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Foreword

The 2013 Technology Industry Business Outlook survey, now in its fifth year, reflects emerging perspectives from U.S. technology executives about revenue and employment growth, promising applications and platforms, R&D spending, and other trends.

This year, U.S. tech executives continue to show moderate optimism about revenue growth. As the tech industry roadmap continues to evolve, the trend, in the next one to two years, is for revenue growth to be driven increasingly by markets outside the United States, China, and India.

Challenges such as losing market share due to lower-cost providers and political and regulatory uncertainties ranked as the top threats to tech companies' business models. In addition labor costs and pricing pressures are seen as growth barriers.

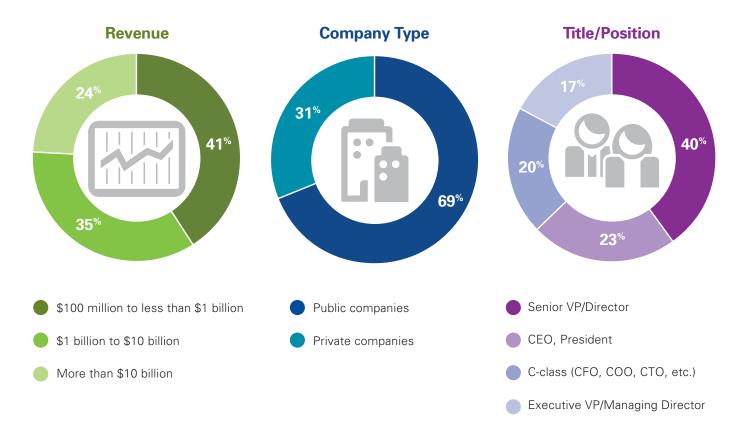
Increased adoption of cloud and mobile technologies, the rise of new market entrants, global expansion and growing concerns about economic pressures—in almost every market in the world—are creating challenges and opportunities for the tech sector.

We hope you find the survey results insightful and welcome feedback about the findings, or suggestions for next year's survey.

Garv Matuszak Global Chair Technology, Media & Telecommunications

Demographics & methodology

KPMG's 2013 Technology Industry Business Outlook is the firm's fifth annual market pulse survey. The online survey reflecting the viewpoints of 102 technology industry executives in the United States was conducted in February 2013.





Geographic growth and revenue gains expected



This year, just under 80 percent of the executives expect their company's revenue to increase over the next year, compared with 77 percent in last year's results. The responses also indicate the growing importance of markets such as Brazil, Canada, Mexico, and South Korea and lower revenue growth expectations for the United States and China.

As global adoption increases for mobile and cloud technologies, revenue expectations continue to be significant for these technologies. The majority of respondents say cloud and mobile revenues have met or exceeded their expectations.

Spending trends



Continued optimism is leading to further investments in products and services development, core R&D, acquisitions, and geographic expansion.

Plans for employment growth reflect broader geographic diversity as emerging markets increasingly drive technology demand and many countries offer employment incentives.

The United States, China, and India remain the leading countries for employment growth, with executives also citing plans to increase headcount in Brazil, Canada, Mexico, the United Kingdom, South Korea, and other countries.

Business challenges



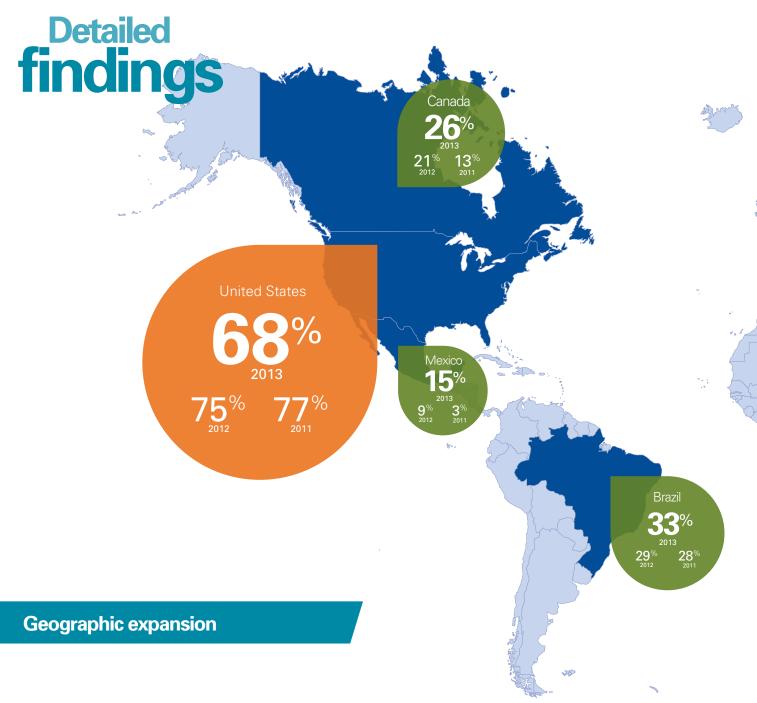
Pricing pressures were cited as the most significant growth barrier over the next year, followed by increasing labor costs and the ability to remain on top of emerging technologies. Regulatory and legislative pressures also emerged as a more pressing growth challenge in this year's results.

The potential loss of market share to lower-cost producers was described as the largest business model threat, followed by political or regulatory uncertainty and the emergence of disruptive technologies.

U.S. economy expectations



Tech leaders' expectations for a broader U.S. economic recovery remain muted. Respondents anticipating the economy to remain about the same rose significantly, with a notable decline in those with expectations for economic improvement in the United States.

