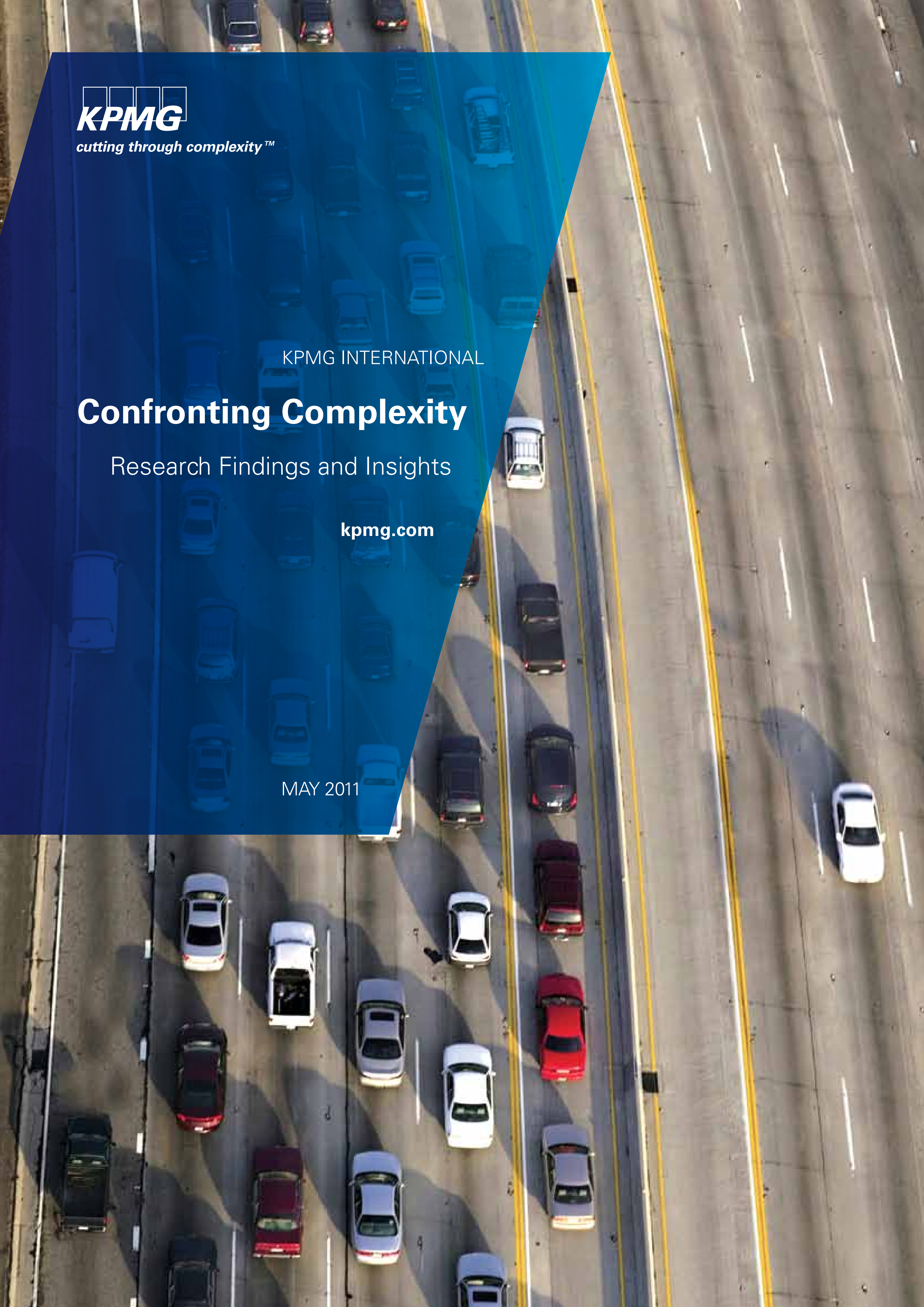


KPMG
cutting through complexity™

KPMG INTERNATIONAL

Confronting Complexity

Research Findings and Insights

kpmg.com

MAY 2011

Contents

Introduction

In recent years we have seen profound changes in our economic, regulatory, political, and social environments. The result is a world of increasing complexity, where markets and systems are more interconnected, and where organizations must learn to navigate uncertainty, innovate, and adapt to changing realities as well as new market opportunities.

More transactions are taking place across more borders, and the changing global regulatory environment is forcing businesses to react to ensure compliance while managing new risks. Technology is a hot-spot – it's changing business models, improving processes, and opening new markets, but also creating volumes of new data that must be managed, supported, and secured.

To gain greater insight into how increasing complexity is impacting business around the world, and how business leaders are responding, KPMG International conducted research globally, speaking with 1,400 senior corporate decision makers from 22 countries representing seven main business sectors.

The research shows that the issue of complexity has risen to the top of the business agenda. Senior decision makers we spoke with recognize complexity as a critical issue that their companies must take significant actions to address.

The vast majority of executives say complexity has increased in the last two years, and most expect it to increase over the next two years. These executives see complexity not only as a source of additional risk and cost, but most also believe that complexity is creating new opportunities. Opportunities to take a fresh look at their strategy, rethink their business model, and make operational improvements to gain competitive advantage.

The following report provides an in-depth review of findings from the research along with insights from KPMG business leaders on what the findings mean and how businesses can address the critical issues raised. We hope the report will help you to better understand the causes and impact of complexity, and ways to integrate actions into your strategies that will not only help you to manage the challenges that lie ahead, but also to take better advantage of new opportunities.

Timothy P. Flynn
Chairman
KPMG International

Global executive summary –

a world striving for simplicity

The world is undoubtedly becoming a more complex place. The rise of new industrial powers adds new layers of complexity to global trade. New technology challenges conventional thinking as it provides radical new forms of production and communication. And in an attempt to exert control over these factors, to minimize the harm they can cause and bend them to the public good, new layers of regulation are added with increasing speed.

For business, increasing complexity is not just an inconvenience. It can radically affect the way that businesses are managed, challenging profitability with new costs, adding new risks and creating opportunities.

To measure the causes and impact of complexity KPMG commissioned one of its largest ever surveys among large companies around the world (40 percent of the companies have global revenues of US$1 billion or more).

Between October and December 2010, we interviewed 1,400 senior executives. They included CEOs, CFOs, and finance directors in a wide range of industries in 22 countries: Australia, Brazil, Canada, China, Denmark, France, Germany, India, Ireland, Italy, Japan, Mexico, Netherlands, Russia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, the UK and the US.

The initial results of this survey were released at the World Economic Forum in Davos in January 2011. This document is a more detailed review of the results, with additional insights, drawing on the practical experience of KPMG experts from all over the world. The key findings of the study are:

- **Rising complexity is an issue in all the countries surveyed, and in all sectors.** But the experience of complexity differs around the world. Mature economies in Europe and the Americas are feeling the dual effects of recession and increased regulation, while developing economies and those in Asia-Pacific are focused on the accelerating speed of innovation and rising costs.
- **Information management stands out as both a cause of complexity and a solution**. It is a challenge for modern, international corporations to understand the range of enterprises they control. Outdated IT systems are a significant barrier to managing complexity.
- **Complexity is not static.** Its causes change as companies move through the business cycle and economies develop. New technologies lead companies to seek people with new skills, mergers and acquisitions lead to issues over information flows and management, and new regulations are a constant source of change. Companies need to be agile to cut through these layers of complexity and achieve growth.

- **The actions many companies take to deal with complexity are, at best, moderately effective.** Improving information management, reorganizing the business or changing the approach to people management, are all popular responses to complexity. But less than half of the people who undertook them thought they were particularly effective. Least effective of all is direct lobbying of policymakers.
- **Opportunities do exist in complex situations.** Most people think complexity provides opportunities for change, but companies in developing economies are more likely than those in mature economies to see complexity as an opportunity to develop new strategies and new products.
- **Broadly, there are two alternative strategies for dealing with complexity.** Embrace it as a spur to innovation and change; or try and avoid it by keeping business processes simple. Executive teams need to decide which path is more appropriate for their companies.

KPMG's view

In each contribution to this report from KPMG's member firm professionals, the central theme focuses on stepping back from the operational side of the business and thinking more strategically about the nature of the organization.

A clear view of the purpose of an organization, combined with an understanding of its overriding culture, provides a vital framework for coherent thinking. It gives guidance on important practical matters like the appetite for risk; decision making; how traditional functions need to change to meet new challenges and working with external partners.

It's easy to lose this clarity as companies get larger and more diverse. But for those who can read them, there are always signals that show where operations can be improved.

Regulation is a strong signal that companies need to take action. Although it may appear to be an additional burden, a new regulation can help an organization to re-focus on its overall purpose. It can then examine what each part should be contributing to that purpose, and review the common platforms that are needed to manage risk and create value.

It is not the nature of the complexity that a company faces that will determine its success; it is the extent to which the company can analyze the problem, identify the most effective way to address it, and then implement appropriate action. In doing so, the challenges of complexity can be turned into opportunities for growth.

