

Supply Chain Intelligence Report

South African Research Report

2009



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February 2009

Introduction

The Supply Chain Intelligence Report (SCIR) is an international, independent study on supply chain management and logistics practices in emerging economies; conducted locally. The aim of the research is to provide insight into the many forces that are driving change in supply chain management and how the most successful companies are dealing with these new and evolving challenges.

Conducted annually, the spirit of SCIR is to aid progress and development in supply chain and logistics practices through the sharing of information and knowledge; without compromising confidential or strategic information. The very fact that the research is owned independently of a logistics or supply chain service provider not only helps to assure respondents of the security of their responses, but also assures readers of the independence of the strategic analysis.

About SCIR 2009

Undoubtedly, "planning and forecasting" is regarded as the single biggest challenge to efficient supply chain management. This finding has been identified by several international studies in recent years. Yet, the more the world changes, and the faster it changes, the greater the challenge of planning and forecasting will become.

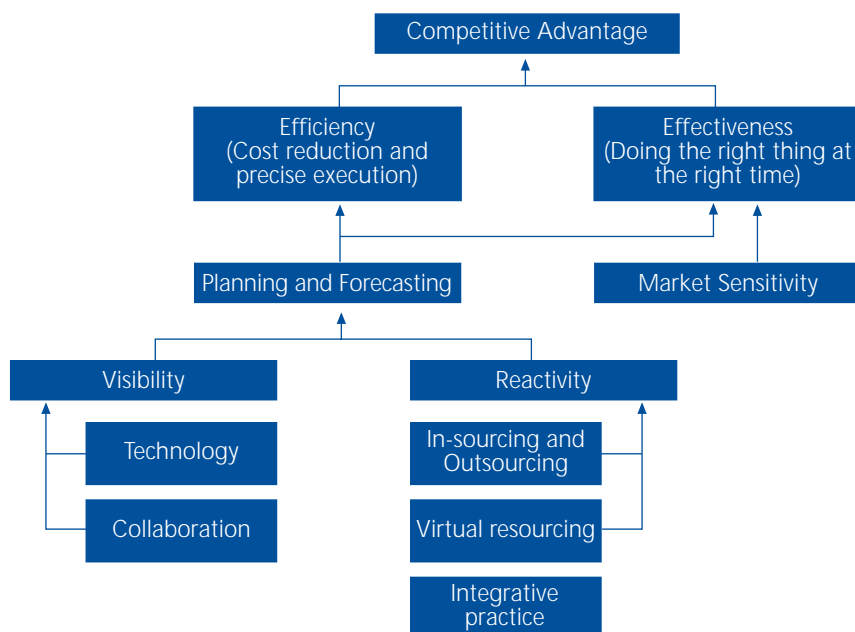
Of course, many fine, sophisticated forecasting and advanced planning tools exist, but as the famous IT saying goes, "garbage in, garbage out".

It is the proposition of SCIR 2009 that the only truly effective way to address the planning and forecasting challenge is to improve visibility in a supply chain, while simultaneously increasing its reactivity; this creates a more flexible and agile supply chain and logistics system, and allows the participant a chance to shorten the forecast period, and to use reasonably sound data.

It is the view of SCIR 2009 that visibility is primarily achieved through the efficient use of technology and collaborative partnerships, both forward and backward in the supply chain. Supply chain reactivity is best improved through the appropriate use of in-sourcing, outsourcing and virtual resourcing, as well as through integrative techniques.

SCIR is an international, independent study on supply chain management and logistics practices in emerging economies; conducted locally.

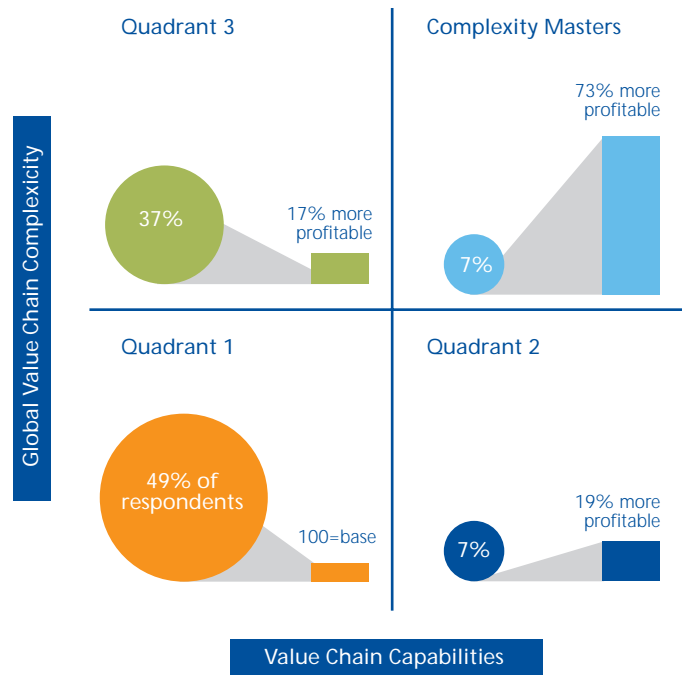
The SCIR Hypothesis: Effectively Addressing the Planning and Forecasting Challenge



To test the above hypothesis, SCIR 2009 built on the Complexity Masters theorem developed and published by Deloitte in 2003, which was conducted using a sample of North American and Western European companies. The research demonstrated that those companies with complex value chains, and the capability to properly manage those complex value chains, are 73% more profitable than their peers. In 2008, the supplychainforesight study conducted in South Africa, an emerging economy, revealed very similar results.