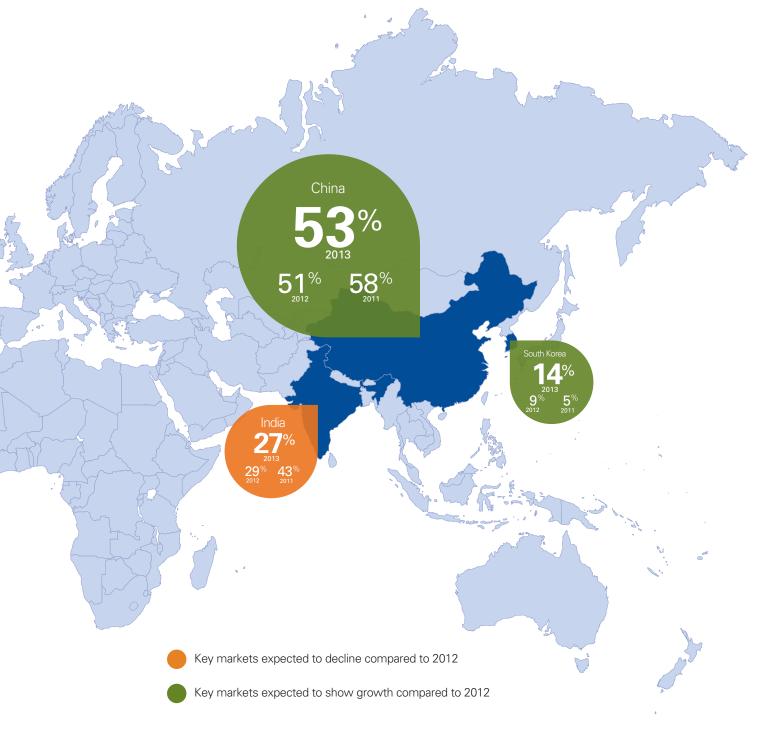




Q: Which geographic markets do you believe will have the highest percentage of your company's revenue growth over the next one to two years?

While the United States and China were again cited for driving the highest percentage of revenue growth, this year's survey demonstrated the increasing importance of markets such as Brazil, Canada, Mexico, and South Korea.

The United States and China are likely to be the leading geographic markets for revenue growth over the next one to two years.



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These trends can be attributed to factors in countries outside the United States, China, and India, such as improving economies, infrastructure investment, government incentives, and increasing technology adoption.

> — Gary Matuszak Global Chair, KPMG's Technology, Media and Telecommunications practice

Revenue growth

Many expect their company's revenue to increase one year from now.



Q: How do you expect your company's U.S. revenue to change one year from now?



Technology executives continue to demonstrate revenue optimism. The majority (79 percent) expect their company's revenue to increase over the next year. Thirty-eight percent indicate increases between 1 to 5 percent, followed by 26 percent anticipating 6 percent to 10 percent increases.

Notably, the percentage of the executives expecting significant revenue increases (higher than 10 percent) rose to 15 percent, compared with 10 percent last year.

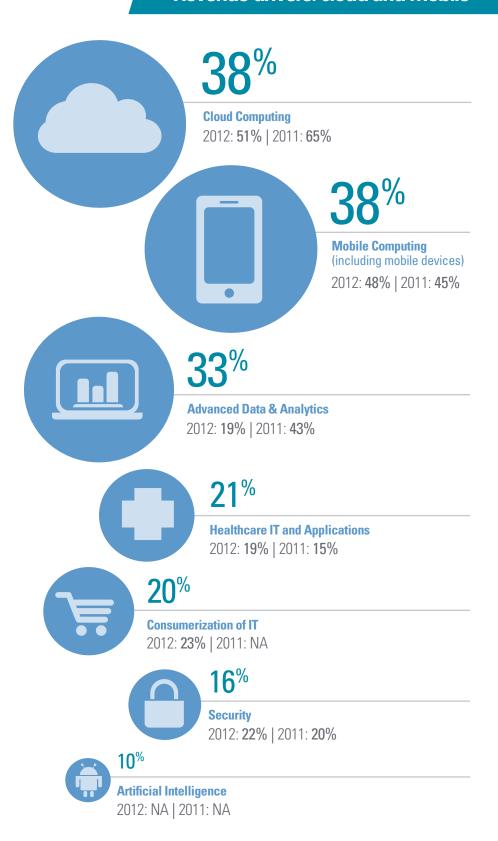
Revenue drivers: cloud and mobile

Cloud and mobile computing will be the biggest drivers of revenue growth in the next one to three years.

Q: Which areas do you believe will be the biggest drivers of your company's revenue growth in the next one to three years?

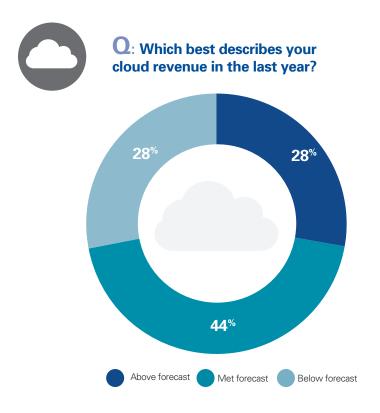
As the industry continues to evolve, the trend is for a wide variety of technologies to drive revenue growth over the next one to three years. Cloud and mobile (both at 38 percent) were again cited as leading growth drivers, but at lower levels than in previous surveys. (see cloud trends on page 10)

Greater expectations propelled data and analytics into third place, as companies in a broader range of businesses make tech investments to harness Big Data's promise to enable real-time, actionable insights about customers and emerging opportunities. (see data and analytics trends on page 16)

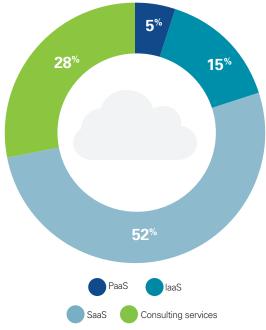


Cloud and mobile revenues*

Cloud revenue generally met or exceeded last year's forecast with SaaS as the main driver.







Looking at revenue growth drivers in more detail, the majority (about three-fourths) indicated cloud technologies generally met or exceeded last year's revenue expectations, with software as a service (SaaS) leading cloud revenues.