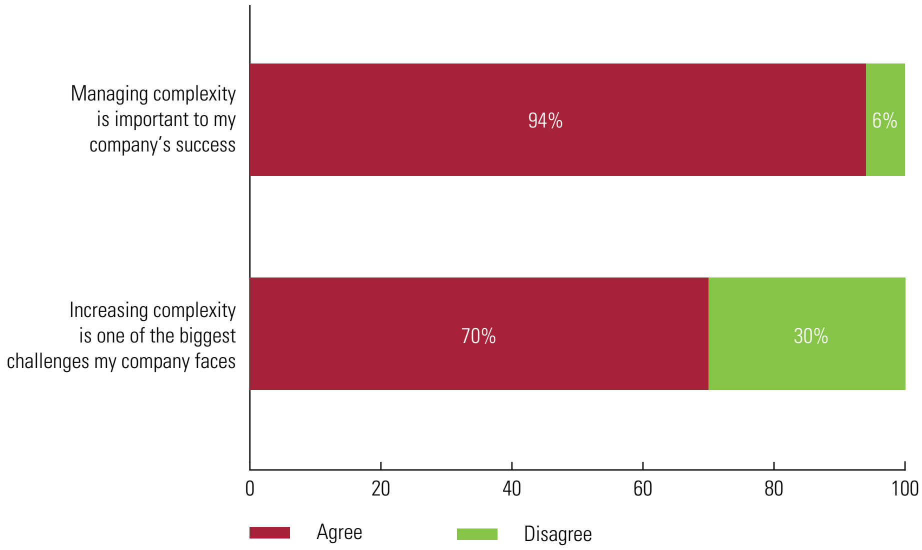
It is not the nature of the complexity that a company faces that will determine its success; it is the extent to which the company can analyze the problem, identify the most effective way to address it, and then implement appropriate action.

94%

Complexity is a major issue for businesses globally – 94 percent of executives believe managing complexity is important to the success of their company.

The story from the research – managing complexity is at the top of the business agenda

Complexity is a major issue for businesses globally – 94 percent of executives believe managing complexity is important to the success of their company



Source: KPMG International, 2010

Respondents were virtually unanimous on the importance of managing complexity, while 70 percent said that increasing complexity is one of their biggest challenges.

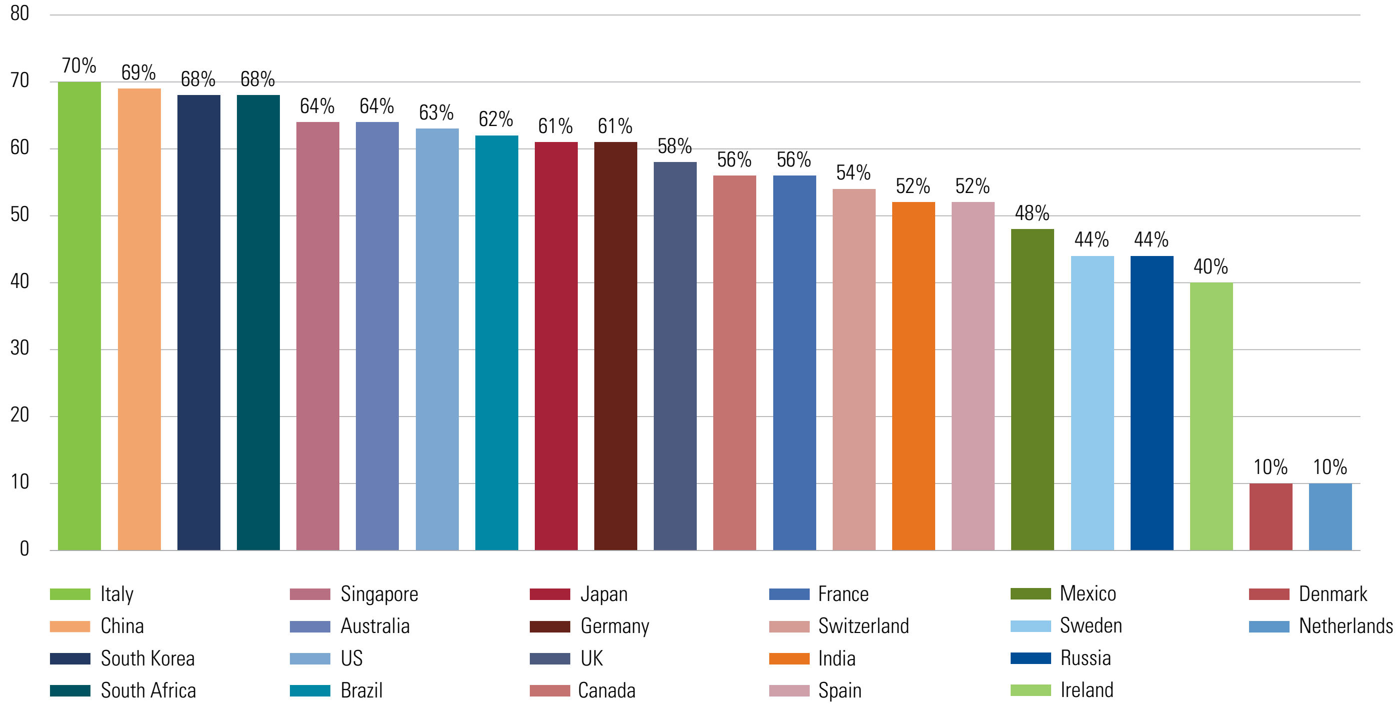
For most of these people, the increase in complexity over the past two years has been substantial. Nearly half (44 percent) reported a 'somewhat significant' increase in complexity over this time, while for 28 percent there had been a 'very significant' rise.

The impact of complexity is global, but it is not felt everywhere to the same extent. Even those countries reporting the lowest increases in complexity (Denmark and the Netherlands) 52 percent and 44 percent respectively said that for them, complexity had increased very or somewhat significantly since 2008.

> "You have to make sure you understand what is making your business complex and understand the consequences before doing something too quickly."
>
> **HR Director,** Transport/Logistics, Germany

Net increase in complexity (%)

Italy, China, South Korea and South Africa saw the largest net increase in complexity



Net increase in complexity = (increased very significantly + increased somewhat significantly + increased minimally) – (decreased + stayed the same)

Source: KPMG International, 2010

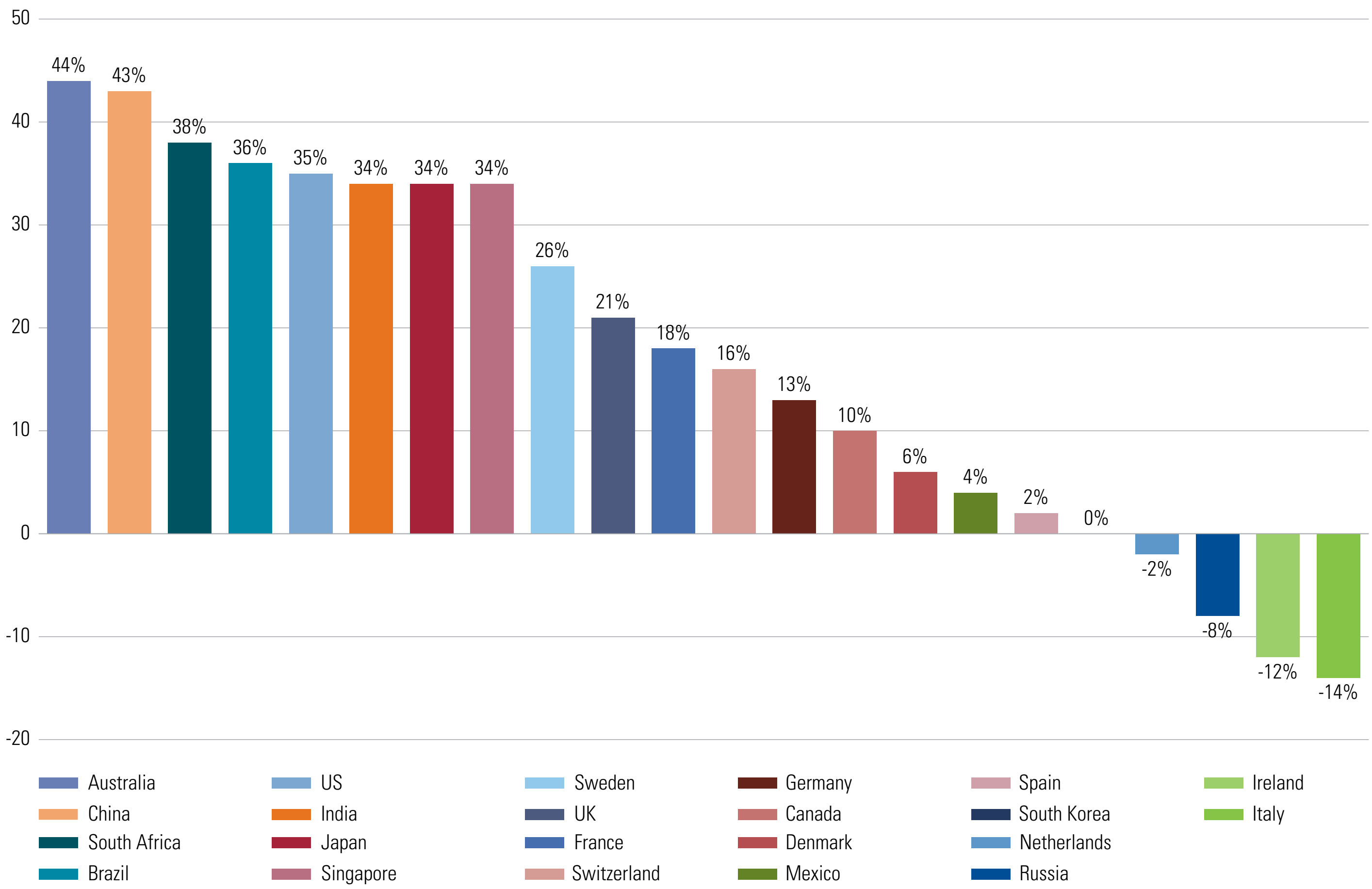
From a regional perspective, the data shows there is little to choose between the Asia-Pacific countries, where 33 percent of respondents reported a very significant increase in complexity, and the Americas, where 32 percent said the same thing. But in Europe, only 24 percent responded that complexity had increased very significantly for them.

The difference is even more marked between the emerging economies of Brazil, Mexico, Russia, South Africa, China and India and the mature economies of Europe and North America. Among the emerging economies, 34 percent reported a very significant increase, while among the mature economies the figure is 26 percent.