By identifying and examining the behaviour of these Complexity Masters (see quadrant 4 below), SCIR 2009 sought to uncover what actions, viewpoints and strategic approaches these companies in this select quadrant are doing differently to their peers with respect to the elements that are the major determinants of supply chain visibility and reactivity. That is, not only to determine whether Complexity Masters have greater supply chain visibility and reactivity than their competitors, but to begin to understand precisely what their attitudinal and behavioural differences with their peers are.

Once this is understood, it becomes easier for companies who exist in quadrants 1, 2 and 3 to improve their businesses. SCIR, through TerraNova, also offers a service to companies to benchmark themselves against both the universe, and against their industry sector. This comparison can be used as powerful input for improved supply chain strategy setting.



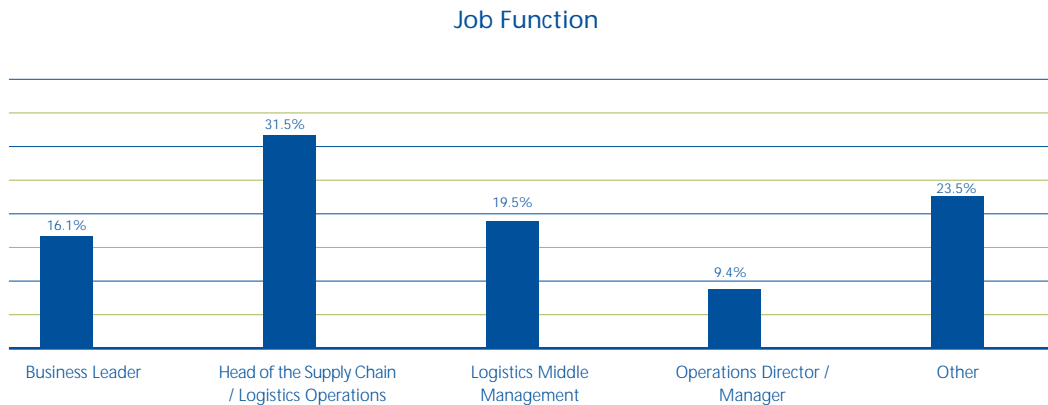
(Source: *Mastering Complexity in Global Manufacturing*, Deloitte 2003)

Finally, SCIR 2009 sought to determine what affects the “Perfect Storm” (that seemed to be brewing when we constructed the research, and has now commenced) would have on supply chains, and what actions companies (particularly those in quadrant 4) are taking to capitalise or mitigate the effects of these events. At the time of developing the research concept for SCIR 2009, the Perfect Storm had not yet erupted, but the dark clouds were hanging low over the markets and the winds of catastrophic change were starting to stir. Little did we, or the world, expect a storm of the magnitude that we now have upon us. The research is of course now more vital than ever.

Participant Profile

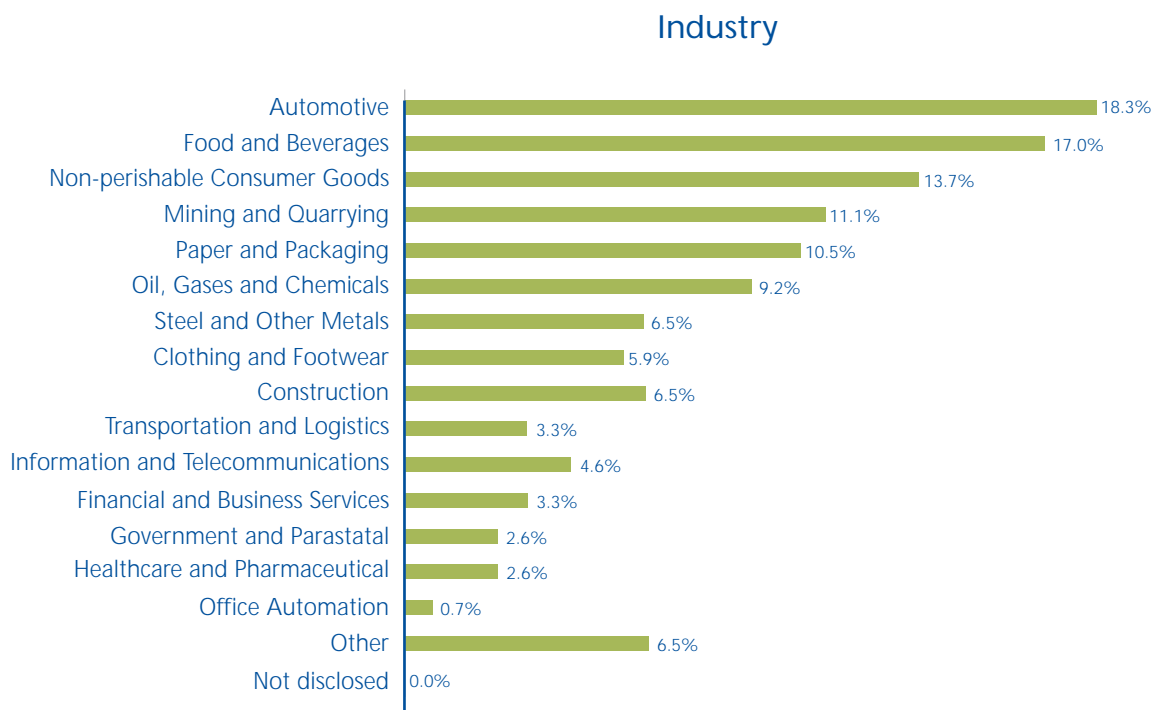
A total of 210 respondents participated in the survey, of which approximately one third of the sample was senior supply chain executives, and 19.5% were logistics middle management. Business leaders (CEOs, MDs and General Managers) constituted a further 16.1% of the sample. The high representation of senior company officials both from a strategic and supply chain perspective gives the findings in this report greater credibility.