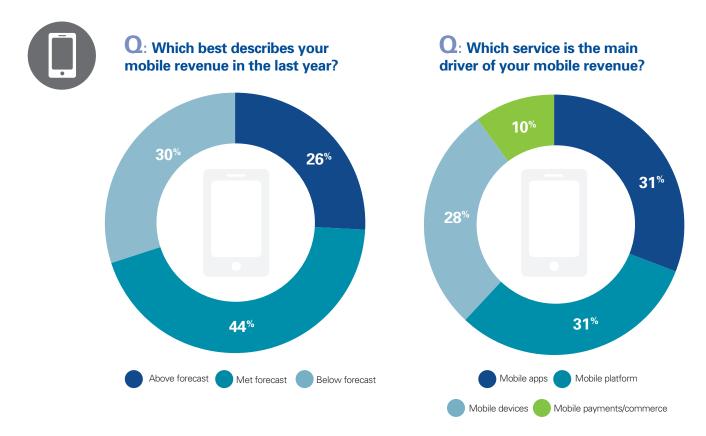
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United States cloud providers are increasingly working with customers to develop comprehensive cloud strategies beyond cost savings.

—Gary Matuszak

^{*}Among those who say cloud computing is a big driver of company revenue growth in the next one to three years.

Mobile met or exceeded last year's forecast with mobile apps and mobile platform as its main drivers.



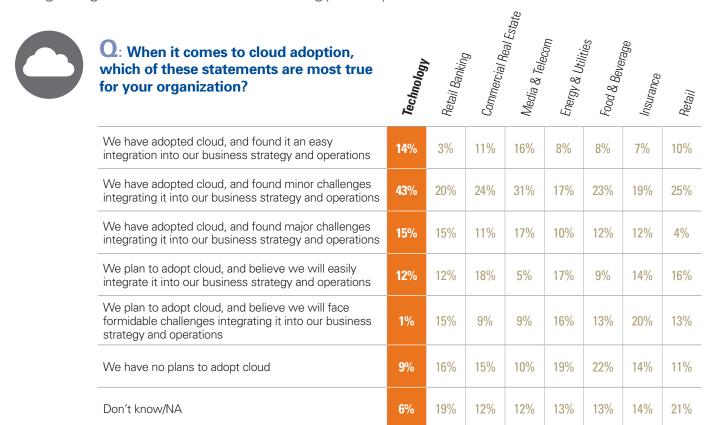
Mobile revenues matched or exceeded expectations, with mobile apps (31 percent), platforms (31 percent), and devices (28 percent) as the leading sources of revenue growth.

Competition is increasing among tech companies to gain leadership in the applications and platform ecosystems, as traditional lines between notebook PCs, tablets, and smartphones converge.

^{*}Among those who say mobile is a big driver of company revenue growth in the next one to three years.

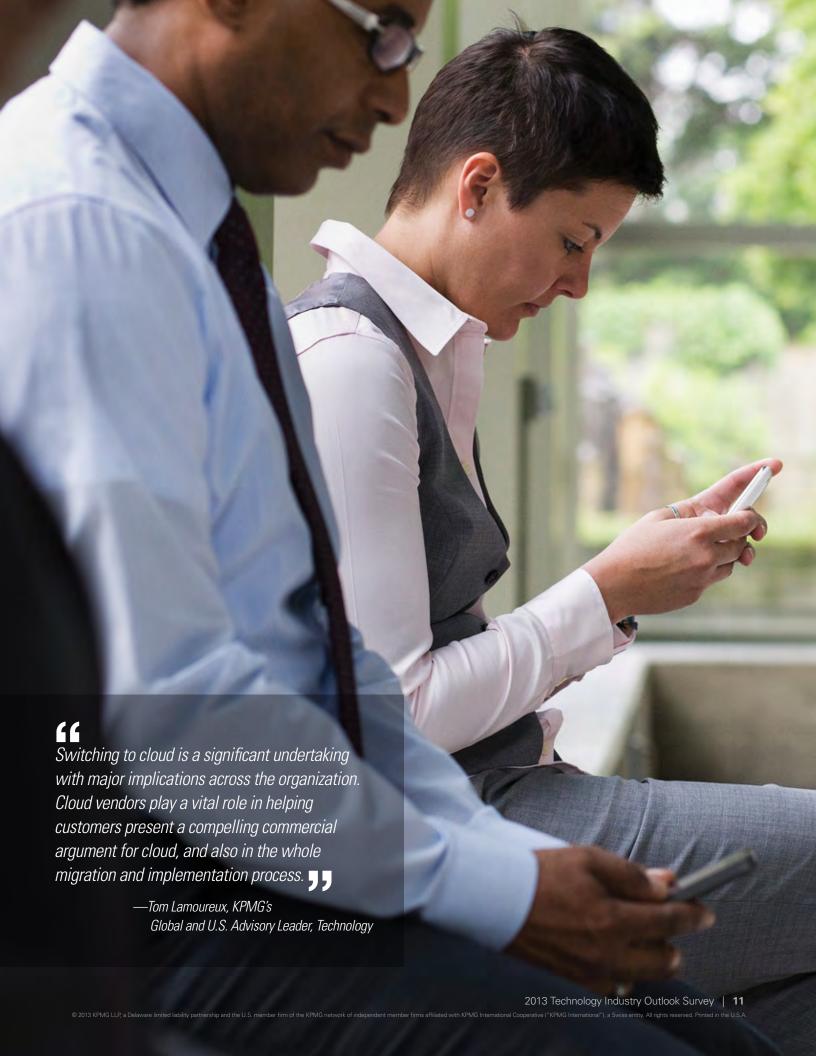
Cloud adoption trends

A majority say they have adopted cloud, and found little to no challenges integrating it into their business strategy and operations.



