is employees’ concern about the impact of automation on their jobs. Another major concern is employee resistance to working with robotic technologies. Clearly, implementing process

automation is like implementing most other new technologies and processes—having an effective change management process in place is key to ensuring successful implementation.

Despite concerns around employee acceptance of automation, a majority (71%) of companies believe that automation will (substantially 35%, somewhat 36%) increase job satisfaction in the accounting and finance area over the next three to five years. Only 16% felt job satisfaction would decline (substantially 3%, somewhat 13%). This result was consistent across companies of all sizes.

Accompanying the belief that automation will bring greater job satisfaction is that a

FIGURE 6: BARRIERS TO RPA ADOPTION



⁴ See Kip Krumwiede, *Building a Team to Capitalize on the Promise of Big Data*, IMA, January 2016, bit.ly/2FwIYIV; Raef Lawson, *The Impact of COVID-19 on the Finance Function*, IMA, January 2021, bit.ly/2MRYli8.

majority of companies believe it will help increase employee retention in the finance and accounting area, either substantially (23%) or somewhat (31%). This significantly

outnumbered those companies that believe automation will substantially (6%) or somewhat (23%) reduce retention. Again, the results were consistent across company size. •



Data

Organizations around the world are taking advantage of enhanced technological and analytical capabilities to employ a more data-centric approach to managing their business, and those in the Middle East and India are no exception. This requires exploring new, more varied sources of data and analysis of data on a scale previously not possible (i.e., Big Data).

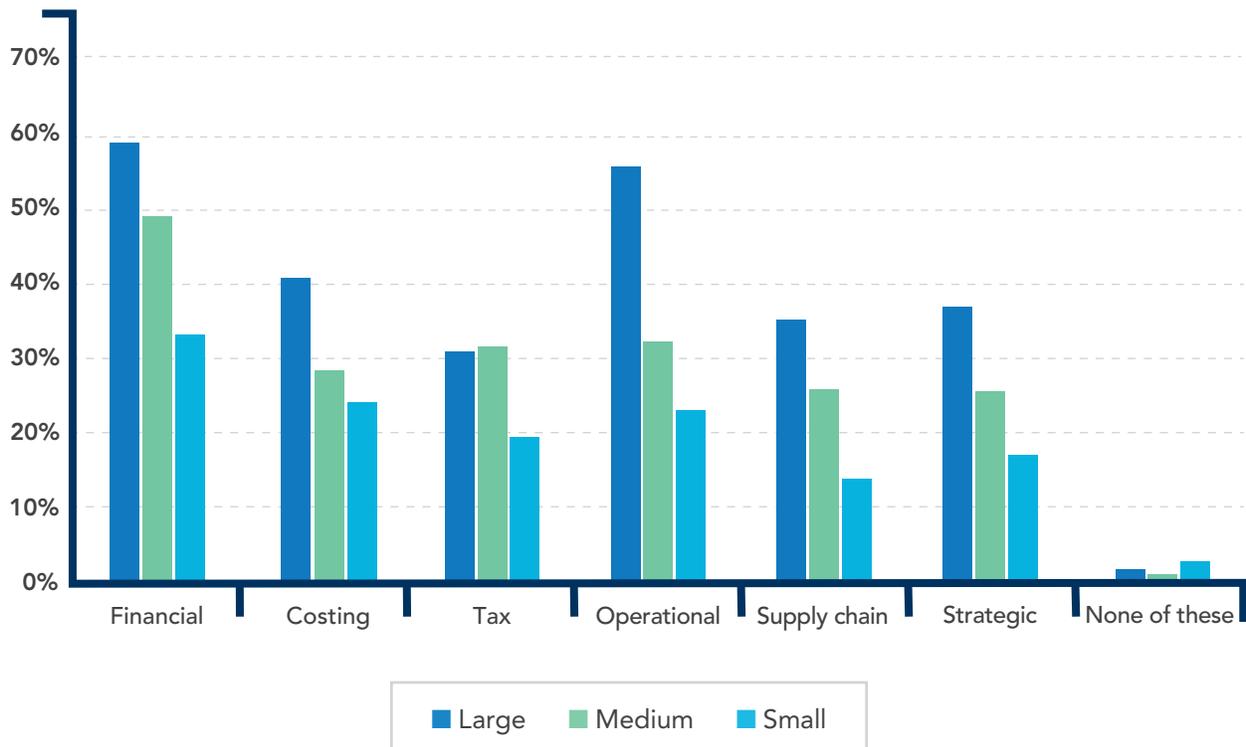
Data Impacted

Digital transformation is affecting all types of data. While financial data is most likely to be impacted, operational data is also likely to be affected, especially for larger organizations (see Figure 7). Organizations today increasingly understand the importance of using data from new and varied sources, both internal and external, for their decision-making needs,

especially with regard to strategy development and execution. Incorporating both financial and operational data can lead to a more robust decision-making process. This finding was consistent across all the countries in this study. For every type of data except tax, the transformation of information at large companies is ahead of that at smaller ones.

Data modernization—moving data from legacy databases to modern databases—is key to many organizations wanting to become data-driven, and most (73%) of the companies in this study have specific initiatives to address this issue. Reflecting the need for strong data governance and quality infrastructure in order to ensure data integrity and quality, most respondents (77%) are including data security planning as part of their modernization efforts.

FIGURE 7: INFORMATION MOST IMPACTED BY DIGITAL TRANSFORMATION



Migration to the Cloud

The COVID-19 pandemic has brought to the forefront the need for organizations to be more efficient and agile while also mitigating business risks. It has also provided organizations an additional motivation to move both data and financial applications to the cloud.

With regard to the use of cloud-based financial applications, since the onset of the pandemic, large companies have reduced their use of private, off-site data centers for these apps while significantly increasing their use of cloud-based software and, to a lesser extent, on-premises software (see Figure 8). The trend for small companies was different, with a significant reduction in the percentage of companies using on-premises software, a change likely due to the need to reduce operating costs.

A similar story exists with regard to data storage. Companies of all sizes are moving to cloud data storage, with larger companies much more likely than small ones to have abandoned keeping their data solely on the premises (see Figure 9). Similar to the storage of financial applications in the cloud, this shift has significantly increased over the

The COVID-19 pandemic has provided organizations an additional motivation to move both data and financial applications to the cloud.

study period.