Participant Profile: Job Function



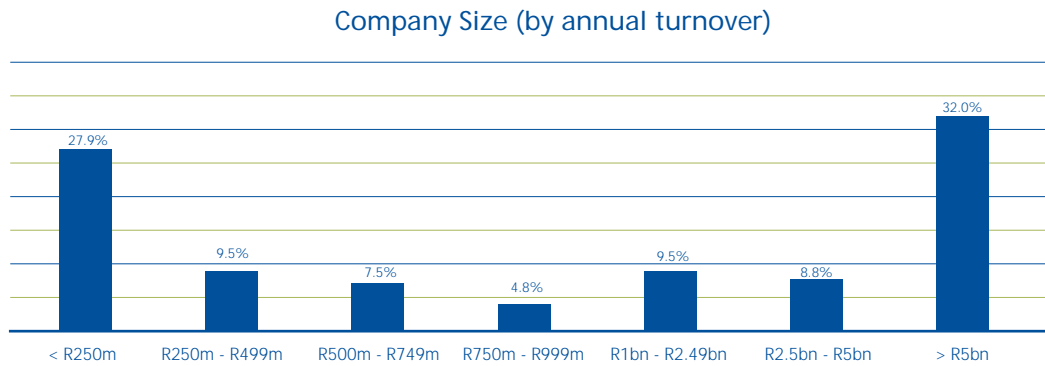
The respondent sample is drawn from a diverse range of industries (or supply chains), with the automotive (18.3%), food and beverages (17.0%), and non-perishable consumer goods (13.7%) industries topping the list – which are very much consumer-facing industries. These are followed by the mining and quarrying (11.1%), paper and packaging (10.5%), steel (6.5%) and construction (6.5%) industries – which are traditionally not consumer-facing sectors. This broad range of viewpoints ensures that the results are not particularly skewed to a single industry or sector's supply chain, but the absolute numbers in the sample allow us to analyse many of these industries on their own.

Participant Profile: Industry



Finally, with respect to size of the companies participating in the survey (measured by annual turnover), a varied sample of respondent companies was achieved with a good balance between smaller enterprises and large corporations (i.e. 49.7% generating an annual revenue less than R1bn and 50.3% in excess of R1bn).

Participant Profile: Company Size

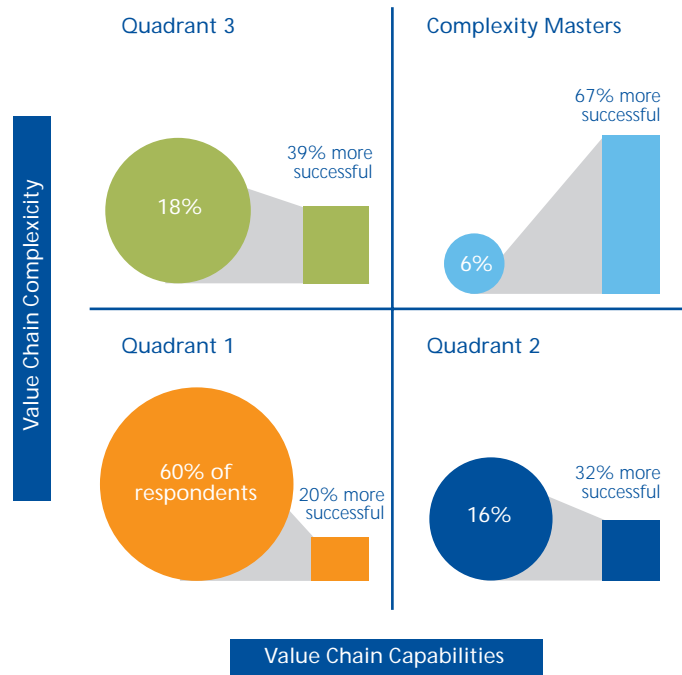


South African Complexity Masters

By tweaking the methodology developed and employed by Deloitte regarding the Complexity Masters theorem, so as to be applicable to an emerging economy such as South Africa, a similar picture to the original study emerges. Only 7% of the sample fall into the desirable quadrant 4; the Complexity Masters, with the majority of the sample (60%) forming part of quadrant 1. Quadrants 2 and 3 comprise the remaining 34% (i.e. 16% and 18% respectively).