Tech companies are known for rapid implementation of their own technologies, so it is not surprising that the majority of respondents said their organizations have integrated cloud into their business strategies and operations. Fifty-seven percent of the executives reported no or minor challenges during their cloud adoption initiatives, compared with 15 percent who reported major problems.

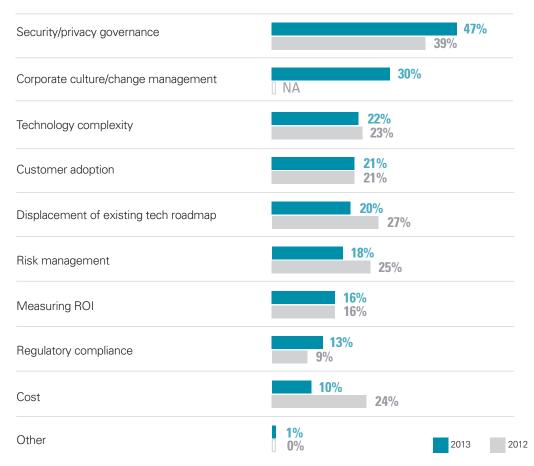
Also not surprisingly, the favorable cloud implementation experience indicated by tech leaders is higher than the executive responses in nine other industries recently surveyed by KPMG.



Cloud and mobile adoption challenges



Q: What do you see as your biggest challenges for businesses to adopt cloud technologies in the next three years?



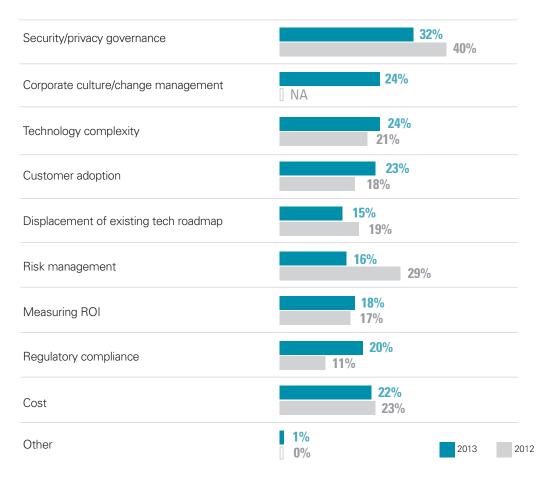
Cloud-related security/privacy governance concerns increased this year, which may reflect a number of highly publicized outages of cloud services, the growing number of workers accessing corporate data on mobile devices, and reluctance among some enterprises to trust critical organizational data to a cloud service provider. Cloud customers remain concerned about data loss and intellectual property theft, but are also becoming more comfortable with mitigation and protection strategies.

Reflecting the transformational potential of cloud, and the importance of comprehensive change management programs being embedded into major initiatives, corporate culture and change management (a new category this year) was cited by 30 percent of executives as a notable adoption challenge.

Security/privacy governance remains the biggest challenge for businesses in adopting social media, cloud, and mobile technologies.



Q: What do you see as your biggest challenges for businesses to adopt mobile technologies in the next three years?

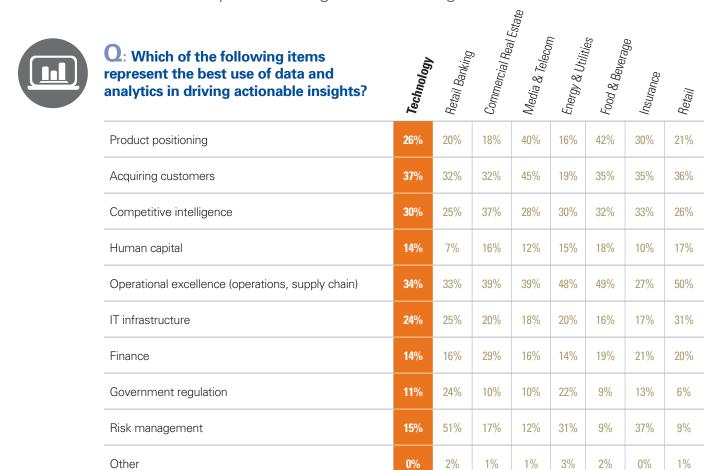


The importance of security/privacy governance declined for mobile as well as risk management concerns, reflecting a

growing understanding of the associated risks and increasing adoption of governance strategies.

Data and analytics adoption trends

Acquiring customers and improving operational excellence represent the best use of data and analytics in driving actionable insights.



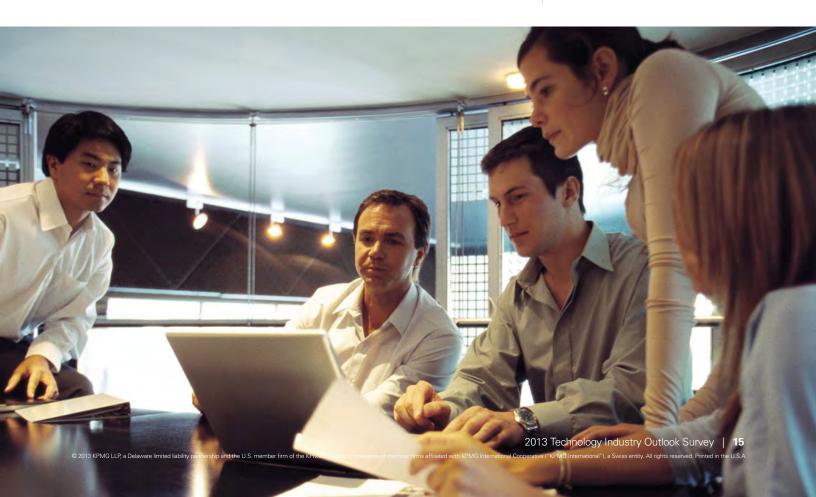
Much of the data in the world today has been created in the last couple of years. As the rate of data continues to increase, tech companies are capitalizing on the opportunity to enable their customers to find new insights that will impact their bottom line.