Estimating changes in the next two years, there is a similar pattern. Among the Asia-Pacific economies 24 percent expect a very significant increase in complexity, compared with 16 percent in the Americas and only 9 percent in Europe. In the emerging economies, the same view is held by 20 percent, compared with an average of only 13 percent among the mature economies.

Net future increase in complexity (%)

Australia, China, South Africa, Brazil and US expect the largest net increase in complexity



Net increase in complexity = (increased very significantly + increased somewhat significantly + increased minimally) – (decreased + stayed the same)

Source: KPMG International, 2010

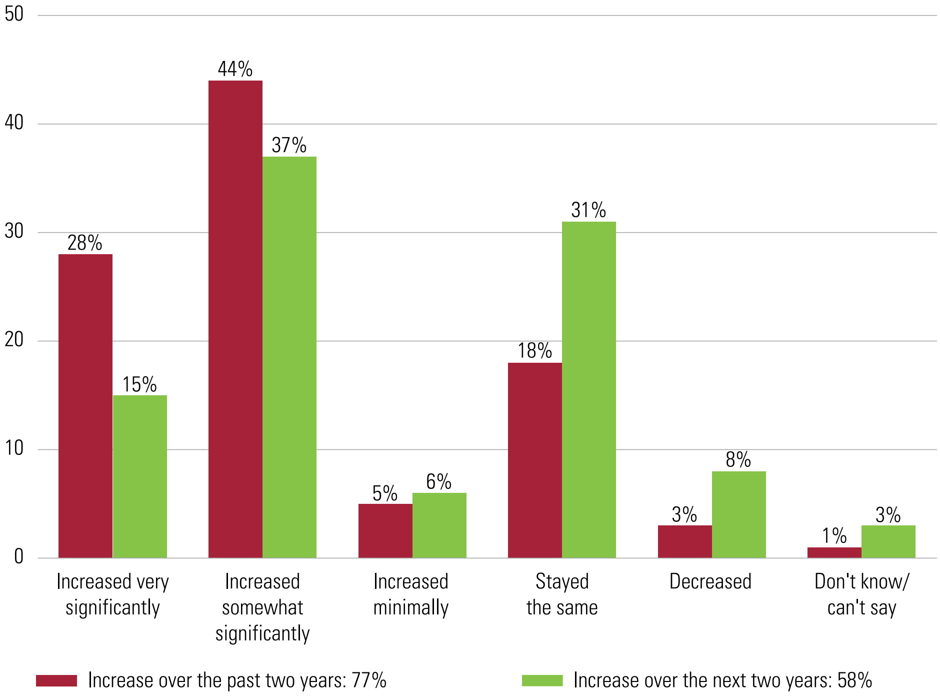
An industry view

At a sector level, complexity affects all industries. More than 70 percent of executives from five key areas said that complexity had increased. Financial services has seen the greatest increase in complexity, with 44 percent of respondents reporting a significant increase in the past two years, and 33 percent saying the increase was very significant. Technology is next, with 47 percent seeing a significant increase, and 29 percent seeing a very significant increase. In each of these sectors, clear majorities expect complexity to continue to increase at a rapid rate over the next two years.

Significant increases in complexity over the next two years are also predicted by around half the executives in the energy and natural resources, diversified industrials and consumer sectors.

The level of complexity has risen over the past two years and companies expect complexity to increase over the next two

Change in level of complexity



Source: KPMG International, 2010

Causes of complexity

Globally, the most common cause of complexity is regulation, cited by 71 percent. Among the sectors, 78 percent of respondents in financial services saw regulation as the major cause in their industry and both regulation and government oversight were seen as significant causes of complexity by 75 percent across all sectors.

At a regional level, 73 percent and 74 percent in the Americas and Europe, respectively, cited regulation as their primary cause of complexity. This compares with 65 percent in the Asia-Pacific countries.

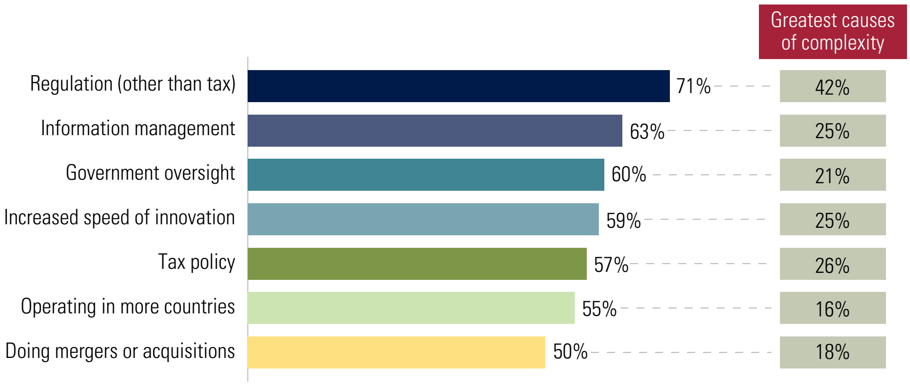
71%

Globally, the most common cause of complexity is regulation, cited by 71 percent.

84%

Information management stands out in this survey as both an important cause of complexity and the most popular means of managing it. It was chosen as a solution to complexity by 84 percent of respondents.

Identifying and ranking the causes of complexity



Source: KPMG International, 2010

One of the main concerns with regulation is its inconsistency across borders. Nearly 90 percent of respondents said that governments should work together to make the global regulatory environment less complex.

Information management is key

The second most frequently cited cause of complexity at a global and regional level was information management. In the Americas, 71 percent chose this as a key cause, rising to 80 percent in Brazil. In Europe this was the choice of 60 percent and among the Asia-Pacific countries, it was the choice of 63 percent. Indian businesses were particularly concerned about information management, chosen as a cause by 72 percent.

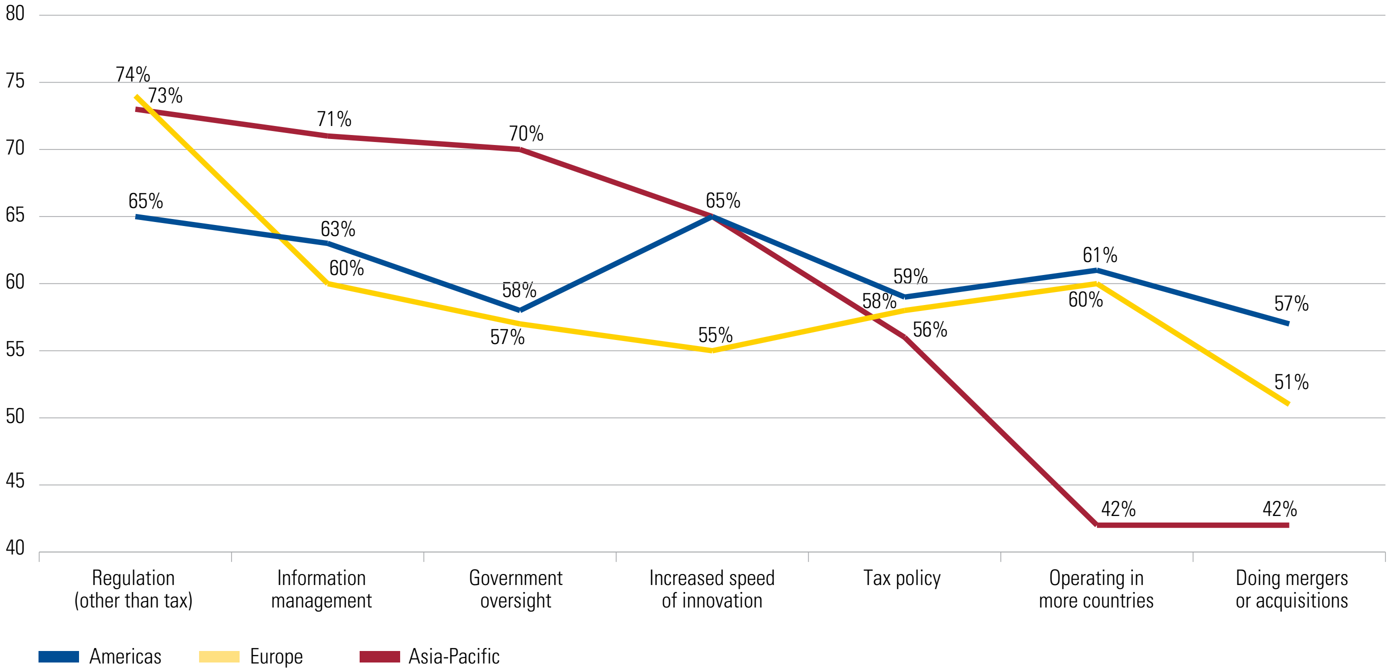
Information management stands out as both an important cause of complexity and the most popular means of managing it. 84 percent chose it as a solution to complexity. In both senses, this is consistent with managements working hard to understand exactly what is going on in increasingly complex and widely spread organizations. They often have to cope with incompatible and inadequate IT systems that need substantial investment to provide good quality information, both as an aid to good decision-making and a means of controlling the organization. At the same time, the pace of change in information management is dramatic, as with the rapid emergence of cloud computing as a possible solution to IT issues.

Mixed views on speed of innovation

Among the Asia-Pacific economies, 65 percent of respondents also cited speed of innovation as a primary cause of complexity, ranking it alongside regulation. Among the emerging economies, speed of innovation was marginally ahead of regulation as the main cause, chosen by 67 percent. This compares with only 57 percent of respondents from the mature economies.

Factors causing complexity by region

Regulation and information management a bigger concern in Americas and Europe. M&A, increased speed of innovation and operation in more countries a bigger concern in Asia-Pacific



Americas – Brazil, Canada, Mexico, US
Europe – Denmark, France, Germany, Ireland, Italy, Netherlands, Spain, Sweden, Switzerland, UK
Asia-Pacific – Australia, China, India, Japan, Singapore, South Korea

Source: KPMG International, 2010

This is not to say that the speed of innovation is an issue limited to developing countries. Across all sectors, speed of innovation is identified as a leading cause of complexity by more than half of respondents.