In a result that confirmed the Deloitte finding, 67% of the local Complexity Masters claim to be more successful than their competitors, compared with only 20% who form part of quadrant 1.

Little did we, or the world, expect a storm of the magnitude that we now have upon us. The research is of course now more vital than ever.



For further reading on Deloitte's Complexity Masters theorem, visit their website at www.deloitte.com and download the report titled "Mastering Complexity in Global Manufacturing" (2003).

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Findings

This section of the report details the findings and insights garnered from the SCIR 2009 study, and are written to address the hypothesis and objectives of the research, as detailed above (refer to “About SCIR 2009”). With this borne in mind, the major findings of the study are separated and addressed under separate headings.

As the proposition of the study calls for the identification of the Complexity Masters (quadrant 4) and the contrasting of their actions and opinions against their peers, the findings of the report focuses primarily on the results for quadrants 1 and 4. This approach also allows us the opportunity to focus on the differences between the two most polarised quadrants; highlighting the issues that differentiate our most successful companies. The results of quadrants 2 and 3 are therefore not included in this commentary, however please contact TerraNova Research should you be interested in these results.

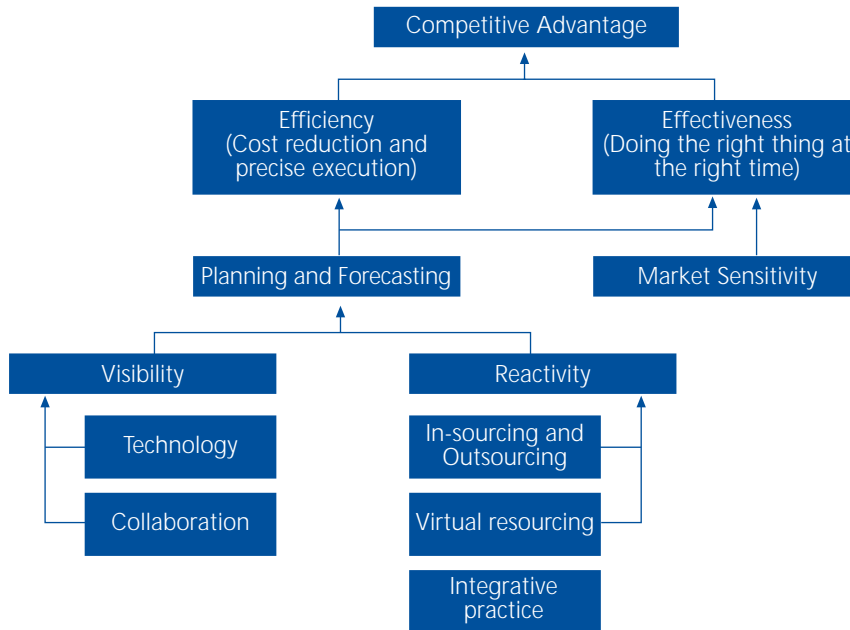
Easing the Planning and Forecasting Challenge

Planning and forecasting is seen as the greatest challenge to efficient supply chain management, as identified in various studies conducted around the globe. As the world changes, and as the pace of that change increases, the challenge of planning and forecasting to more accurately meet market demand will only become more problematic.

The supposition of SCIR 2009 is that only by increasing visibility in your supply chain and by improving its reactivity/flexibility, will one be able to effectively address the challenge of planning and forecasting. By increasing forward and backward visibility along the supply chain, companies will have a greater lead time to adjust their production schedules and orders – providing them with a longer window of visibility; their one and only opportunity in which they can plan and forecast with any degree of confidence.

And within this longer period of visibility, their operations and supply chains need to be agile, flexible and reactive enough to adjust so as to meet the forthcoming demand before it morphs into something new. The next section is dedicated to a study of how well South African businesses are doing with respect to these individual variables and to the identification of the behaviours that distinguish the best performing companies.