As tech companies implement data and analytics they see customer acquisition, operational excellence, and competitive intelligence as the top areas to gain actionable insights. This trend was consistent with other KPMG industry surveys conducted in parallel with the tech industry survey.



Q: When it comes to data and analytics literacy at your company, which of these statements are most true for your organization?

My company has high data and analytics literacy		24%	
My company is rapidly moving toward becoming an enterprise with high analytical literacy		23%	
My company is about average when it comes to utilizing analytics, and our management team and workforce have an average analytical literacy			33%
My company has some data and analytics capabilities, but at the moment we are behind our competitors when it comes to utilizing analytics, and our management team and workforce have average to low analytical literacy	11%		
My company has no formal data and analytics capabilities, and our management team and workforce have low analytical literacy	6%		
Don't know	3%		



Spending trends

New products/services will continue to be first in line to see increased spending over the next year.



Q: In which three areas do you expect your company to increase spending the most over the next year?

	% in 2013	% in 2012	% in 2011
New products or services	39	48	56
Research and development	32	34	40
Acquisition of a business	30	47	38
Information technology	26	33	24
Geographic expansion	25	25	15
Advertising and marketing/branding	14	14	16

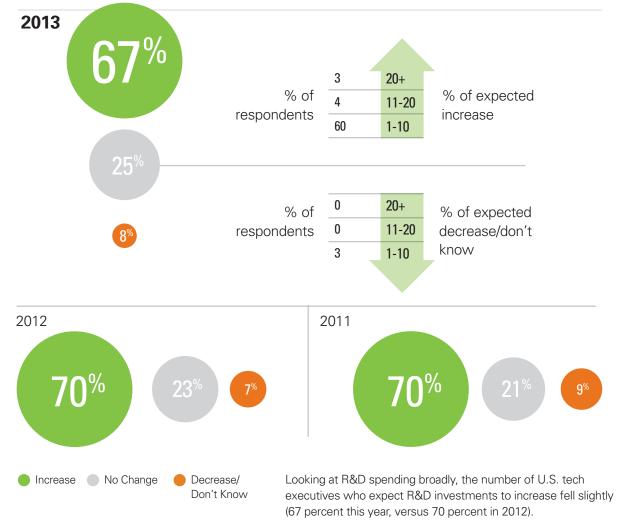
Tech companies continue to invest to remain competitive in the long term. Increased spending is expected in product development, core R&D, and acquisitions. The continued

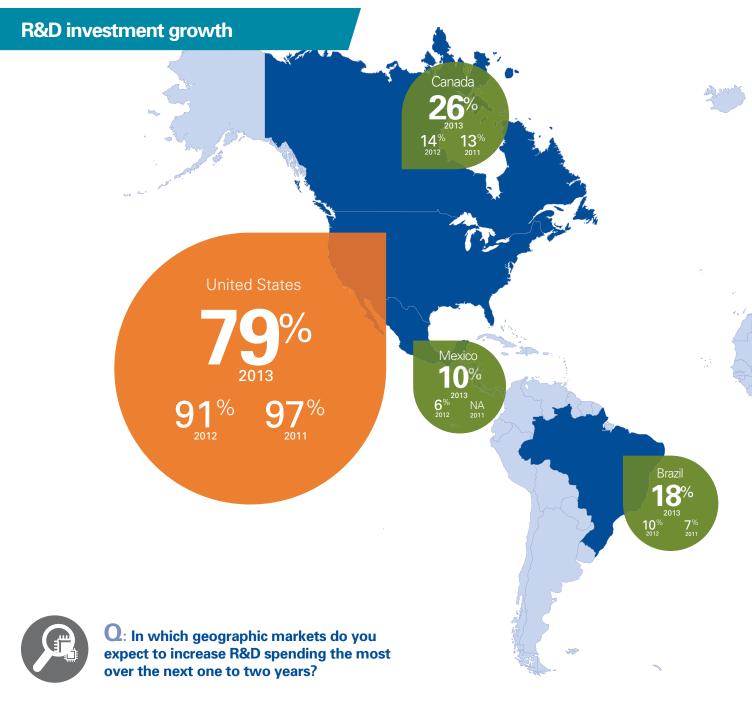
revenue optimism among tech executives is also an indicator of further investments in cloud and mobile expansion strategies.

A significant majority expect their research and development spending to increase in the next year.



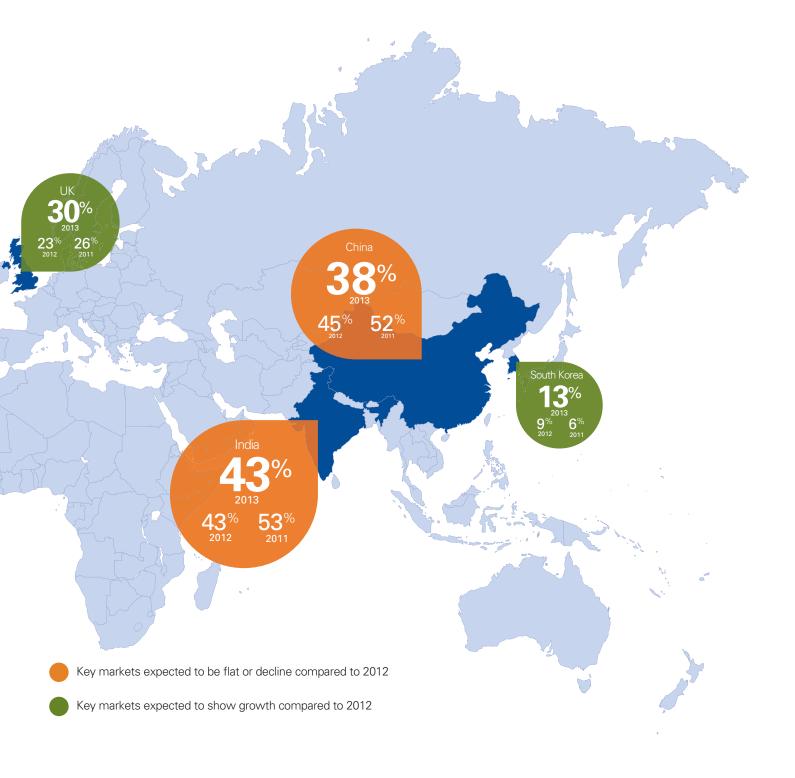
Q: What do you expect your company's R&D spending to be like one year from now?