Operating “in the cloud” brings numerous benefits, regarding both data and applications. For data, companies cited greater security and protections, along with modernization, as key reasons for making the change to the cloud (see Figure 10). There are numerous benefits as well for migrating applications, including the savings that can be realized from economies of scale, the availability of cloud-based software, the greater access to external data, and numerous others. •

FIGURE 8: FINANCIAL APPLICATIONS—2019 VS. 2020

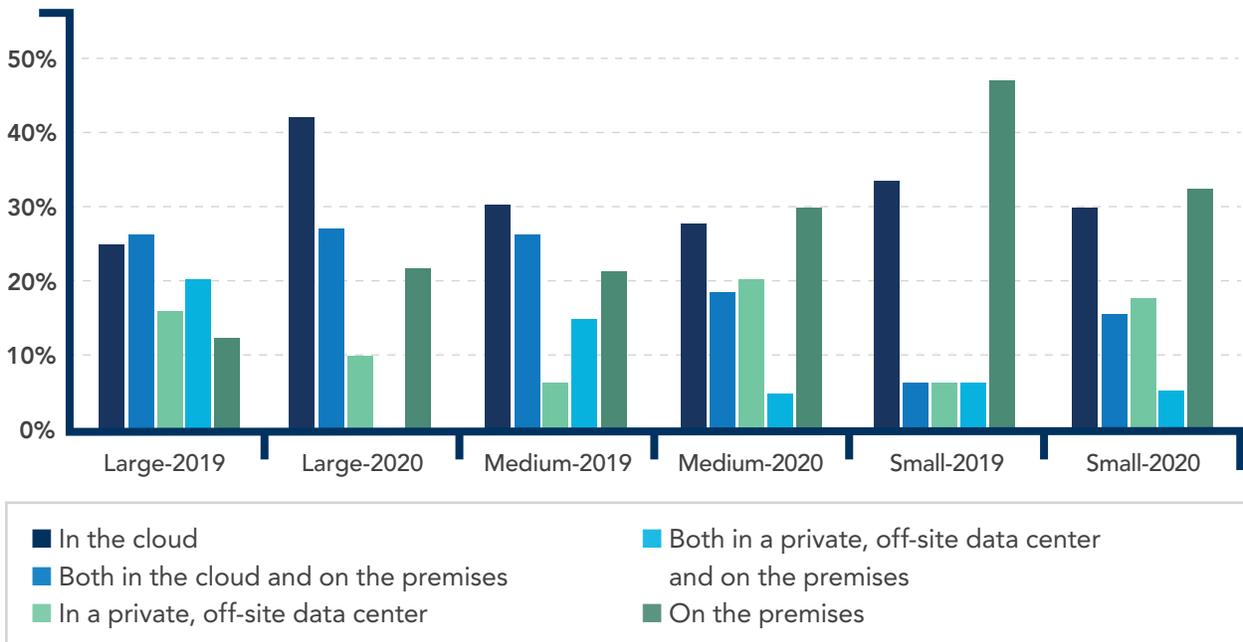


FIGURE 9: STORAGE OF DATA BY COMPANY SIZE

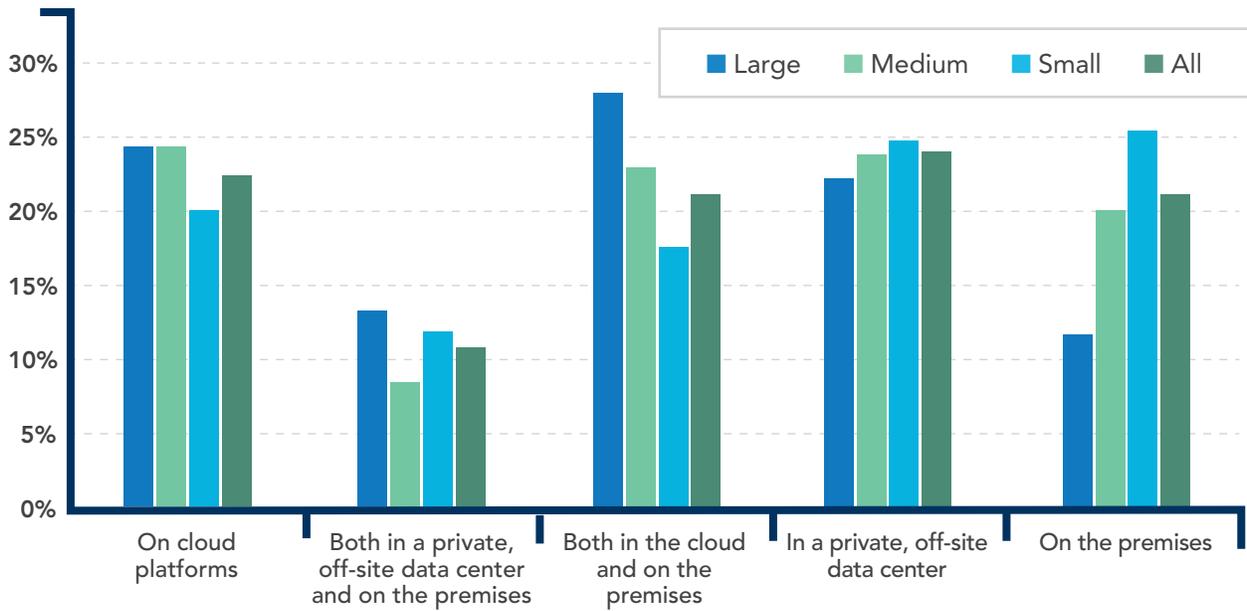
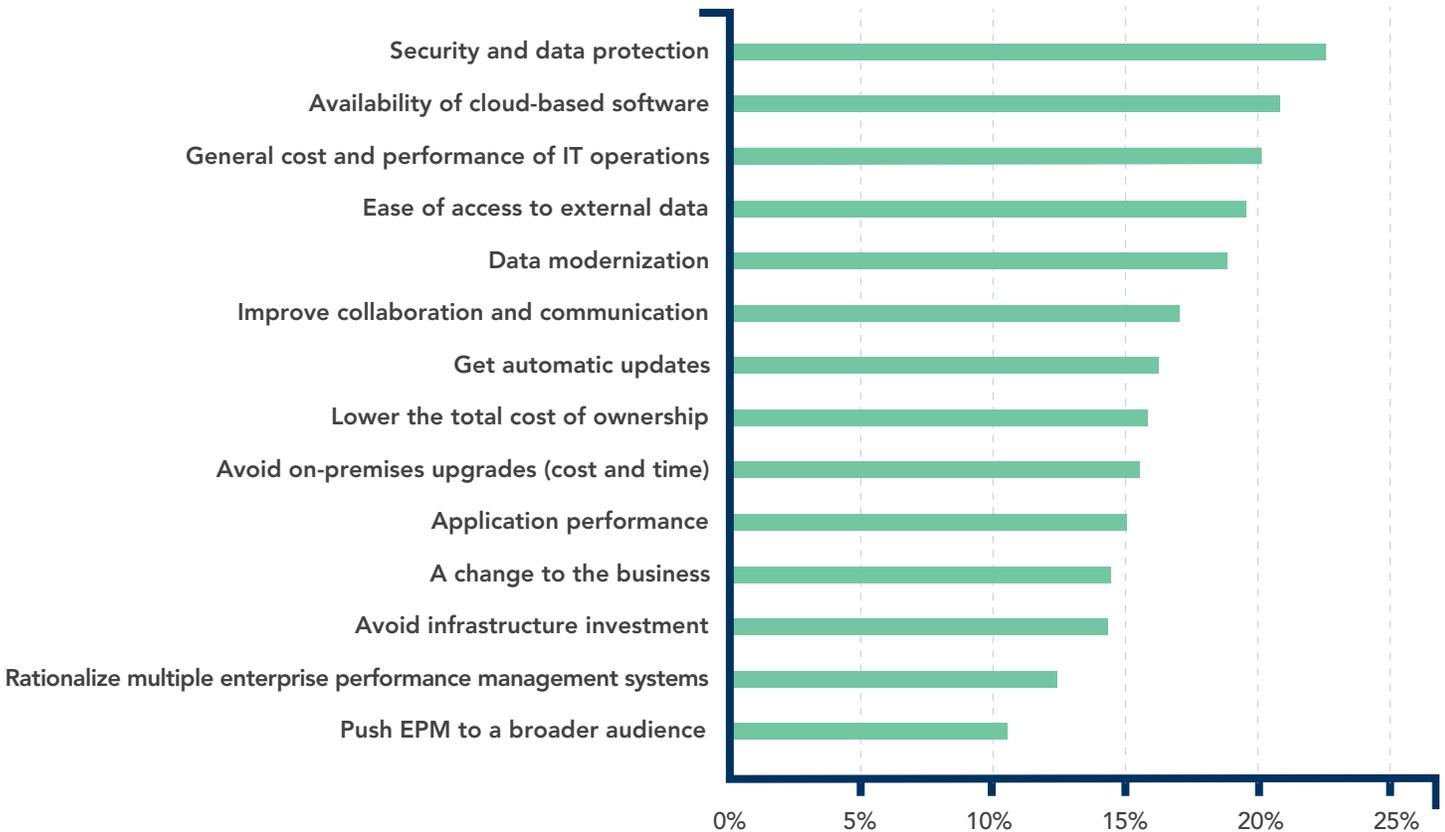