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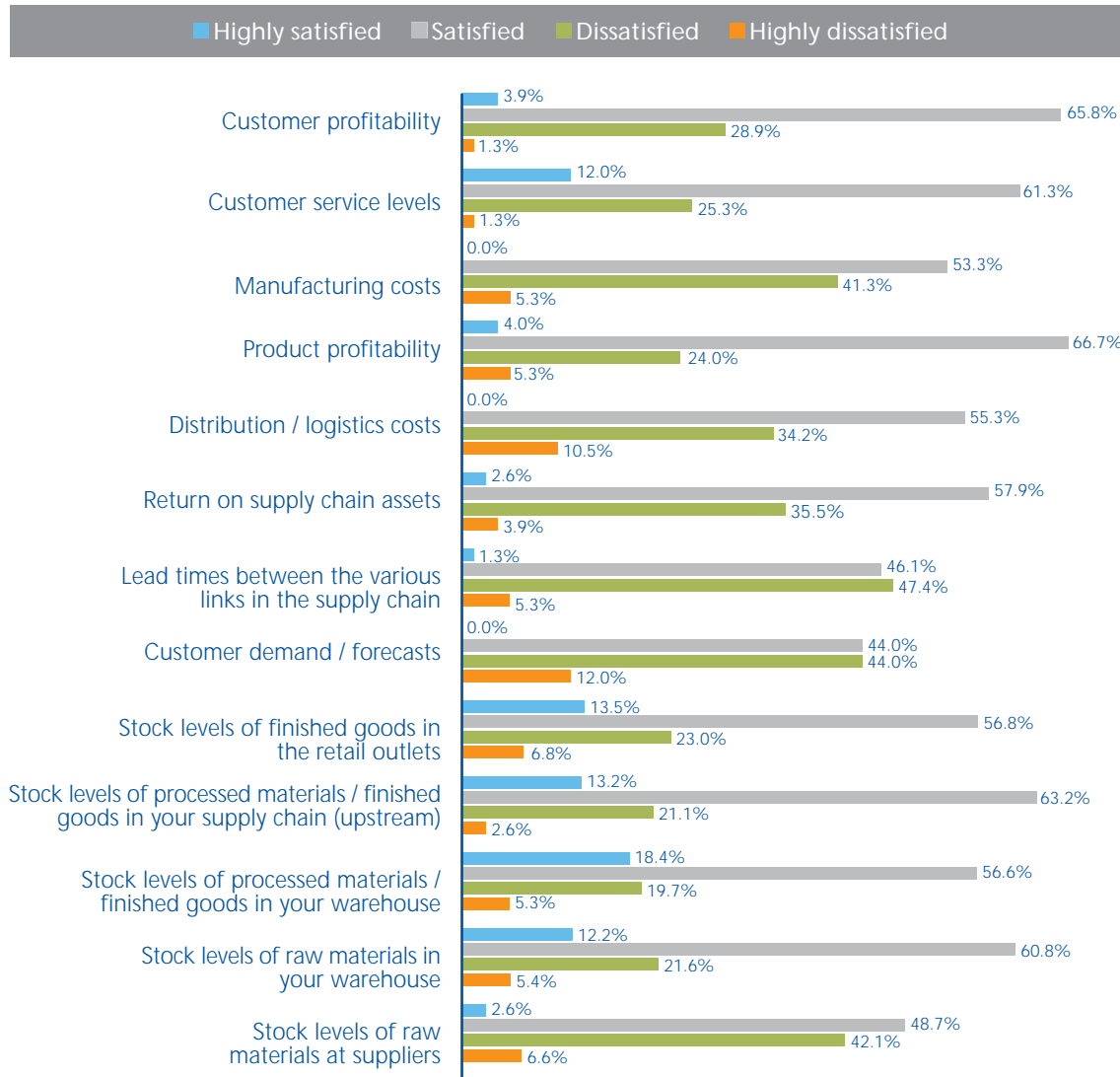
Supply Chain Visibility

When asked whether they are satisfied with the availability of information in their supply chain, 66.4% of the respondents indicated that they were either “satisfied” or “very satisfied”. When examined by quadrants, the constituents of quadrant 1 reported a 63.1% satisfaction level, compared to 75.8% for quadrant 4, the Complexity Masters, thus suggesting greater visibility in the supply chain for the Complexity Masters.

Only by increasing visibility in your supply chain
and by improving its reactivity/flexibility, will one be
able to effectively address the challenge of
planning and forecasting.

Quadrant 1: How satisfied are you with the availability of the following information in your supply chain?