A majority expect research and development spending to increase in the United States over the next one to two years.

Matching expectations for revenue and employment growth, respondents showed increases in R&D spending in more diversified international markets. While the United States remains the leading location for increased spending, it recorded a notable percentage decline from 91 percent of those surveyed in 2012 to 79 percent this year.



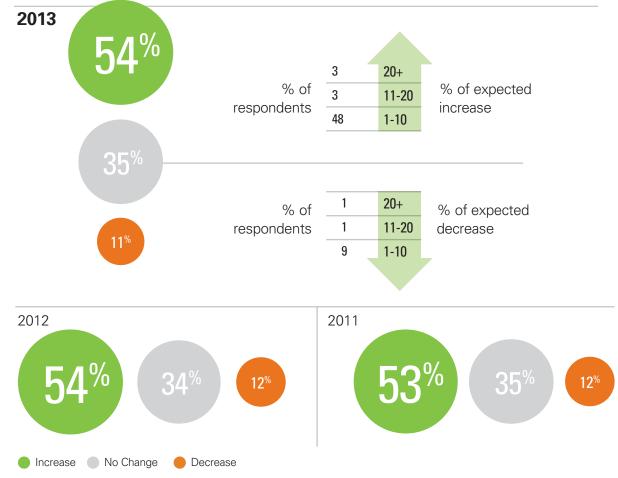
Reflecting slower economic growth, intellectual property challenges, and increases in labor costs, China (third, at 38 percent) fell below India (now second, at 43 percent) as an attractive location for R&D investment growth. And highlighting increased globalization of R&D spending, the United Kingdom, Canada, and Brazil were among the nations targeted for notable R&D spending increases.



A majority say their company's capital spending will increase over the next year.

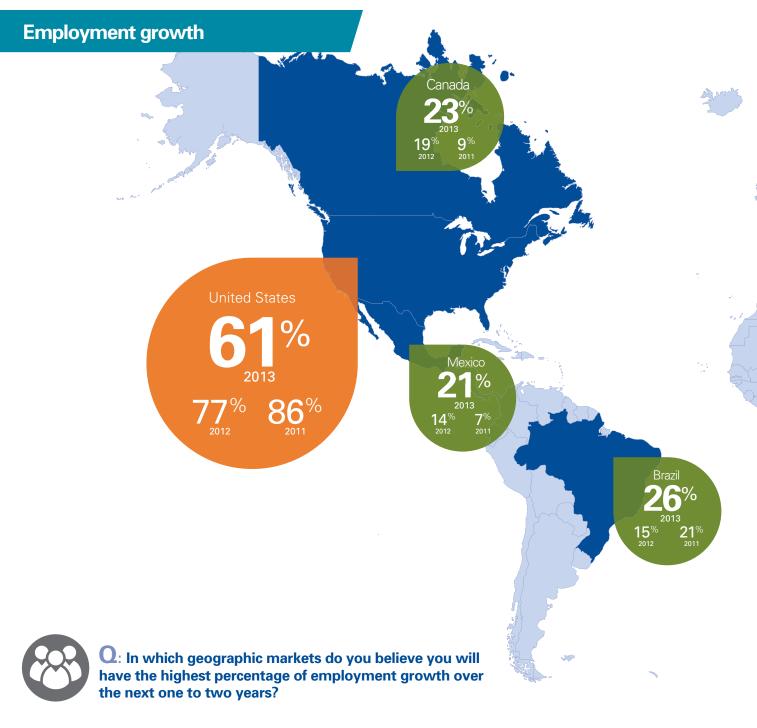


Q: What is the outlook for capital spending by your company over the next year?



Tech leaders' plans for capital spending were consistent with previous KPMG surveys, reflecting continued industry optimism to invest for further growth. Nearly half of the companies plan to increase capital spending outside the United States, with China, India, Brazil, and Mexico among the leading markets for international capital investments.

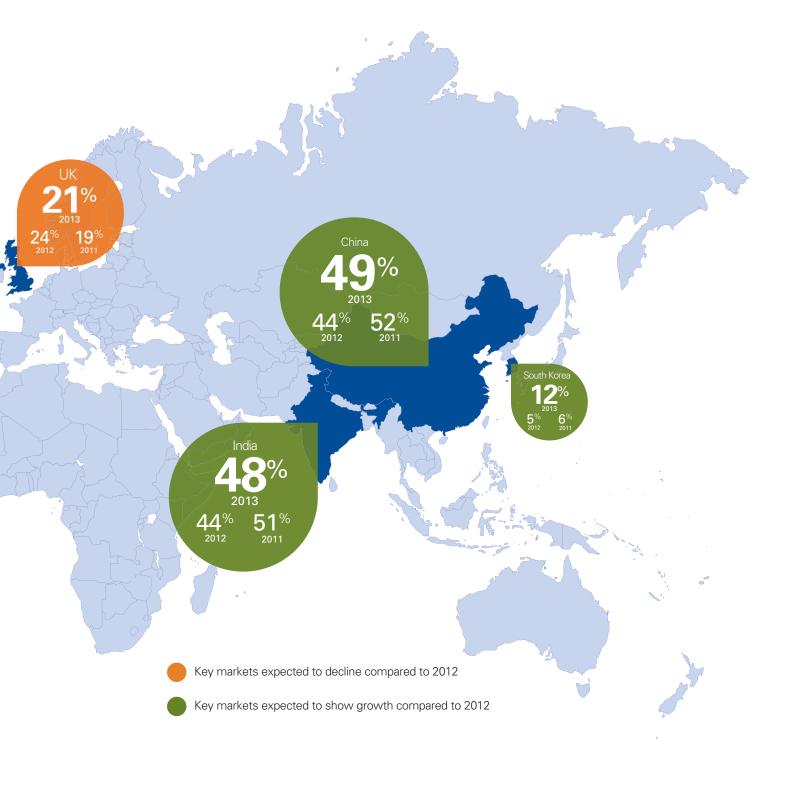
This broad-based tech-sector optimism aligns with the KPMG Global Semiconductor Survey, in which 73 percent of respondents outlined plans to increase hardware and software investments in 2013.