Moreover, the speed of innovation is expected to have a much greater impact on complexity going forward. 70 percent of respondents in developing economies and over 60 percent in the Americas and Asia-Pacific economies expect rapid innovation to increase its impact on their companies over the next two years.

Challenges and opportunities

One of the greatest long-term challenges is that complexity is not static. Its causes will likely change over time as economies develop and become more complex. This view is held particularly strongly in the Asia-Pacific region, where 60 percent of respondents expected changes in the nature of complexity.

The respondents expect these changes to be driven primarily by faster innovation. But where innovation leads, regulation will likely follow, so companies will find themselves dealing with successive waves of additional complexity as their markets develop.

Today, three immediate challenges stand out.

- More risks to manage
- Increased costs
- The need for new skills

The greatest of these is a straightforward increase in the number of risks that need to be managed. Globally, 84 percent of respondents opted for increased risk as their main challenge, (87 percent in the Americas).

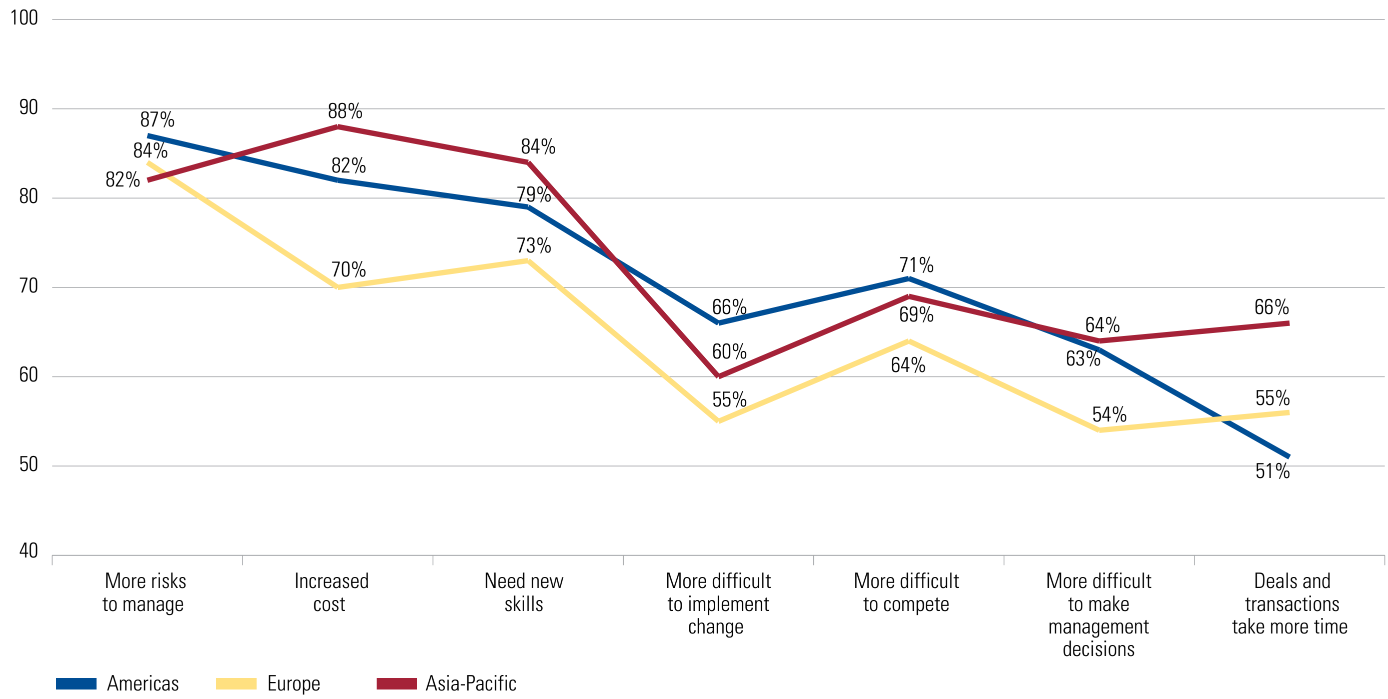
The increase in the number of risks organizations manage is itself a cause of additional complexity. Many businesses routinely react to a new regulation by introducing a new compliance initiative. It does not take too long before the number of overlapping initiatives is so great that the sheer complexity of the compliance arrangements within an organization is itself a new source of risk. We look at this in more detail in the section on managing risk.

Closely linked to risk is increased cost. Globally, 78 percent of respondents thought that this was the principal challenge of complexity. This rose to 88 percent in the Asia-Pacific economies. The impact on cost was particularly strong in China (93 percent), Japan (90 percent), India (86 percent). In the UK the figure was 86 percent which, alone among the European nations, chose increasing costs as the principal challenge.

The third most frequently identified challenge was the availability of new skills. This seems to correlate closely with those economies where speed of innovation is a strong cause of

Challenges of complexity by region

More new skills needed and a greater cost in Asia-Pacific due to complexity



Source: KPMG International, 2010

complexity. This is true of Brazil (where 92 percent identified the need for new skills as a major challenge), Japan (90 percent) and China (92 percent). It is also a major factor for the technology sector, where more than 80 percent say it is a significant challenge.

Creating new opportunities

Increasing complexity is also a source of new opportunities. Three-quarters of all respondents agreed that opportunities can arise from complexity, with gaining competitive advantage and creating new and better strategies as the two most common opportunities identified.

There were some interesting alternative views, however. Among German respondents, for example, 40 percent did not think there were opportunities to be had. Those who did see advantages were focused mainly on the need for new products.

At a regional level, there was a slightly higher tendency to see new opportunities in Asia-Pacific and the Americas (78 percent and 79 percent, respectively, compared to 69 percent for Europe). But the emerging economies were significantly more positive, with 81 percent seeing opportunities compared with 72 percent for the mature economies. Large majorities in Brazil, Mexico, India and China see complexity as a stimulus to improve existing corporate strategies or create new and better ones.

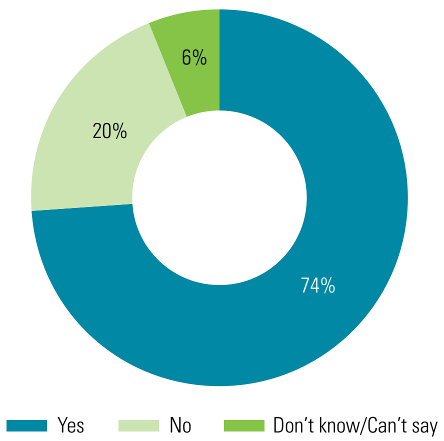
Among the more mature economies, the Irish, Spanish and Japanese were most optimistic about new opportunities. Their optimism might be a reaction to the recession, which hit these economies particularly hard.

All told, at least 70 percent of respondents said complexity can create opportunities for:

- Gaining competitive advantage
- Creating new and better strategies
- Expanding into new markets
- Improving efficiency

> "Keep an open eye on all the new complexities that occur in some countries; if you are the first to resolve them you will have an advantage on the challenger."
>
> **Consumer Market respondent,** Germany

Complexity can create new opportunities



Source: KPMG International, 2010

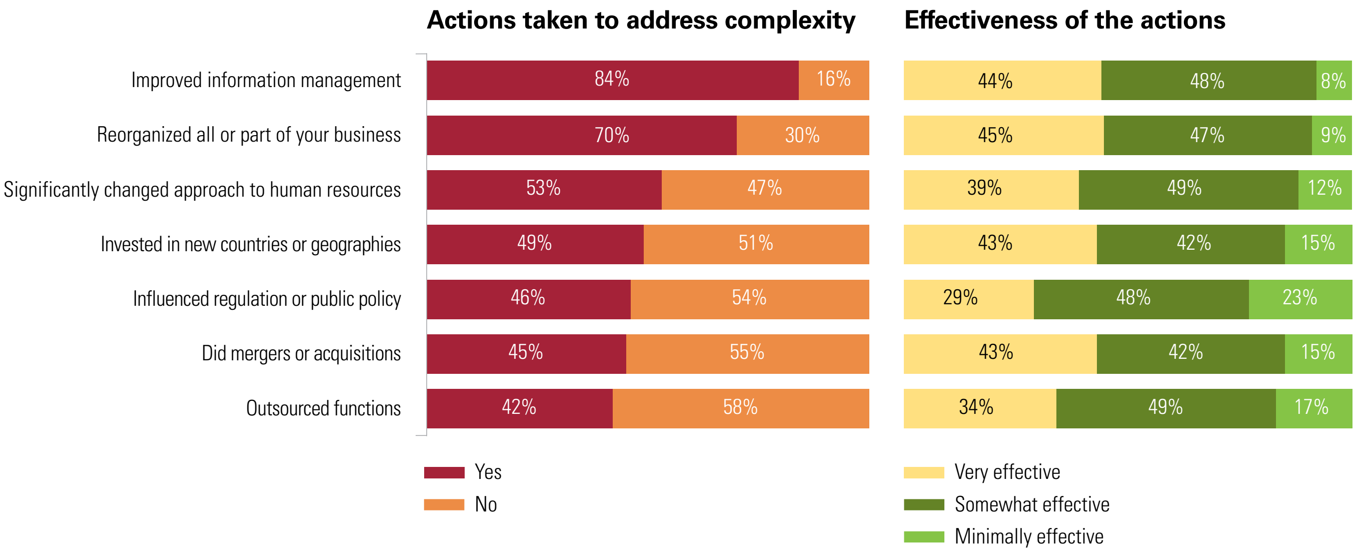
Opportunities created by complexity

The response from business – actions to address the challenge

Businesses around the world are working hard to meet the challenges of increased complexity. Respondents from all regions, all sectors and both emerging and mature economies chose better management of information as their main response. This perhaps explains the proliferation of solutions being developed for business intelligence, data analytics and cloud computing.