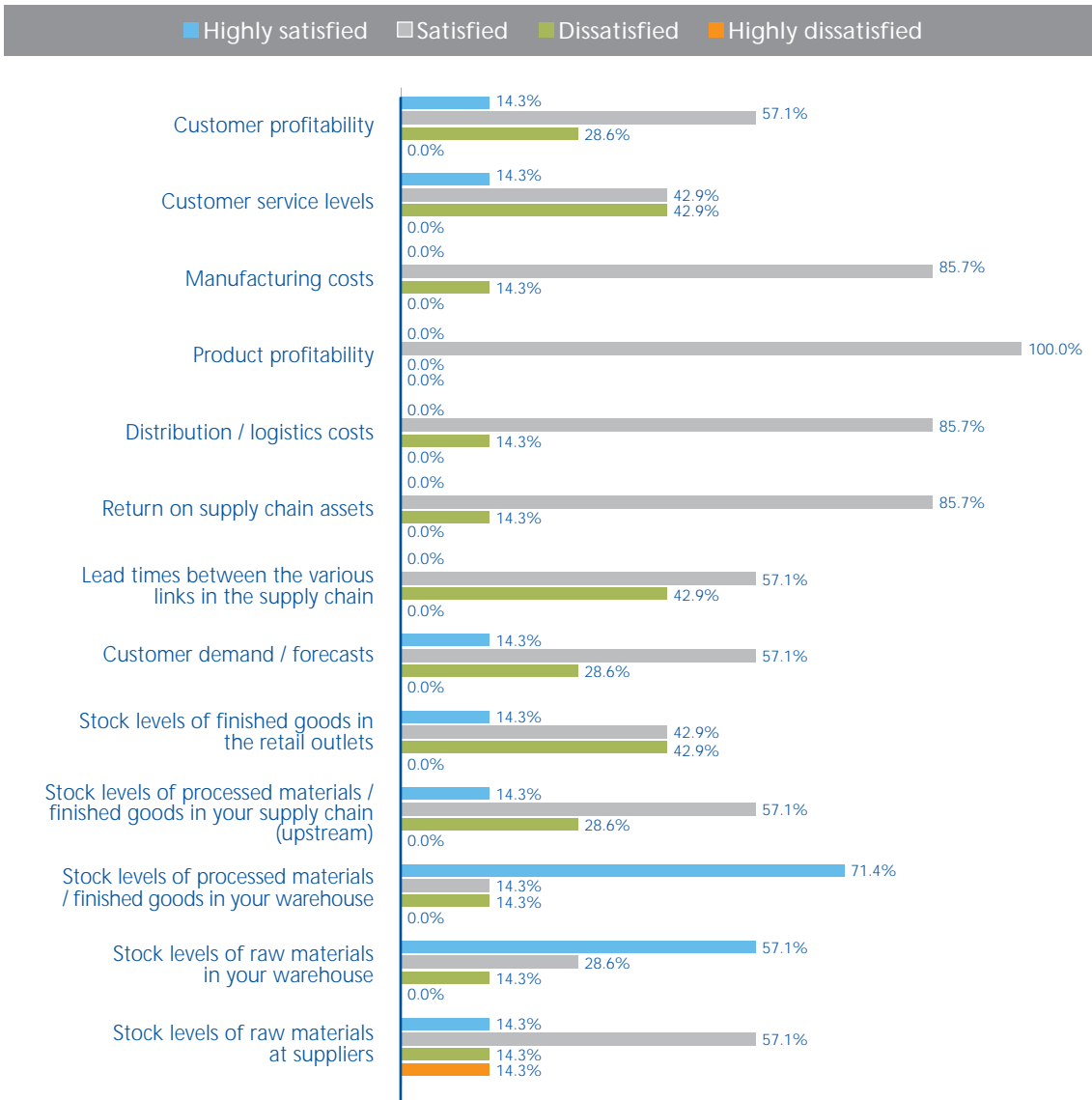
How satisfied are you with the availability of the following information in your supply chain?



By increasing forward and backward visibility along the supply chain, companies will have a greater lead time to adjust their production schedules and orders

Complexity Masters: How satisfied are you with the availability of the following information in your supply chain?

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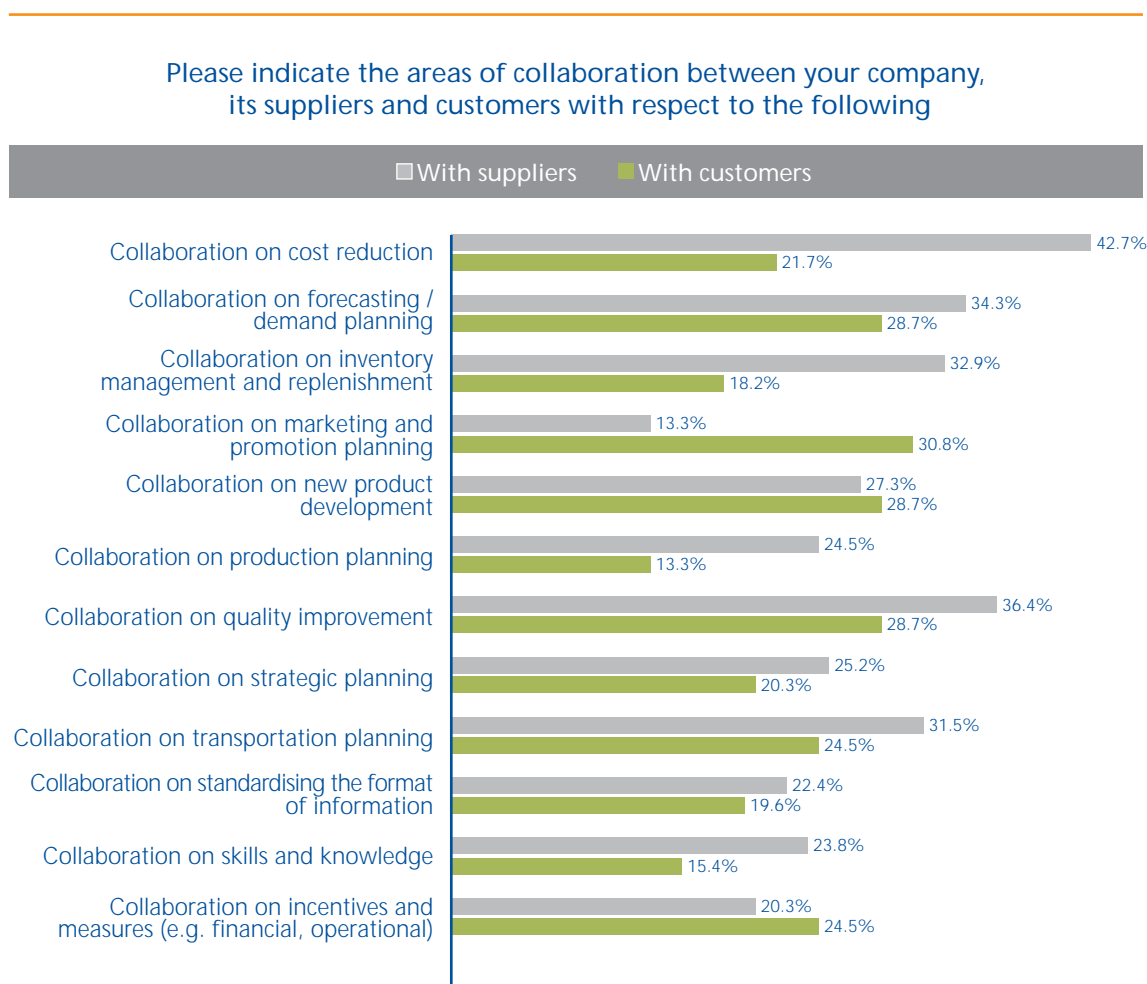
Upon closer examination, the only two areas of supply chain visibility in which the Complexity Masters are less satisfied than their peers, are the stock levels of finished goods in retail outlets and customer service levels i.e. forward visibility in the supply chain. It is our belief that this greater dissatisfaction does not emanate from reduced visibility upstream compared to their peers, but rather from a greater realisation of the importance of this variable, and a desire for even more visibility than they currently enjoy upstream in the supply chain.