FIGURE 10: REASONS FOR MIGRATING TO THE CLOUD



Analytics

Most organizations know that enhancing their analytical capabilities is critical to their success and survival—helping them gain a competitive advantage or helping them maintain their current market position. But for many, our survey shows implementation of leading-edge analytics remains a work in progress—very few have completely implemented their desired leading-edge analytic techniques and technologies (see Figure 11). There are several reasons that implementation is incomplete, including the wide variety of technologies that are being adopted and the varying stage of maturity of each technology.

The stage of implementation was fairly similar

among companies of all sizes, with the exception that large companies were slightly more likely to be actively engaged in implementation rather than just starting on it.

Focus of Analytics Efforts

As organizations progress in their analytics journey, they face the need to prioritize their efforts. A key priority for many companies is deploying business process management tools, i.e., process automation technology that includes the efficient coordination of people, systems, and data (see Figure 12). More than half of the large organizations in our study have implemented these tools.

FIGURE 11: ANALYTICS IMPLEMENTATION STAGE

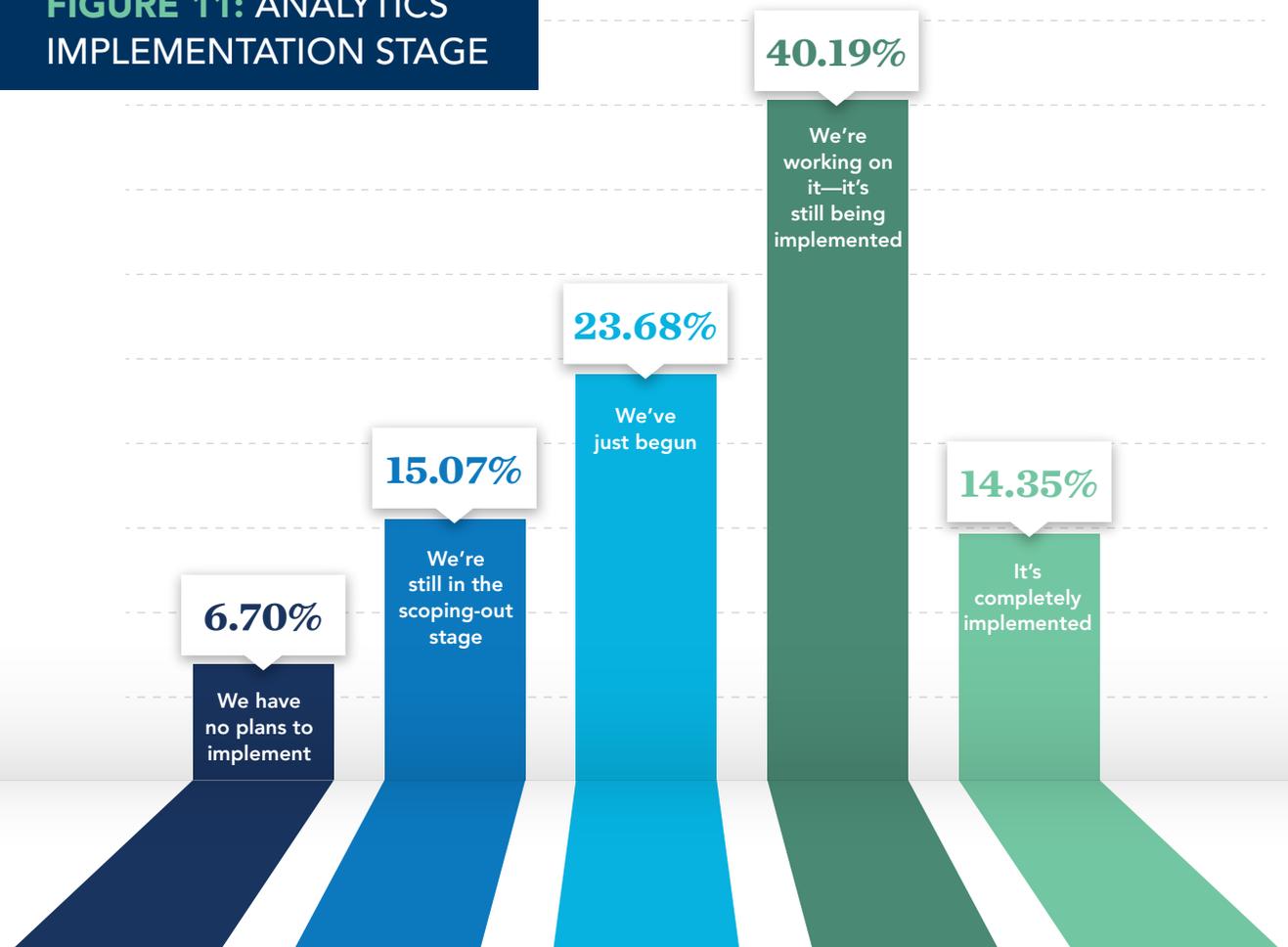
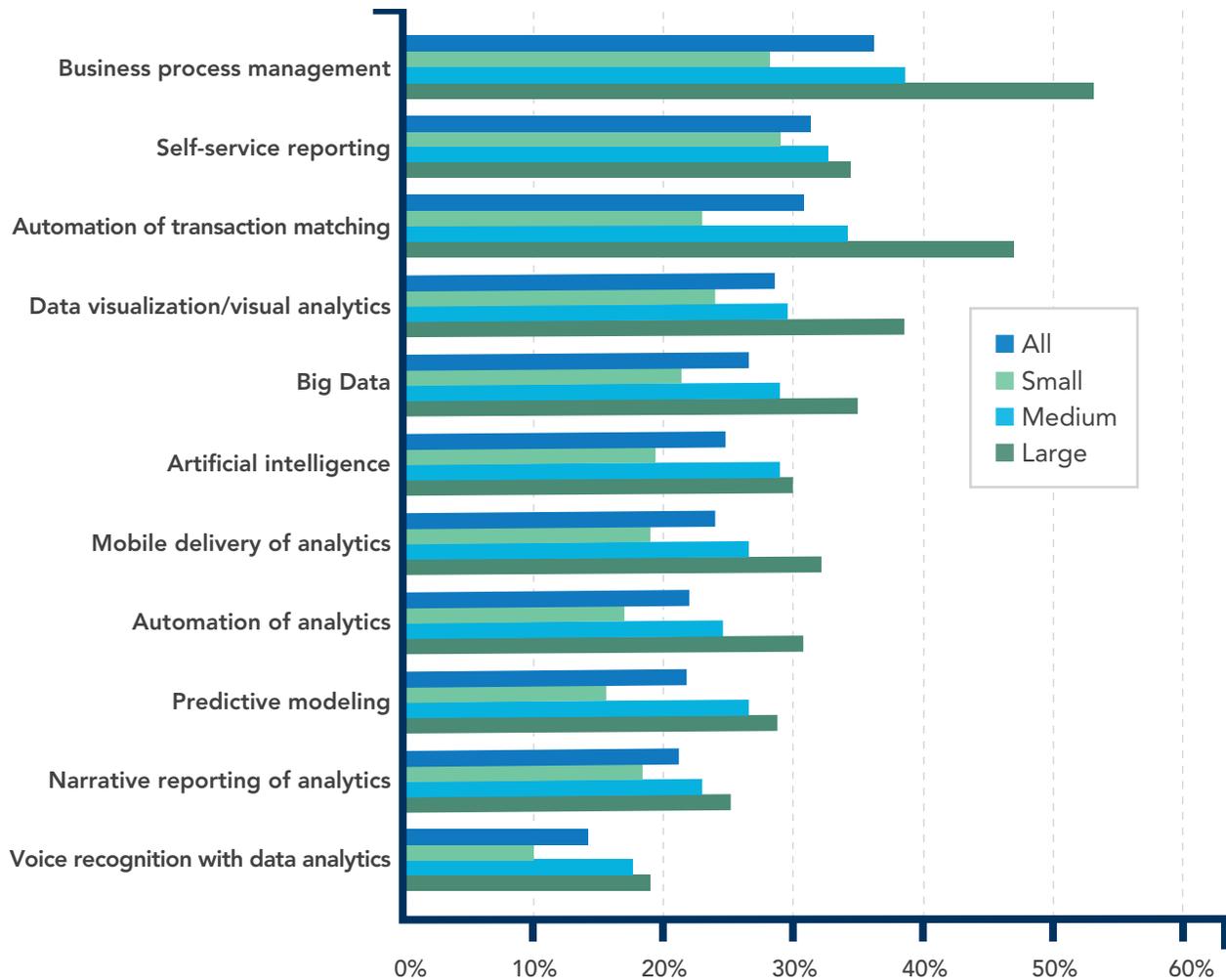