The United States and China are likely to provide the highest percentage of employment growth over the next one to two years.

The United States, at 61 percent, remains the leading market for employment growth, followed by China (49 percent) and India (48 percent).

Reflecting increased technology demand in new markets, more executives cited plans to increase headcount in Brazil, Canada, Mexico, and South Korea, among other countries.



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Anticipated revenue growth and employment growth rates are closely connected, so we are seeing increased employment expectations in a number of countries that see revenue growth.

— Gary Matuszak

M&A trends

Considering plans to make an acquisition in the next year, more than 40 percent of respondents said their organization was very or somewhat likely to purchase another company, down from 66 percent in 2012.



\mathbf{Q} : What is the likelihood that your firm will be involved in a merger/acquisition in the next year? 2012/2011 question: What is the likelihood that your firm will be involved in a merger/acquisition in the next two years?

	% in 2013	% in 2012	% in 2011
Very/somewhat likely (as a buyer)	41	66	68
Very/somewhat likely (as a seller)	18	11	15
Somewhat likely (as a buyer and seller)	6	NA	NA
No plans for M&A activity	25	19	10
Not sure/don't know	10	4	7



With large-scale technology deals in recent years reducing the supply of available high-value targets, tech companies continue to add to record cash levels and to focus on core products and services. As cloud and mobile grow in importance, tech companies are increasingly acquiring industry-specific expertise to accelerate product and service development.

> — Richard Hanley, KPMG's U.S. Advisory industry leader Technology, Media and Telecommunications



Q: Which of the following do you think will be the most important drivers of alliances, mergers, and acquisitions in the industry over the next year?

	% in 2013	% in 2012	% in 2011
Access to new technology and products	56	63	69
Access to new geographic markets	39	34	31
Product synergies	37	47	50
Labor cost pressures	23	11	10
Access to employees with new skills and expertise	21	28	31
Production cost pressures	19	16	12
Other	3	3	1

Access to new technology and products, new geographic markets, and product synergies were other leading drivers of alliances, mergers or acquisitions.

Labor cost pressures, alluded to earlier as a threat to growth and business models, rose significantly as a driver of M&A activity or alliances.

Business challenges

Pricing pressure is viewed as the most significant growth barrier over the next year.

: Which of the following are the most significant growth barriers facing ur company over the next year?				
	% in 2013	% in 2012	% in 2011	
Pricing pressures	38	38	41	
Staying on top of emerging technologies	24	34	36	
Labor costs	24	20	16	
Regulatory and legislative pressures	22	18	13	
Lack of customer demand	21	26	32	
U.S. dollar strength	16	11	12	
Increased taxation	14	12	9	
Lack of qualified workforce	12	16	13	

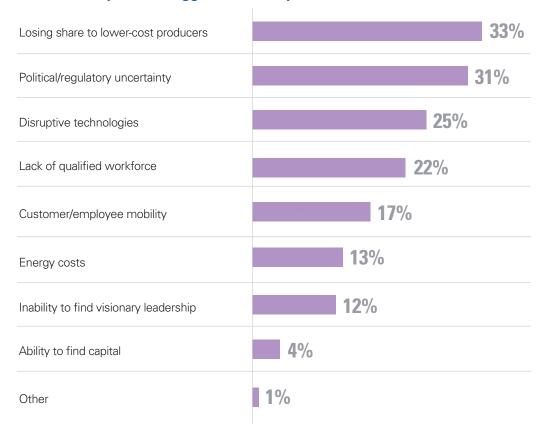
Highlighting more competition and economic concerns, respondents cited pricing pressures (38 percent) as their most significant growth barrier over the next year. Reduced pricing strength in some segments reflects continued technological evolution and commoditization of products considered innovative in recent years.

Labor costs and an ability to remain on top of emerging technologies tied (at 24 percent) as the second-most-significant growth barriers, with increased concern about labor costs likely caused by higher wages in China and India, and a corresponding dilution of cost advantages in those markets.

Losing share to lower-cost producers and political/regulatory uncertainty are the biggest threats to companies' business models.



$oldsymbol{\mathbb{Q}}_{:}$ What issues pose the biggest threat to your business model?





Pricing and operational efficiencies are key areas of focus as tech companies manage their global strategy and supply chains. Tech leaders are also paying close attention to economic pressures and political and regulatory uncertainty, which historically hasn't been high on their list of concerns.

In a new question this year, the potential loss of market share to lower-cost producers was cited by tech executives as their largest business model threat, followed by political or regulatory uncertainty. These threats were largely aligned with leaders' views about growth challenges.

—Gary Matuszak



Management initiatives

Top management priorities remain consistent, however "new markets" selection reduced percentages from top two responses.



Q: What initiative do you expect to undertake over the next year that will consume the most time, energy, and resources, from a management perspective?