Reorganizing all or part of the business came second, chosen by 70 percent of the global sample and, again, a popular response across all regions and sectors. It was particularly popular among respondents who also said that they had experienced a very significant increase in complexity over the past two years. 81 percent of this group said that their response was some form of business reorganization.

Businesses are addressing complexity in a variety of ways ... with mixed success*



**Due to rounding, graphs may not add up to 100%*

Source: KPMG International, 2010

These options may have been the most popular, but there is some doubt as to how effective they have been. Around half of respondents whose organizations tried improving information management or business reorganization said that their actions had been only moderately effective in solving their problems.

A need for new skills

The impact of the third most popular option, changing the approach to human resources, was equally mixed. Although this was a favored option for 53 percent of respondents, overall it was seen as very effective by only 39 percent.

The least effective option was to try to influence regulation or public policy directly through lobbying or other representations. However, this was a popular option in financial services and energy and natural resources. It was also relatively popular in the Asia-Pacific countries, where 53 percent chose it as an option, compared with 47 percent in the Americas and 42 percent in Europe.

Despite this enthusiasm, nearly a quarter of respondents said that direct representations were minimally effective in controlling complexity, and only 29 percent were prepared to say they were very effective.

Outsourcing functions was popular as an option in China, Japan, Brazil, Russia and Ireland, but it has a mixed following among other countries, with only 34 percent declaring it a very effective response.

These results show that simply taking on new tasks or outsourcing functions to respond to complexity is not a guarantee of success. If these actions are not integrated into the existing business model, there are likely to be overlaps, duplications and conflicting initiatives. These, in turn will increase the complexity that an organization has to manage.

Future plans to meet the challenge of complexity

Just over half of the people interviewed expected that in the next two years their companies would be taking different or additional actions to deal with complexity. But responses varied significantly between countries.

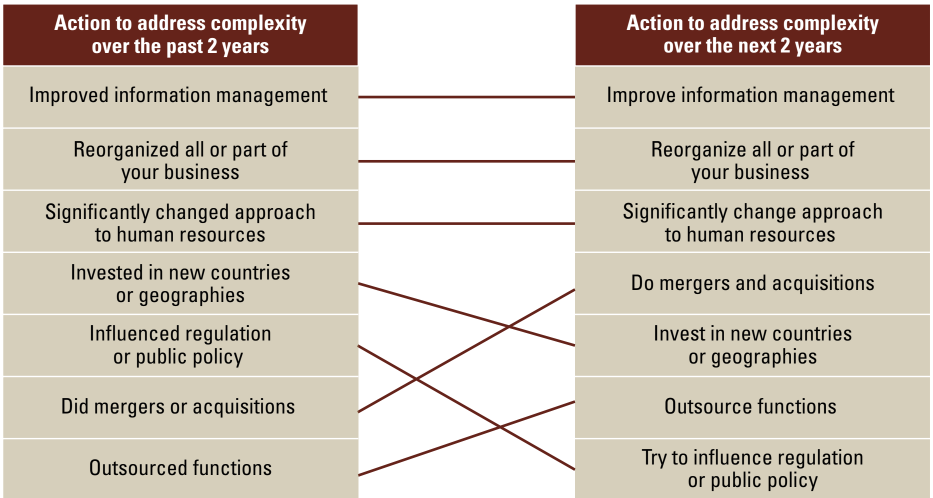
The most active countries looking forward are South Africa, where 76 percent expect to increase or change their activity, Ireland where the figure was 74 percent, and the US with 71 percent. At the other end of the spectrum, the countries where companies are least likely to change or increase their anti-complexity activity are Italy, where 56 percent expected no change, the Netherlands where the figure was 66 percent and Spain, with 68 percent.

Improving information management is the number one action taken across all market sectors

Actions taken	Overall	Market sector (%)						
		Financial services	Technology	Communication media	Consumer	Chemicals and pharmaceuticals	Diversified industrials	Energy and natural resources
Improved information management	84	83	88	85	83	81	82	82
Reorganized all or part of your business	70	69	78	76	65	67	76	65
Significantly changed approach to human resources	53	51	57	44	54	54	58	54
Invested in new countries or geographies	49	44	60	40	45	58	52	44
Influenced regulation or public policy	46	55	43	47	40	40	40	53
Did mergers or acquistions	45	41	51	36	44	50	48	43
Outsourced functions	42	44	50	49	38	39	44	39

Source: KPMG International, 2010

Actions to address complexity, in order of importance



Source: KPMG International, 2010

Again, the most popular action by a long way is improving information management, followed by reorganizing all or part of the business, and changing the approach to human resources. The option of doing more mergers and acquisitions is proving relatively more attractive, particularly among emerging economies, while the option of seeking to influence regulation directly is becoming even less popular.

Next steps

Although there are clear differences in the impact of complexity on different countries, regions and business sectors, there is consistency in the importance decision-makers place on it and in the actions they are taking to address it.

It is also clear that these actions have met with limited success so far. There is wide agreement on the need for new and better approaches.

In the face of complexity, leadership needs to be a management priority.

Leaders need to ask themselves the following:

- What are the specific causes of complexity facing my business and industry?
- How can I best address the challenges of complexity?
- How can I use our knowledge and insight into complexity to drive opportunity creation and growth?
- How do we ensure that our company is managing these responsibilities effectively today, while also planning for the complexity of tomorrow?

In the rest of this report, we look more closely at some of the key themes arising from our research and offer some thoughts on how companies may choose to meet the challenges and take advantage of the opportunities it presents.

59%

Looking ahead to the next two years, just over half of the people interviewed expected that their companies would be taking different or additional actions to deal with complexity. But there was a significant variation between countries.

Information management – problem or solution?

If regulation, speed of innovation and the economic environment are the three main external causes of complexity, the three main internal causes are managing information, operating in multiple countries and the effects of mergers and acquisitions on internal organization.

Among these, the only element identified as both a cause of complexity and a method of dealing with it is managing information. It is the most popular technique for dealing with complexity, both now and in the next two years, in all regions and in all sectors.

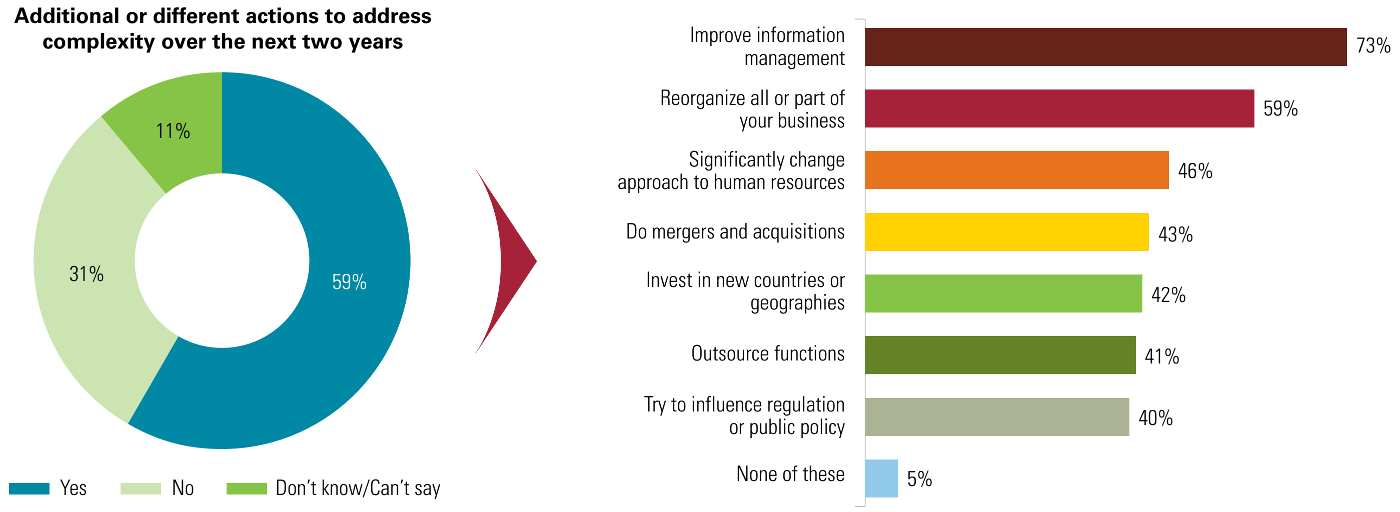
The implications of this are profound. This report suggests that companies are struggling to find out what is happening in their own organizations, either through lack of good quality data, inconsistent information, or through problems interpreting what they have.

Short versus long term

This idea is supported by the results of another KPMG survey, (*A New Role for New Times, KPMG and CFO Research, 2011*), which examines the role of the chief financial officer (CFO) and the finance department in a modern international corporation.

59% to take different or additional actions to address complexity

Improving information management (73%) and reorganizing all or part of your business (59%) the most important future actions



Source: KPMG International, 2010

The two greatest challenges cited by the CFOs interviewed are the internal complexity of their organizations and difficulties in finding and using an effective IT system that is able to collect, analyze and present the information needed.

Problems with IT systems frequently arise because executives find themselves needing more and better information from systems that were not designed to carry such a burden. This is especially common in organizations that have been through a large M&A program and have to cope with several different legacy systems.

The only long-term answer to this problem is a complete structural review of the system. Short-term fixes can help for a while, and some KPMG teams have been able to reduce 250-page management information packs to 50-60 pages by careful selection and analysis of the information available. But modern organizations need modern information systems. To better obtain the benefits of an accurate and comprehensive view of a company's performance, there is often little alternative to investing in proper integration of information management systems to create a common, reliable and effective platform.