FIGURE 12: IMPLEMENTATION OF ANALYTIC TECHNOLOGIES BY COMPANY SIZE



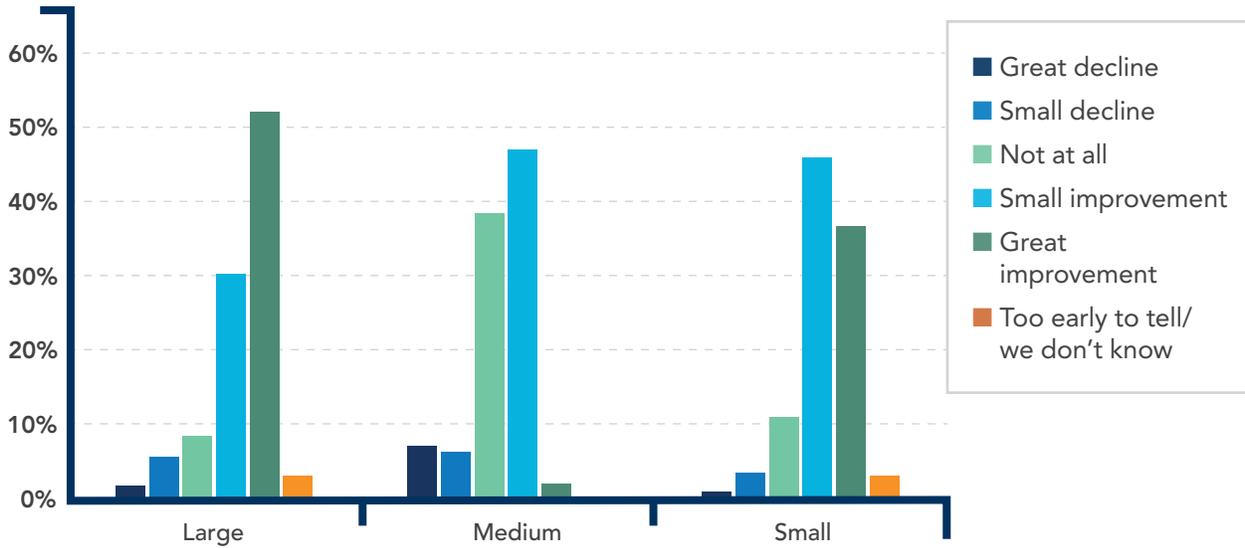
Self-service reporting was next most widely adopted overall, with very similar adoption rates across company size. This may reflect its relatively low cost and ease of implementation. Automation of transaction matching was the third most frequently adopted tool. Again, this was especially the case among larger organizations, with these organizations twice as likely to adopt this tool as small companies.

What is the business case for implementing leading-edge analytic techniques and technologies? The vast majority of organizations doing so report improvements in their organization’s performance (see Figure 13), although large and medium-size

companies appear to receive more benefits than smaller ones to some extent. •

Most organizations know that enhancing their analytical capabilities is critical to their success and survival.

FIGURE 13: IMPACT OF LEADING-EDGE ANALYTICS ON PERFORMANCE



Preparing for the Future

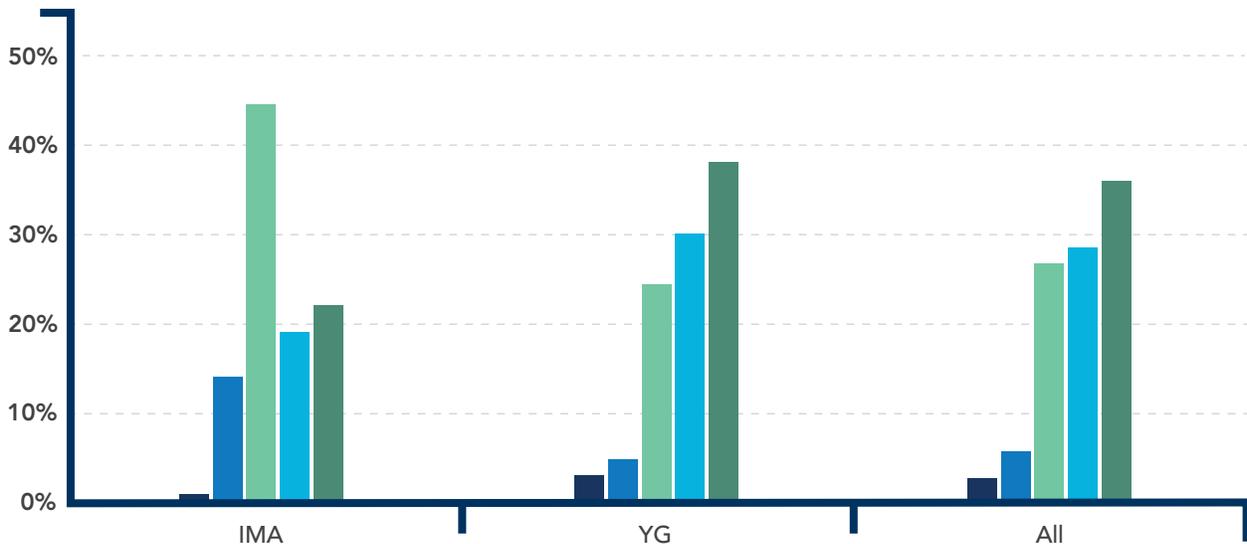
The digital transformation of the profession is under way. How effectively are finance organizations functioning in this new emerging digital environment? The answer very much depends upon which survey respondents we ask. Most YG respondents believe they are usually or consistently outperforming other organizations' finance departments.