Supply Chain Collaboration

With respect to the levels and areas of collaboration with suppliers and customers, there appears to be more collaboration upstream with suppliers (34.6%) than with customers downstream (28.3%). However, when examined by quadrants, the levels of collaboration exhibited by quadrants 1 and 4 are vastly different. While only 27.9% of the sample in quadrant 1 report collaborating with their suppliers, more than twice that proportion of Complexity Masters claim to be collaborating with their suppliers (i.e. 62.0%). Similarly, only 22.8% of quadrant 1 respondents assert to be collaborating with their customers, compared to 60.2% of the Complexity Masters.

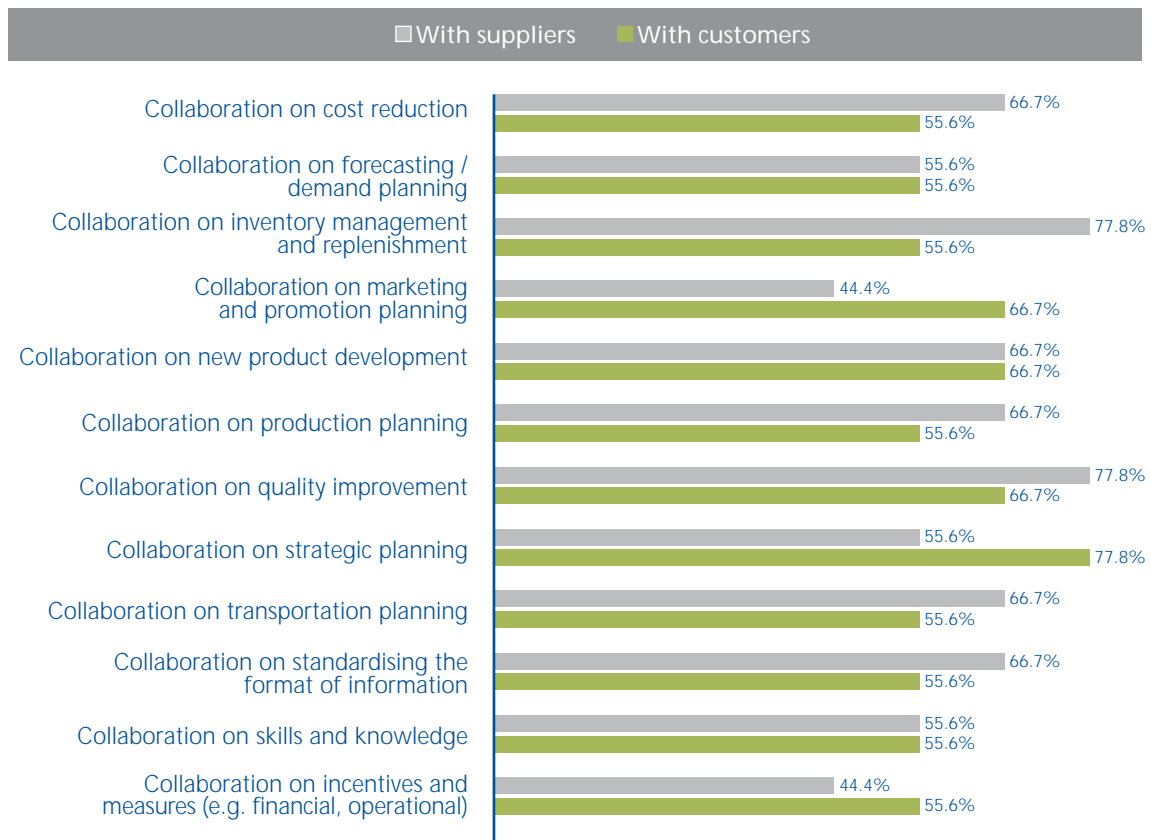
Within the Complexity Masters, the highest areas of collaboration relate to areas around strategic planning, marketing and promotions and incentives which in our opinion are most likely driven by the Complexity Masters themselves.