Embedding controls at the right level

Focusing on managing information suggests a widespread need to develop an accurate central view of the risks and performance of an organization. It is a short step from here to developing centralized controls in the belief that these are an effective method of solving problems.

However, although an accurate central view is clearly important, KPMG's experience shows that heavily centralized controls are rarely the most effective way to manage a diverse, multinational enterprise. The reality is that in a modern corporation it simply may not be possible or even desirable to run things from the center with good IT, when agility and responsiveness to complex, rapidly changing markets is what is really needed.

KPMG subject matter experts talk instead of embedding best practice at the lowest possible level, whether this is in a tax, finance, or risk management function, or in an operational department.

This view was expressed eloquently by a Russian finance director in the consumer sector, whose comment on complexity was, "Every single employee should be responsible for what they do. Give them the power to make decisions on what they specialize in, as if every member of staff owns the company they work for. Because, today, even if you know what to do and that this is the right thing to do, you still need approval from a director or manager who may not be competent on that issue."

Although an accurate central view is clearly important, KPMG's experience shows that heavily centralized controls are rarely the most effective way to manage a diverse, multinational enterprise.

Managing increasing risk

A large majority of the businesses polled in this survey feel the effects of increased complexity primarily through an increase in the number of risks they have to manage. As we noted earlier, a common response to identifying a new risk is to create a new program to handle it. It doesn't take long before the number of programs is itself a new cause of complexity, not least because these programs often overlap and, once in place, it can be very difficult to remove or consolidate them.

This is not just a problem of organization, it can be a major contributor to costs. A survey carried out for KPMG in September 2009 *(The Convergence Challenge, KPMG and EIU, 2010)* revealed that 50 percent of respondents thought governance, risk and compliance costs account for 5 percent of overall revenues, while for 20 percent they were as high as one-tenth.

These costs might not be a significant problem if they were seen to be providing a good return on investment. But only one-third said they were able to see this as an investment. For the rest, it was simply a (rising) cost of doing business.

Governance, risk and compliance convergence and integration

In larger companies, especially when highly regulated, the expansion of governance, risk and compliance activity has created many large, unwieldy and often autonomous risk and control functions. It is not uncommon to have dozens of committees dealing with different aspects of risk, many of them overlapping yet not communicating.

In the midst of this bureaucracy and duplication, many organizations are drowning in a sea of their own complexity. They are unable to distinguish the critical business risks at both the group and entity level, and may come to mistrust some of the business intelligence they are receiving.

One approach to resolve this problem is to align and converge the organization's governance, risk and compliance functions and processes (i.e. internal audit, regulatory compliance, operational risk, information security, and risk management) to help provide increased confidence in, and transparency of, information. Once risk and compliance functions and process silos are removed, the organization can gain broader insight and can foster improved decision-making, choosing how and where they want to assume greater risk to enhance performance.

An increasingly common strategy for dealing with the complexity of governance, risk and compliance is to tackle head-on the difficult task of converging or integrating risk management, creating simpler, more effective governance and information management structures.

Organizations are viewing enterprise-wide risk management more strategically, while also looking to draw more efficiency out of existing risk and control functions. This combination results in pre-existing silos being broken down from a risk information perspective (risk convergence), allowing for more efficient identification and management of risk, including emerging risks.

Although this may sound logical and practical, it can meet with some resistance from the risk and control functions who may not fully understand the impact on their work. *The Convergence Challenge* found that 44 percent of respondents thought simple resistance to change was the largest single barrier to greater convergence of governance, risk and compliance. These efforts therefore

> "Most countries' tax authorities purport to follow the OECD transfer pricing guidelines, but each authority interprets the guidance differently. Everyone likes it, but everyone has their own take on how it should be done."
>
> **Steven Fortier,** Global Head of Transfer Pricing, KPMG International

require senior management support and careful consideration to change management. It needs to be clear to everyone in the risk and control functions that the goal is to identify opportunities to share risk information more efficiently, and to leverage and coordinate activities and resources. The business is no longer accepting multiple requests to the same people from various risk and control oversight functions, asking for similar information.

This approach will ultimately require the risk and control functions to coordinate activities from risk assessment and planning through to execution of work and managing issues. To allow this, there will need to be agreement of guiding principles by all stakeholders to establish protocols and to assist in decision making throughout the risk convergence initiative.

These guiding principles may include statements related to the establishment of a common risk language, simplification of processes, protocols for working together and others. They will set the basis for improved cooperation across functions.

Clear establishment of roles and responsibilities is critical in any risk convergence initiative along with a transparent change management plan to embed the right behavior in people and processes. With these functions working in harmony and by leveraging appropriate technology to manage risk information, an organization should be able to combine the necessary risk oversight with continuously improved performance.

But, effective though it is, risk convergence is not an easy process, and many companies have tried alternative methods of reducing complexity. Popular options are reorganization and transformation.

Reorganization as a solution to increased risk

Respondents to the complexity survey chose reorganizing the business as the second most popular method of dealing with complexity, after improving information management. Seven out of 10 respondents to the survey said they had already done this, and a clear majority expect to do this within the next two years.

It is likely that many of the organizations that were polled in the study had taken part in the very active mergers and acquisitions market leading up to 2008, and are still dealing with the issues raised by bringing together separate businesses and groups of people.

Mergers and acquisitions were clearly identified as a cause of complexity by 50 percent of respondents. It does not take much thought to conclude that bringing together businesses from different countries, as many companies were doing in a response to the boom in international trading opportunities, would present formidable organizational difficulties.

But, like information management, mergers and acquisitions were cited both as a cause and a solution for complexity. More surprising still, M&A was thought to be a good solution to the problem, and said by 43 percent to be very effective.

Improved integration techniques

For insight on this, it is helpful to turn to KPMG's long-running series of studies on post-merger integration techniques. This survey has been conducted every second year since 2000, and has charted a steady rise in the level of professionalism, the understanding of organizational problems and the standardization of methods applied to large-scale reorganizations of business.

Supply chain reorganization

One area in which we have seen direct evidence of a widespread move to reduce complexity through reorganization is in international supply chains.

This comes from the most recent of KPMG's regular surveys of global manufacturing. Published in late 2010, it showed clearly that large companies are actively reorganizing their supply chains specifically to reduce cost and risk. The focus for many was on cutting down the number of suppliers they deal with, and on taking the time and trouble to check the financial health of this reduced number to cut down the risk of a failure, which might affect the whole group.

Although cost reduction was a declared aim of these reorganizations, many conceded that an excessive concentration on cost reductions in the past had damaged relationships with important suppliers. As a direct consequence, risk had increased, either through poorer quality, late deliveries, less co-operation on product development or a mixture of all three.

By choosing instead to deal with fewer suppliers, but to take time to build improved relations of trust between supplier and principal, these organizations have sought to simplify their operations and improve management of risk through reorganization. Many have conceded that pursuing the lowest possible cost in all cases carries too high a risk, and have opted to take a broader, longer-term view of cost management in the expectation of better long-term results.

Risk management still a challenge

An underlying theme of this survey is that executives globally see complexity as a source of additional risk that they must manage. They recognize that poor risk management in increasingly complex environments has contributed both to the international financial crisis of the late 2000s and to more industry-specific incidents, at great cost to all involved.

KPMG recently sponsored a research report in co-operation with the Economist Intelligence Unit that examined the post-recession role of risk management in international organizations *(Fall Guys – Risk Management in the Front Line – KPMG/ACE/EIU 2010)*. The key findings from this research were that:

- Strategic risk management remains an immature activity in many companies
- Only a minority of companies involve risk functions in key business decisions
- There is limited appetite for investment in the risk function
- Risk functions have increased in authority, but there is a danger that this will not be a permanent change; and
- There are doubts about the level of risk expertise among non-executive directors.

So has anything really changed in the last couple of years? While these findings may suggest not, KPMG member firm practitioners' experience in this area suggests that some companies are working hard to embed sophisticated risk management in their decision-making. The goal is to turn risk, or at least the effective management of risk, into a positive advantage that can generate value.

These organizations view risk as an issue that affects everyone, not the sole responsibility of a risk management department. People who can clearly articulate and quantify the risks they face and their probable impact on performance are likely to make better business decisions.

The latest study, to be published later in 2011, reaffirms some key lessons from previous surveys; that successful integrations/reorganizations are done fast, they integrate the new/reorganized business completely, and they are planned very thoroughly in advance.

In terms of complexity, the most difficult issue that arises, and one which consistently receives less attention in the due diligence phase, is merging different cultures. In extreme cases, problems in getting people to understand and work with each other can prove to be a deal breaker, either because key people leave, or because the accumulated problems of communicating effectively become overwhelming.

There is further evidence of this problem in the complexity survey, where 53 percent of respondents said they had made significant changes in their approach to human resources in an attempt to deal with complexity, but only 39 percent were prepared to say that this had been very effective.

Both surveys suggest that there has been much improvement in the techniques of business reorganization, and that using these techniques can bring a new logic and structure to complex organizations that can improve their performance. But both also suggest that there is work still to be done on the effective management of cultural complexity, and that this has become more urgent as businesses expand further beyond their national borders.

Transformation of traditional functions

Major reorganizations require good information and vision, and it is in pursuit of these that many organizations have taken an alternative route to better management of risk and cost – transformation of core functions like finance and tax from their traditional transactional role into active providers of insight and value.

KPMG's forthcoming survey of CFOs shows that finance departments, in particular, are coming under increasing pressure to provide high-quality business analysis of the information that they routinely collect. Typically, a finance department that yesterday might have spent 15 percent of its time on supporting decision making for value creation, 30 percent of its time on financial controls to protect value and 55 percent of its time on transactional processing, will today be expected to spend 50 percent of its time on value creation, and only 20 percent on processing transactions, often at a much reduced cost to the organization.