The IMA members had a more realistic assessment of the performance of their finance areas, with most believing they were performing on par with other organizations and slightly more believing they were outperforming others as compared to those who believed they were relatively underperforming (see Figure 14). This

difference in responses was consistent across all countries and all company sizes. While the reason for this difference is subject to opinion, it is likely that the IMA respondents, as members of a global professional association, are better attuned to the current state of practice and how it is evolving.

Deploying new technologies and increasing the use of leading-edge analytics tools and techniques have changed the relationship between finance and other organizational areas. Across organizations of all sizes, the vast majority (78%) find that finance is now viewed more as a business partner, helping improve decision making and enhancing performance management.

FIGURE 14: EFFECTIVENESS OF ACCOUNTING AND FINANCE ORGANIZATION



- We consistently underperform relative to other organizations' finance departments
- We often/usually underperform relative to other organizations' finance departments
- Our performance is about on par with other organizations' finance departments
- We often/usually outperform relative to other organizations' finance departments
- We consistently outperform relative to other organizations' finance departments

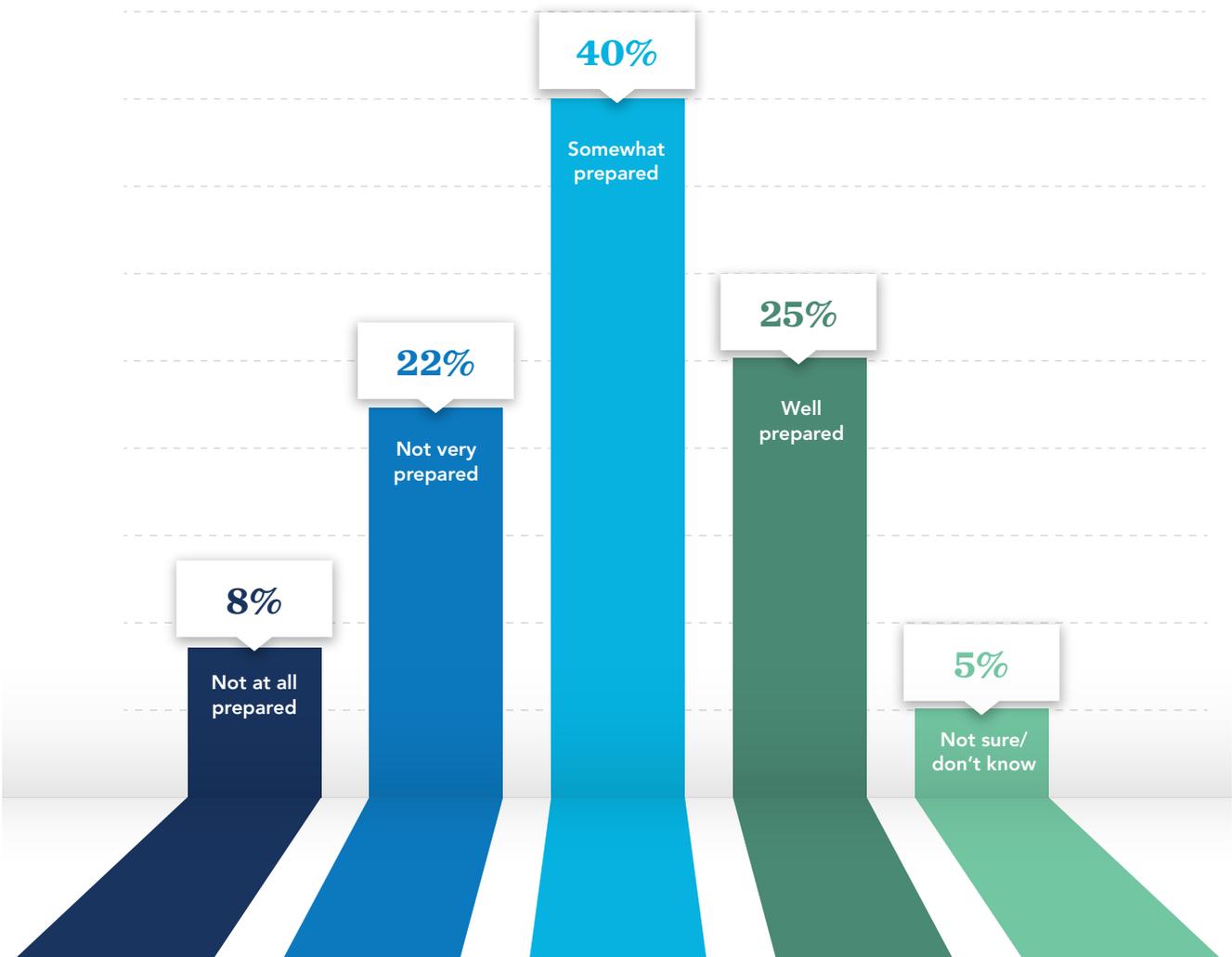
Organizational Readiness

There are four crucial elements for organizations wishing to use advanced technology and analytical capabilities to become data-driven: data-savvy people, quality data, state-of-the-art tools, and processes and incentives that support analytical decision making (i.e., organizational intent).⁵ With regard to the first of these, many organizations feel their staff is somewhat prepared for technological change, with the rest feeling in

about equal numbers either well prepared or not prepared (see Figure 15).

In a recent study, we found a high percentage of finance and accounting professionals in the Middle East (89%) and India (76%) were interested in upskilling or reskilling.⁶ While this was of interest pre-COVID-19, the pandemic has now intensified finance professionals' interest in upskilling as many worry about the relevance of their skills post-COVID-19.

FIGURE 15: STAFF PREPAREDNESS FOR TECHNOLOGY CHANGES



⁵ Lawson, et al., 2019.

⁶ Lawson, 2021.

These concerns regarding the need to upskill are not unfounded. New competencies will be needed for professionals to remain competitive in the workforce, and many do not yet possess the needed skills. Just focusing on automation, for example, approximately one-fifth of the finance workforce will need reskilling (see Figure 16), with the proportion even greater for

larger companies.

When preparing for the future, what skills should finance functions focus on? In the view of our respondents, the most important technology skills for the finance area in the next three to five years are AI and data governance, followed by enterprise resource planning, data visualization, and process automation (see Figure 17).