2012/2011 question: What is the top initiative from a management perspective for the next two years in terms of energy, time, and resources?

	% in 2013	% in 2012	% in 2011
Significant investment in organic growth (new product development, pricing strategies, geographic expansion)	18	34	37
Significant improvement of operation processes and related technology	17	27	19
Entering into new markets	13	NA	NA
Significant changes in business model	12	9	16
Significant cost reduction initiatives	12	9	10
Merger/acquisitions	11	8	12
Navigating significant changes in regulatory environment	6	2	1
Improve enterprise risk management programs/processes	6	1	2
Strategic divestiture of current assets	4	7	1
Significant changes to financial processes and related technology	0	2	1
Other	0	1	1

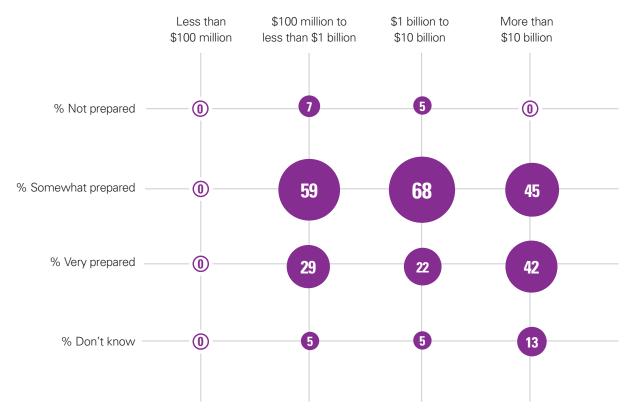
Asked about leading management initiatives over the next year, tech executives again cited investments in organic growth (18 percent) and improving operational processes and technologies (17 percent) at the top of their to-do lists. A new category in this year's survey, entering new markets, likely reduced percentages from other responses and ranked third - consistent with the overall focus on growing revenues and operations in more diversified international markets.

Political and regulatory change

Preparation to manage the impact of public policy and regulatory changes.



$oldsymbol{\mathbb{Q}}_{:}$ How prepared is your company to proactively manage the impact of public policy and regulatory changes?



Asked about their preparation to manage potential impacts from public policy and regulatory changes, 88 percent of the tech leaders felt either somewhat (59 percent) or very (29 percent) prepared to respond effectively.

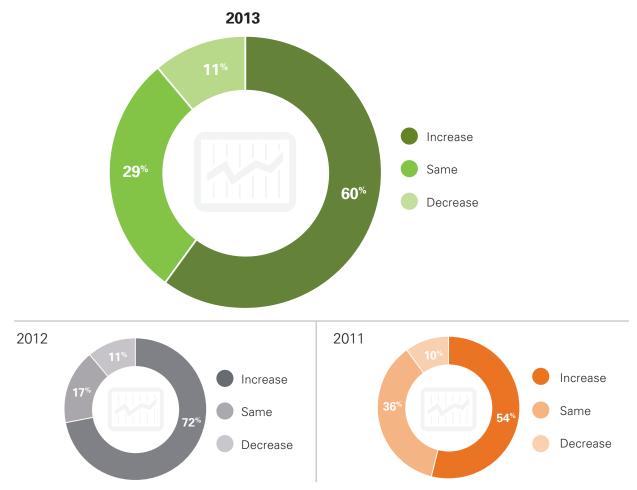
Although regulatory or political challenges have not traditionally been a high concern for tech firms, the growing importance is perhaps a sign of the industry's continued maturity and a stronger willingness to engage with the political and regulatory process.

As one might expect, the percentage of leaders saying they were "very prepared" to manage the impact of regulatory change was highest (42 percent) among the companies with more than \$10 billion in revenue.

A majority expect a moderate improvement in the U.S. economy, one year from now, down somewhat from last year.



Q: A year from now, what are your expectations for the U.S. economy?



After years of challenging macroeconomic conditions, tech leaders' expectations for the U.S. economy remain muted. The trend this year is a significant increase in respondents expecting the economy to remain about the same, with a notable decline in the expectations for moderate economic improvement in the United States.

Conclusion

his year's survey results reflect a stronger international emphasis among U.S. - based technology leaders, with executives calling for higher revenue, employment growth, and R&D spending in markets outside traditional tech research and manufacturing strongholds such as the United States, China, and India. A broader range of markets is offering attractive growth opportunities and attracting increased industry investments. Optimism about revenue and geographic growth is also reflected in spending plans.

Cloud and mobile continue to be the leading technologies driving revenue growth. As these technologies mature and enable the growth and management of data, the trend is for data and analytics to provide attractive opportunities to increase revenue as enterprises invest to harness the potential benefits of cloud transformations and Big Data

Concerns expressed about pricing pressures, increased labor costs, regulatory and political pressures indicate the importance for tech leaders to be prepared to manage the impact of economic and political changes in the United States and abroad.

Consistent with previous surveys, tech sector leaders have muted expectations for the U.S. economy, with a notable drop in expectations for economic improvement.





About the author

Gary Matuszak is the global chair of Technology, Media & Telecommunications at KPMG and chair of KPMG's Technology Innovation Center. Mr. Matuszak works with global technology companies ranging from the Fortune 500 to pre-IPO startups, and represents KPMG in a number of organizations affecting the industry. He has influenced the development of key industry positions on several issues that impact the technology sector.

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Breaking through the cloud adoption barriers

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KPMG's global technology practice combines industry knowledge with technical experience to provide insights that help technology leaders take advantage of existing and emerging opportunities. We also work with our clients to proactively manage business challenges such as privacy, security, international tax and operational transformation.

In June 2012, KPMG launched the Technology Innovation Center to assess the business impact resulting from disruptive technologies. The Center connects leading global technology thinkers including entrepreneurs, Fortune 500 executives, venture capitalists and KPMG professionals. For more information visit: kpmg.com/techinnovation

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