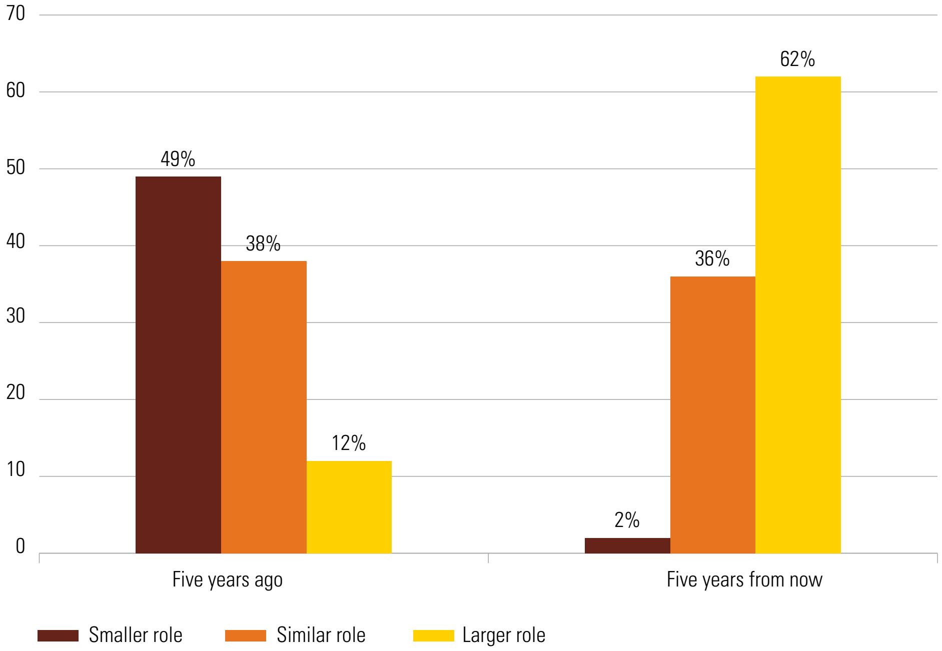
> "The answer for many organizations is to take their approach to risk back to basics, review compliance in the light of how their business looks today, and rebuild on a more rational basis."
>
> **Mike Nolan,** Global Head of Risk and Compliance Services , KPMG International

This is clearly a major challenge for CFOs – the need to provide an accurate, understandable picture of what is happening in increasingly complex organizations, and to interpret it for opportunities, while making sure that the core transactional work of the function is still being done flawlessly.

But among participants in KPMG's CFO survey, just under half said they were already playing a larger role in business strategy than five years ago, and 62 percent expected to increase this part of their work in the next five years. A CFO from Singapore commented, "This role means to actively participate in decision making, providing high-quality analysis that is fact-based and objective. By and large finance is able to play this role, but it struggles with catching up with the constantly changing environment."

There are many techniques for managing this kind of transformation within large organizations, but no one method that is guaranteed to provide a perfect result every time. In most instances, the basic requirements of those driving these programs are a deep understanding of the organization's goals and business, a strong adherence to processes and policies, and, in many cases, the ability to acquire a new and different set of skills.

CFOs say their finance functions play a much larger role in decision-making now than they did five years ago, and they expect this involvement to increase in the future



Source: *KPMG CFO survey 2011*

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Speed of innovation

Although the pace of change is increasing for all respondents, speed of innovation is a major cause of complexity for the emerging economies. In China and Brazil, it is cited as the number one cause, ahead of regulation or tax issues. In India, it is second only to information management, and in Mexico it comes second after tax policy.

Among the mature economies, speed of innovation is the top cause of complexity for Japanese businesses. But elsewhere, in the US, Germany, Canada and the UK, for example, it comes well down the list, after regulation and information management.

For the mature economies, this may say more about the relative importance of regulation than it does about speed of innovation as a cause of complexity. Nevertheless, innovation is being used throughout the world as a stimulus for new structures, new thinking and new solutions to problems.

On one level, companies in emerging economies are finding growth opportunities driven by demographics. In many cases, they already have much larger, faster growing populations than in the developed world. This rapidly growing domestic market means that organizations that can develop efficient manufacturing and distribution processes can gain an advantage.

It requires continuous innovation to exploit this opportunity, adapting existing products and solutions to local requirements. This is a challenge that European companies know well. One German respondent said, "You must keep an open eye on all the new complexities that may occur in your countries; if you are the first to resolve them you will have an advantage over your challenger."

A Swiss CFO added, "Keep your ears open, everything is changing very fast. It's death for those not adapting their business." In this environment, the drive for growth drives relentless innovation.

On another level, many global manufacturing firms are locating research and development centers in emerging economies. This is to take advantage of a lower-cost base and the availability of highly skilled workers to ensure that products and services meet local customer needs.

A premium on agility

Most emerging markets suit highly diverse conglomerates. These are the companies best able to adapt to fast-changing opportunities in the drive to grow. Indeed, they have to do so, which in turn places a premium on agility and innovation.

Techniques for developing these qualities vary widely. One Korean respondent spoke proudly of the "Intrapreneuriat" which his company had established as a successful focus for entrepreneurial thinking within the company. This formalized approach can work very well in one company, but may not be suitable for those with a different culture.

For any company, harnessing the creativity and imagination of employees is necessary to remain competitive. This is clearly a complex task. It could involve adapting technology to create new products, reducing the cost of products to appeal to markets in emerging economies, or adapting products and solutions to meet new regulations.

The key to managing innovation is to maintain an open and receptive policy on new ideas, and to avoid internal complexities that might stifle or divert creativity. Those who get this right will succeed.

> "Businesses in emerging economies are finding greater growth opportunities and acting upon them more quickly than those in the developing world. The companies that are most successful have efficient manufacturing and distribution processes that deliver profitable, low-cost products and solutions. This requires continuous innovation to adapt existing products and solutions to local requirements."
>
> **Adam Bates,** Partner, Risk and Compliance Services, KPMG LLP (UK)

Changing demographics presents a number of challenges for human resources: businesses will have to adopt new approaches to recruitment.

The need for new skills

Economies in a period of rapid technological change will naturally be hungry for people with the necessary new skills to help build and maintain a competitive advantage.

In this survey, speed of innovation is identified as a leading cause of complexity in Brazil, Mexico, China and India, so it's not unreasonable that these countries should also identify the need for new skills as a top priority.

If we compare emerging with mature economies, the need for new skills is identified as a major challenge by 81 percent and 76 percent respectively. It is interesting that the gap between the two is not wider.

In Japan, for example, the need for new skills is rated as the top challenge of complexity, chosen by 90 percent of respondents, alongside increased costs. In Europe and North America the figures are between 70 percent and 80 percent.

Demographic changes driving changing labor force

Part of this may be simply due to the pace of technological change in these countries, but for further insight it is helpful to look at some of the work on demographic change that is being done by Bernard Salt, a KPMG partner in Australia who has specialized in analyzing the global impact on business of changes in population.

His work on population trends in large economies has identified a widespread decline in the rate of growth in numbers of active working age people (defined as 15–64 years of age) in these countries. Aging populations and declining birth rates have meant that, taking Japan once again as an example, the number of Japanese working age people began to fall in 1994 and has fallen every year since then.

In France, the rate of growth has declined substantially from the peaks of the 1970s and 1980s, and is expected to tip into a net reduction in the working age population by 2012. China is expected to reach the same point in 2016.

India does not have the same problem. Its relatively young population is expected to provide growth in the number of working age people for decades to come. But in the UK and the US, declines in the growth of the indigenous population have been overcome only by large-scale immigration; in the UK, migrants have come largely from former colonies and from the EU, and in the US they have come from Latin America.

For businesses faced with a labor force where the average age is steadily rising, there may be a desire to bring in new people with fresh skills and different ideas. If these people are not available in the domestic workforce, then this is clearly going to be easier to do in countries where there is a tradition of immigration to fall back on, as in the US and the UK.

As to where these people might come from, India would seem to be a good place to look. UN statistics suggest that over the past four years, around

14 million working age people a year have been added to the Indian workforce.

These changing demographics present a number of challenges for human resources. Businesses will have to adopt new approaches to recruitment and start to look outside their traditional marketplaces for resources. A more proactive and flexible approach to workforce planning may be required.

The development of new skill sets among existing workforces will also become more important. Finally, for many countries it appears that the war for talent is imminent, which means attracting and retaining resources will become a business priority.

The results of Bernard Salt's research were published as *The Global Skills Convergence*. This included interviews with senior HR executives in several global companies. Their preferences for the ideal corporate recruit are summarized in the table below, and set alongside their actual experiences of recruiting among "Generation Y," people coming into the workforce in the mid-2000s. The differences between the two may go some way to explain the problems businesses are having in filling their need for new skills.

Ideal Corporate Citizen	Reality of Generation Y
Age 38-42	Age 15-30
Agreeable or moveable spouse/partner	No relationship commitments
Law degree and business degree, e.g. MBA	No mortgage, deferrable debt
Second language as well as English	Widely travelled, possibly second language
May have lived abroad in youth	Backpacker, gap year
Experience in running a division or program	Possibly involved in volunteer work abroad
Possesses and employs cultural sensitivity	Exposure to different cultures via technology
Possibly spent time in military	Children of rich, guilty and indulgent parents
"Known" within the industry	Moves frequently between jobs
Technically excellent	Prefers autonomy to corporate direction

> "Businesses will have to adopt new approaches to recruitment and start to look outside their traditional marketplaces for resources."

Rachel Campbell, Global Head of People, Performance and Culture, KPMG International

Government and regulation

“Increasing regulation can be a catalyst for companies to focus on areas of their business that could operate more efficiently and create greater value. The tax function is a good example. As businesses globalize, they seek tax-efficient ways to expand. At the same time more tax authorities are requesting evidence that tax decisions are made in accordance with clear corporate governance guidelines. This provides the tax function with a need and an opportunity to adopt better processes, new controls and improved use of technology to feed their increasing need for accurate and up-to-date information.”