FIGURE 16: STAFF NEEDING RESKILLING DUE TO AUTOMATION

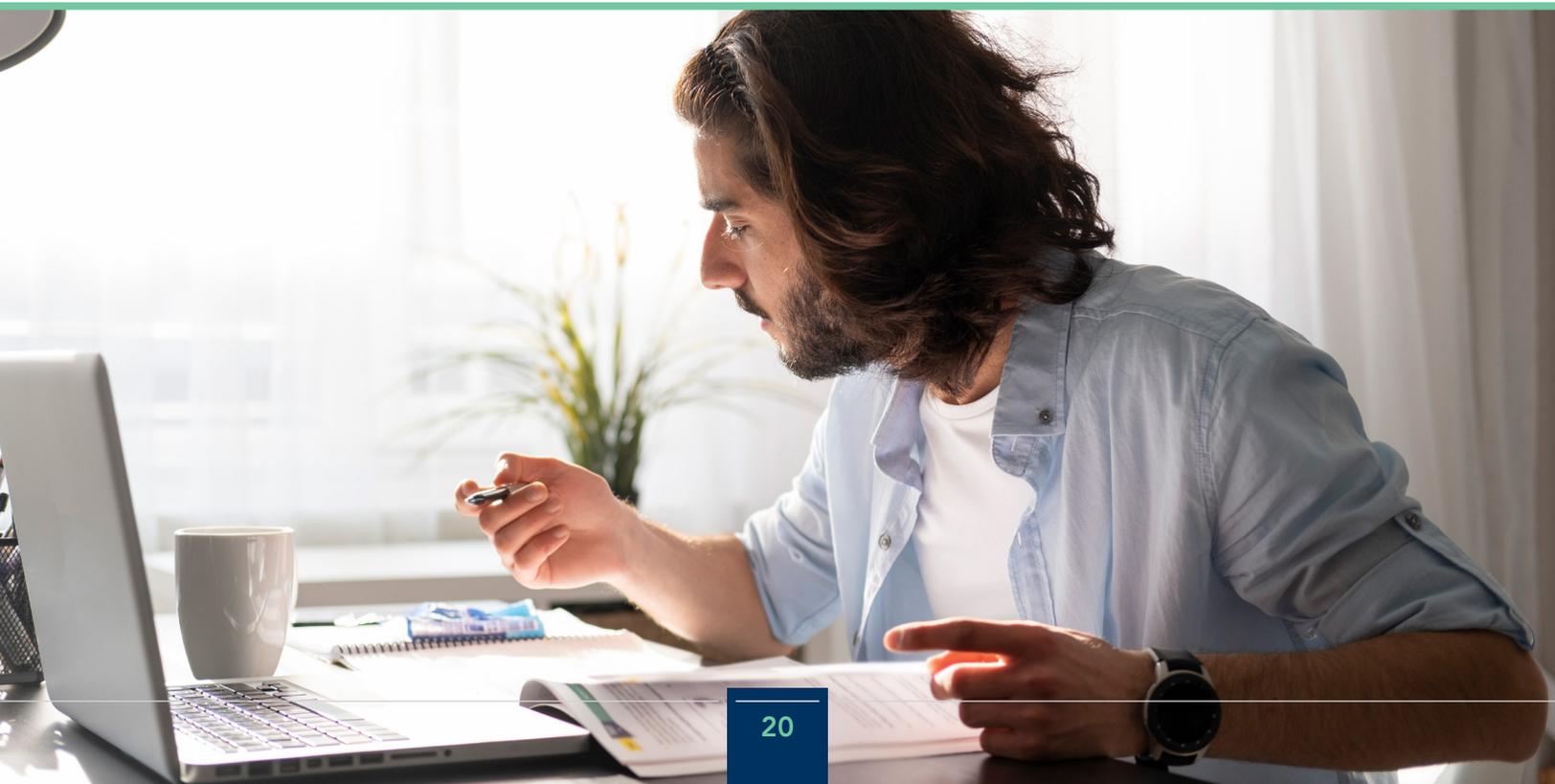
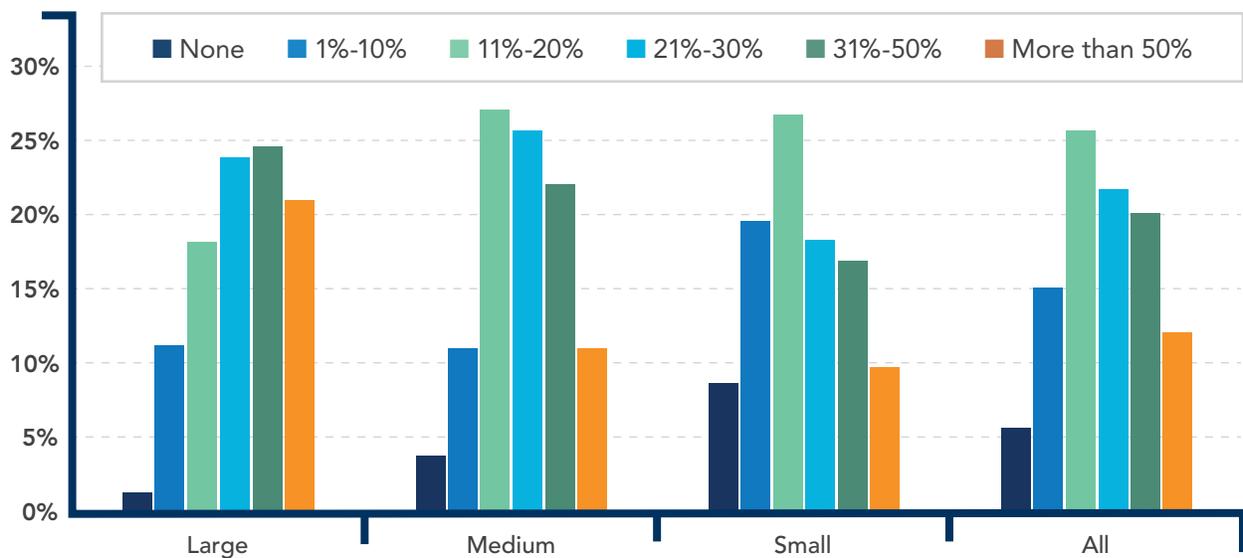
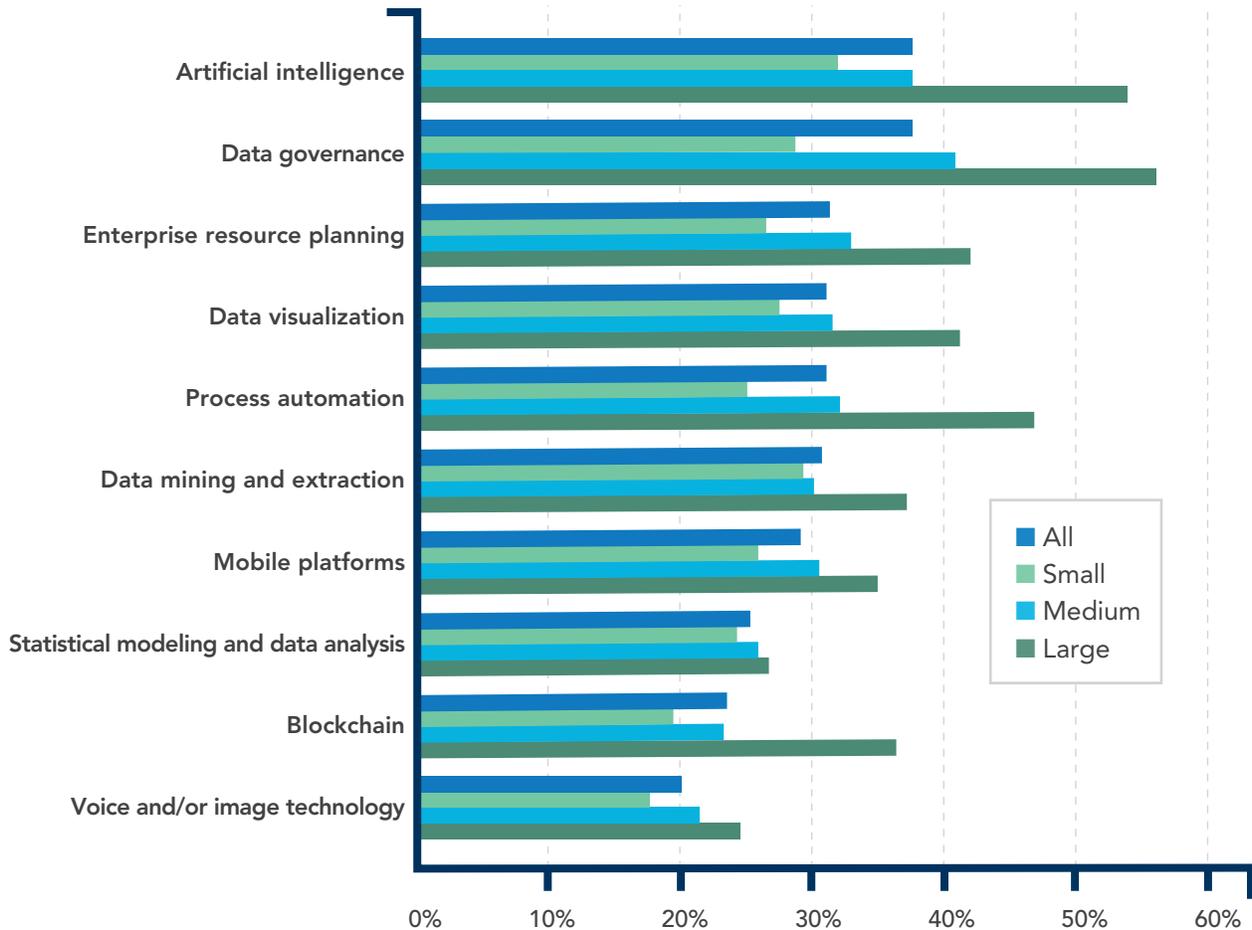


FIGURE 17: MOST IMPORTANT TECHNOLOGICAL SKILLS



Challenges in Enhancing Analytics Capabilities

Despite the benefits from adopting enhanced technological and analytical capabilities, the vast majority (95%) of companies encounter at least some problems in developing these capabilities. Most common is the cost of investing in new technologies (30.3%), followed closely by developing necessary skills in existing staff (29.4%), limited staff resources/focus on competing initiatives (29.2%), and the difficulty in hiring staff with the necessary skill set (28.6%). (See Figure 18.) •

In the view of our respondents, the most important technology skills for the finance area in the next three to five years are AI and data governance.

FIGURE 18: CHALLENGES IN ENHANCING ANALYTICAL CAPABILITIES



CONCLUSION

Finance and accounting professionals in the Middle East and India, like their counterparts around the world, are responding to the challenges and opportunities presented by leading-edge technology to digitally transform the finance function. The digital revolution is impacting many of finance’s processes for organizations both large and small. While finance faces challenges in carrying out its digital transformation, very significant advances have been made in the last year and will continue to be made.

By combining its traditional core expertise with enhanced technological and analytics

Finance can become a true business partner, supporting organizations in making insight-driven decisions.

skills, finance can become a true business partner, supporting organizations in making insight-driven decisions, thereby enhancing organizational value. •



APPENDIX: ABOUT THE STUDY

The findings contained in this report are based on the results from three surveys. The first two were surveys of IMA members in India and the Middle East. The former of these was conducted in the September-October 2019 time frame and had 68 respondents; the latter was conducted during March-April 2020 and had 132 respondents (these two surveys are collectively referred to as “IMA” or “2019” respondents).

The results of these two surveys were supplemented by a survey conducted during July 2020 by YouGov (YG), a professional survey organization, for IMA. We received 807 responses, approximately evenly divided (by design) between four countries: India, Saudi Arabia, UAE, and Egypt.

Use of data from these three surveys enables us to analyze (given that the IMA surveys were pre-COVID-19 and the YG survey was conducted during the first wave of the COVID-19 pandemic) how the use of technology changed during this period of instability and unprecedented change.

Survey Respondents

The number of survey respondents by country was as follows:

TABLE A1: SURVEY RESPONDENTS BY COUNTRY (DEMOGRAPHICS)

IMA Members	200
India	68
Middle East	132
YouGov Respondents	807
Egypt	204
India	202
Saudi Arabia	200
UAE	201
Total Respondents	1,007



Demographic information, collected (only) for the YG respondents, indicated that the proportion of female respondents was fairly consistent across countries, ranging from a low of 18% in Egypt to a high of 25% in the UAE, and was 21% overall. There were significant differences in respondents’ ages from the various countries, with those in India tending to be the youngest and those in Saudi Arabia the oldest (see Figure A1).

The larger percentage of respondents in the oldest age group from Egypt helps account for respondents from that country being more likely to hold positions in top management (see Figure A2).

As expected, incomes tended to be lowest in Egypt and highest in the UAE (see Figure A3).

There is a very significant difference between the sizes of the companies at which respondents to the IMA and YG surveys work, with the median IMA company having 101 to 1,000 employees and the median YG company having fewer than 50 (see Table A2). •