Loughlin Hickey, Global Head of Tax, KPMG International

For companies in Europe and the Americas, particularly the more mature economies, regulation is the number one cause of complexity. Corporate leaders talk of the problems of dealing with a constant stream of new legislation, with less and less time for effective preparation.

For companies in the Asia-Pacific region, regulation remains a major cause of complexity, but it is matched by speed of innovation. Among the major emerging economies – Brazil, Mexico, Russia, South Africa, China and India regulation is the number one cause of complexity.

This suggests that while companies in these countries will share some of the concerns of their US and European competitors over increased government activity, more of their energies are being spent working out how to stay ahead of the new ideas, products and competitors in their markets.

These results are entirely consistent with the conclusions of a 2009 KPMG survey, *Never catch a falling knife*, which examined how companies around the world reacted to recession. It found that while European and North American companies tended to see the problems of recession as a matter for governments, requiring more regulation and oversight to solve them, companies in other parts of the world saw recession as an opportunity to review practices and find a new path to growth.

Regulation is, however, a fast-developing field. Several of the most impressive economic success stories of the past decade have been accompanied by common complaints. Firstly, that legal systems are not sufficiently reliable for international trade, and secondly that labor, product quality or health and safety legislation is undeveloped in comparison with international standards.

The survey indicates that a majority of the Asia-Pacific and emerging economies believe that speed of innovation could become their biggest cause of complexity in the next two years. However, it is possible that the demands of consumers in other countries, combined with increasing international cooperation on financial regulation, tax legislation and environmental issues, may drive regulation to the top of their list.

Regulation as a catalyst for improvement

Increasing regulation may appear to present nothing but problems for business, but regulation is created to deal with specific problems. For many businesses, the complexity that new regulations generate can be used as a catalyst to identify and focus on areas of the operation that are not working efficiently and therefore need close attention.

This problem of inefficient operation arises when different parts of the business develop different perspectives on what they are meant to achieve. They start to move apart, working in isolation. The imposition of an additional external control may help an organization to re-focus on its overall purpose, examining what each part should be contributing to that purpose, and reviewing the common platforms needed for managing risk and creating value.

Tax is a good example. As businesses have globalized, they have sought tax-efficient ways to expand. Governments have responded with tax legislation designed to protect the tax base – whether through anti-avoidance laws or the development of greater focus on transaction based taxes and transfer pricing. This has made the global tax environment more complex and, as a result, tax authorities have developed new methods of audit, looking more closely at the underlying financial and data systems companies use, and their approach to tax processes and controls.

At the same time, globalization has meant businesses have come into contact with more and increasingly complex tax regulatory environments in new and unfamiliar countries. This creates additional risk that has to be managed.

This new range of pressures may also generate a positive response, as tax functions take the opportunity to argue successfully for better processes, new controls and improved use of technology to feed their increasing need for accurate and up-to-date information.

This additional complexity may even provide opportunities to create value. To take one very common example, examining VAT processes in response to increasing penalties may often reveal inefficiencies of cash management which, if corrected, will produce cash flow benefits while improving compliance.

Forward-thinking tax functions are using complexity to make a step change in the way they position themselves for the future and address their particular challenges.

The rise of global regulation

The changing international policy on tax is also a good example of the increase in cross-border regulation that is driving complexity for globalized businesses. European companies already have some experience of this through the rising influence of EU directives in most areas of business. But it is a phenomenon that is expanding across the world as governments improve their cooperation on financial regulation, environmental controls, health and safety issues, security and many other areas.

Although this forces businesses into an almost constant process of reviewing and reorganizing their compliance functions, there are signs in the survey that respondents appreciate the work that governments are doing to harmonize regulation, and want it to continue.

Complexity is clearly seen as an issue for governments as well as companies, and while 81 percent agree that regulation needs to be less complex, 89 percent said that governments should work together to achieve this goal.

This is not a simple task. One respondent familiar with the work of the EU pointed out that EU directives are not law, and need to be incorporated into the national law of the member states before they can be implemented.

"Because there are so many different languages in the EU," he said, "each country seems to take something different out of the directive. This is a hugely complex issue, and it has a major effect on costs. In some countries, the cost of these directives is paid by the consumer. In some it is defined by the government and in others it is paid by industry. It is different in each country, and very difficult."

Management actions – what works and what doesn't

The companies polled for this survey are taking complexity very seriously. The effort required for large-scale business reorganizations is huge. Nevertheless, 70 percent of respondents said that they had done this in the past two years to help deal with complexity, and it remains a favored option for the immediate future.

Reorganization is seen as the most effective technique for managing complexity, but only marginally and this doesn't include outsourcing. Only 42 percent said they had outsourced functions to deal with complexity in the past two years, and this was thought to be very effective by only 34 percent.

Does lobbying ever work?

The least effective action was trying to influence public policy, despite the significant impact that regulation has on increasing complexity. While direct interaction with policymakers may not be an easy task, businesses are an important source of input and expertise to government in helping to find more efficient ways of doing business. Business leaders may, therefore, need to provide greater clarity of purpose around their operations to help in shaping policies and regulations that contribute to economic well-being.

Rational risk management

This clarity of purpose is also a necessary foundation for the rationalization of risk management (including compliance risk) which many businesses now believe is necessary. This is one of the more challenging routes to reducing complexity since it often involves reducing the influence of people who are responsible for ensuring regulatory compliance in their part of the organization.

To win support for rationalization, it is important to have a clearly stated business purpose that can be translated into an equally clear and defendable appetite for risk. Together with a good set of figures outlining the cost of compliance within a company (with the corresponding return on investment), it becomes substantially easier to make the necessary arguments for change.

A US management school professor summarized the benefits very clearly. "If something is more complex, it is just more risky. But when companies go beyond that to actively manage unnecessary complexity out of their business processes… they benefit not only from lower risk, but also higher efficiency and agility."

Avoid or embrace

The specific actions mentioned in this report can clearly have an impact on how complexity affects an organization. Some of them, like improving information management, are simply best practice in operation. But even the most effective measure is only thought to work well by a minority of the people polled, and a clear majority feels that none of these options really helps to manage or reduce complexity.

There is a view, which emerges from the in-depth interviews with respondents and also from KPMG's experience, that the only really effective way to manage complexity is either to avoid it as far as is possible or to embrace it.

Seeking simplicity

There are organizations in every sector that have done well by keeping their business models simple. They do what they know, provide a valued set of goods or services in an efficient way, and avoid markets they don't understand.

These organizations deal with externally imposed complexity as best they can, but they place a huge premium on internal simplicity and will go to some lengths to preserve it. Many of the reorganizations that KPMG has assisted are designed to help simplify business models that have moved too far from the core.

One Irish strategy director captured this approach. "I think first of all you have to understand what is complex – you have to identify it and break it down into parts," he said.

"You then have to have a business strategy which will translate into a tactical plan that breaks down and simplifies processes. The end result is simplification."

His thoughts were echoed by a finance director from India whose comment was," Be as simple as possible in all actions. Don't try to make anything complex, and be transparent."

> "Many of the more successful organizations have done well by keeping their business models simple. It is a state of mind, only doing things that you understand really well – only doing what you know."
>
> **Alan Buckle,** Global Head of Advisory Services, KPMG International

Complexity as the stimulus

The alternative view is that complexity is a necessary part of a vibrant and rapidly developing market. It drives innovation by presenting a constant stream of new problems to solve. It highlights areas of outdated thinking and forces businesses to improve constantly.

This is a common view held by many of the emerging economy businesses. For these companies, cutting through complexity to focus sharply on the opportunities it presents is a major part of their corporate strategy.

In Mexico, the view taken by one consumer markets finance director was, "It is the current situation that makes you innovate, be more efficient and look for strategies that allow the company to achieve its objectives in the medium and long term."

These may not be comfortable strategies, and they certainly require a large personal commitment from managers determined to keep up to date with rapidly changing markets. But the rewards are there. The advice from one UK-based finance director was, "Embrace it. A lot of people can get overwhelmed by it. The key is to take advantage of the opportunities, while understanding the need to simplify complexity and bring some clarity."

Conclusion

If there was any doubt about the importance of complexity as a real, day-to-day issue for modern businesses, this survey will have dispelled it. Senior decision makers recognize complexity as a source of additional risk, cost, management challenges and opportunities.

Perhaps the most challenging aspect of complexity is that it is not static. This year, it may be that the after-effects of recession are causing additional complexity. Next year they may give way to the impact of regulations designed to avoid recessions in the future, followed by a new technology that revolutionalizes the way business is done, followed by a struggle to find the right people to manage that technology and turn it to advantage.

Faced with this stream of issues, senior management has a responsibility to respond with strategies to mitigate complexity and take advantage of the opportunities it presents. This implies institutionalizing the study of complexity, to identify the most effective techniques for dealing with it and apply them throughout the organization. Successful management teams will be looking for ways to embed agility into their organizations, moving rapidly to understand and meet the changing needs of their markets. They also will need to develop powerful, yet flexible structures to manage the demands of increasing regulation without stifling innovation.

There are some important differences emerging between specific economic regions and groups at different stages in their development. These will be reflected in the actions taken by companies based in these areas. But it is striking how similar are the concerns of companies throughout the world.

It is not so much the nature of the complexity a company faces that will determine its success, it is the extent to which the company can effectively analyze the situation and bring resources to bear. This applies throughout the world, and strategies learned in one market or one geography may well prove applicable in other markets.

It is not realistic to expect complexity to decline in an increasingly sophisticated global economy. The most appropriate course is to seek ways to understand it, to focus on the opportunities it presents, and to turn challenges into engines for growth.

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