FIGURE A1: AGE OF RESPONDENTS BY COUNTRY

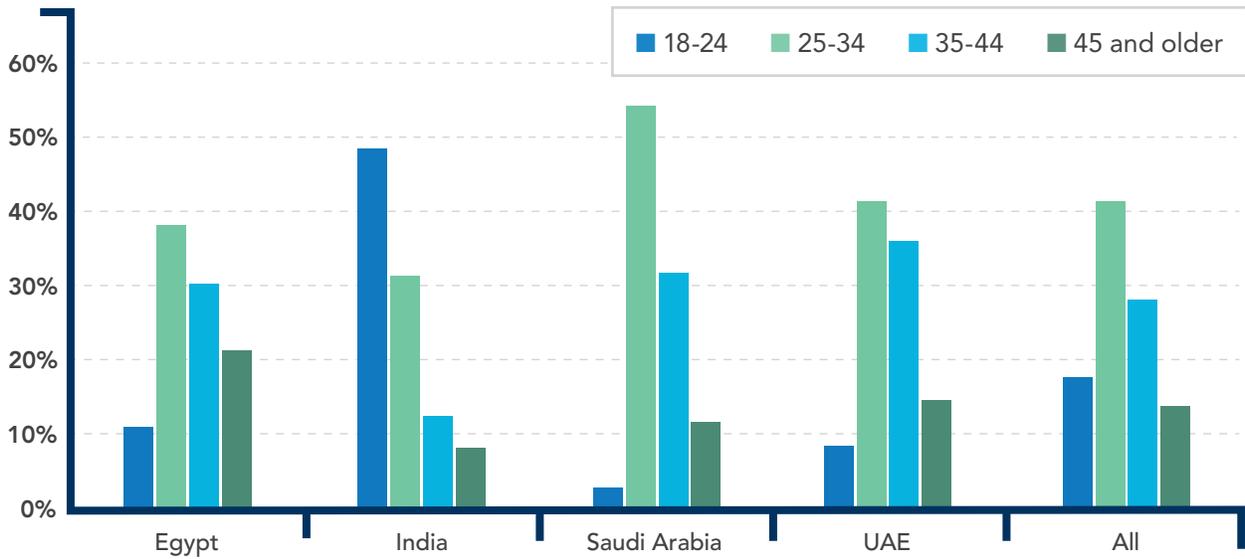


FIGURE A2: MANAGEMENT LEVEL OF SURVEY RESPONDENTS

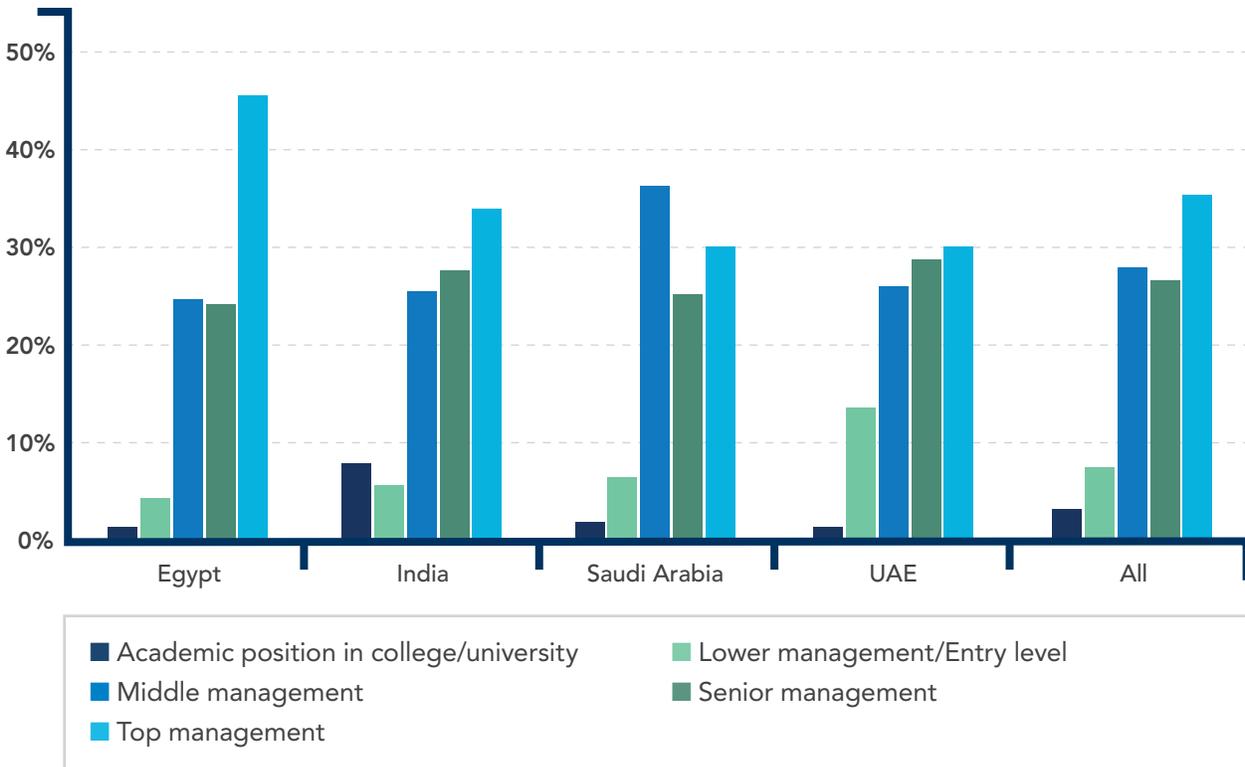


FIGURE A3: RESPONDENT INCOME BY COUNTRY

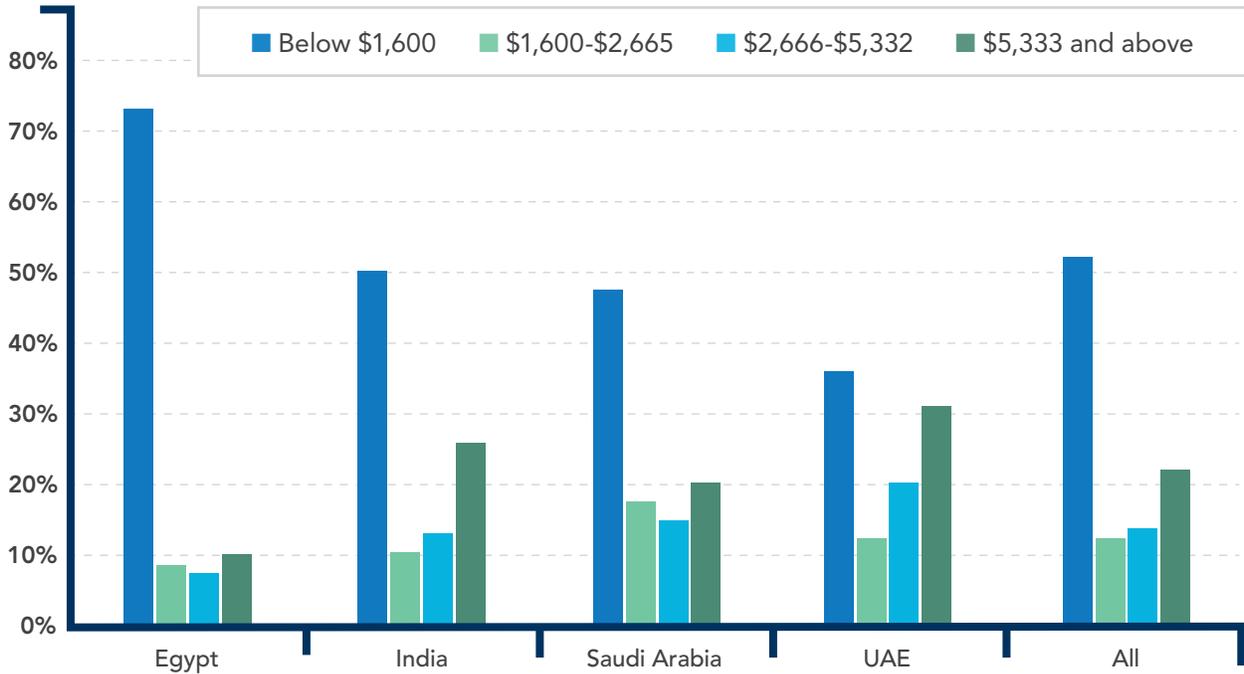


TABLE A2: SIZE OF COMPANY (NUMBER OF EMPLOYEES)

IMA		YG	
50 and below	14%	Less than 50	52%
51-100	14%	50-249	20%
101-1,000	28%	250-999	16%
1,001-2,500	5%	1,000 or more	12%
2,501-5,000	14%		
5,001-20,000	10%		
20,001-50,000	5%		
More than 50,000	12%		



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