Quadrant 1: Please indicate the areas of collaboration between your company, its suppliers and customers with respect to the following



Complexity Masters: Please indicate the areas of collaboration between your company, its suppliers and customers with respect to the following

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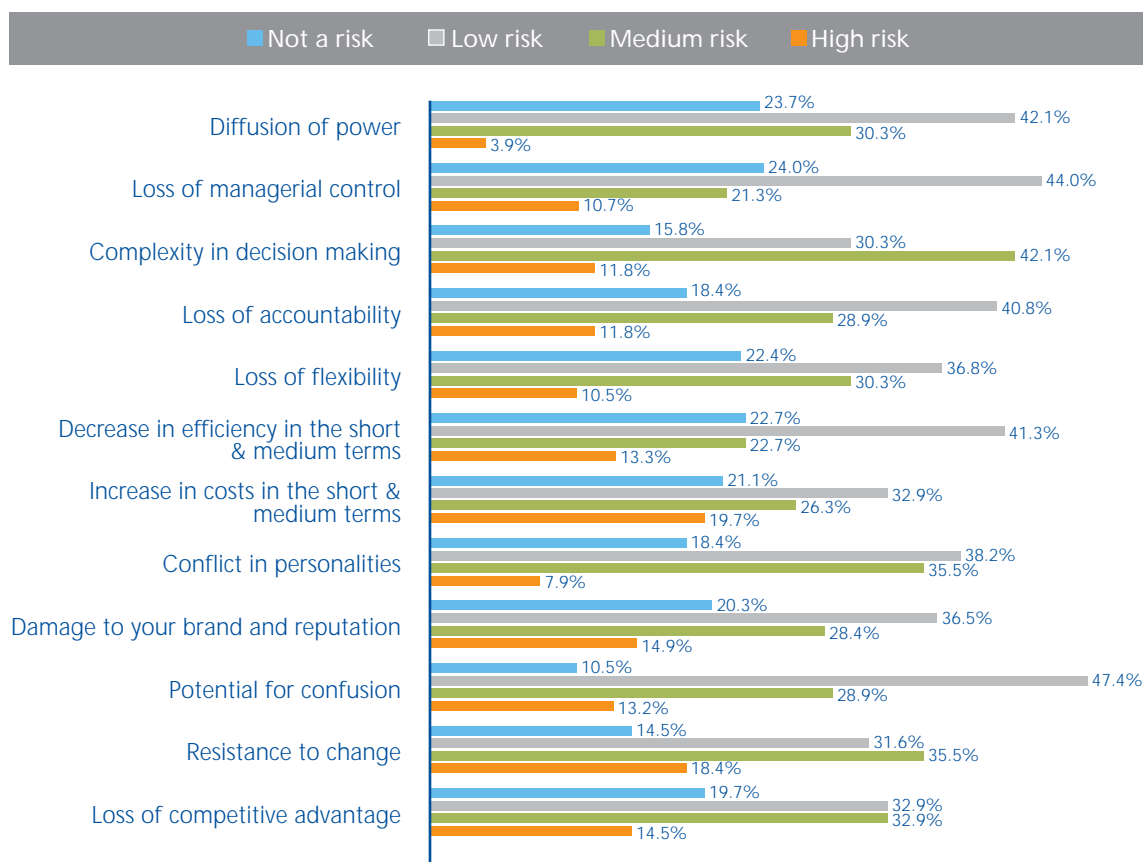
On the whole, the total sample of respondents perceived a greater risk in collaboration with customers than with suppliers, however the converse for the Complexity Masters was true – particularly in the areas of “loss of accountability” and “decrease in efficiency in the short and medium terms”.

These differences in the perceived risk could be due to two reasons. Firstly, as identified earlier, the Complexity Masters are seeking greater forward visibility in their supply chain, and of course collaboration with their customers would help achieve this end. Secondly, perhaps the Complexity Masters fear that their suppliers might share their collaborative yields with their competitors, thereby eroding at their competitive edge.

Potential may exist for manufacturers to find new ways to make collaboration more productive.

Quadrant 1: Please rate the following perceived risks that are associated with supplier collaboration

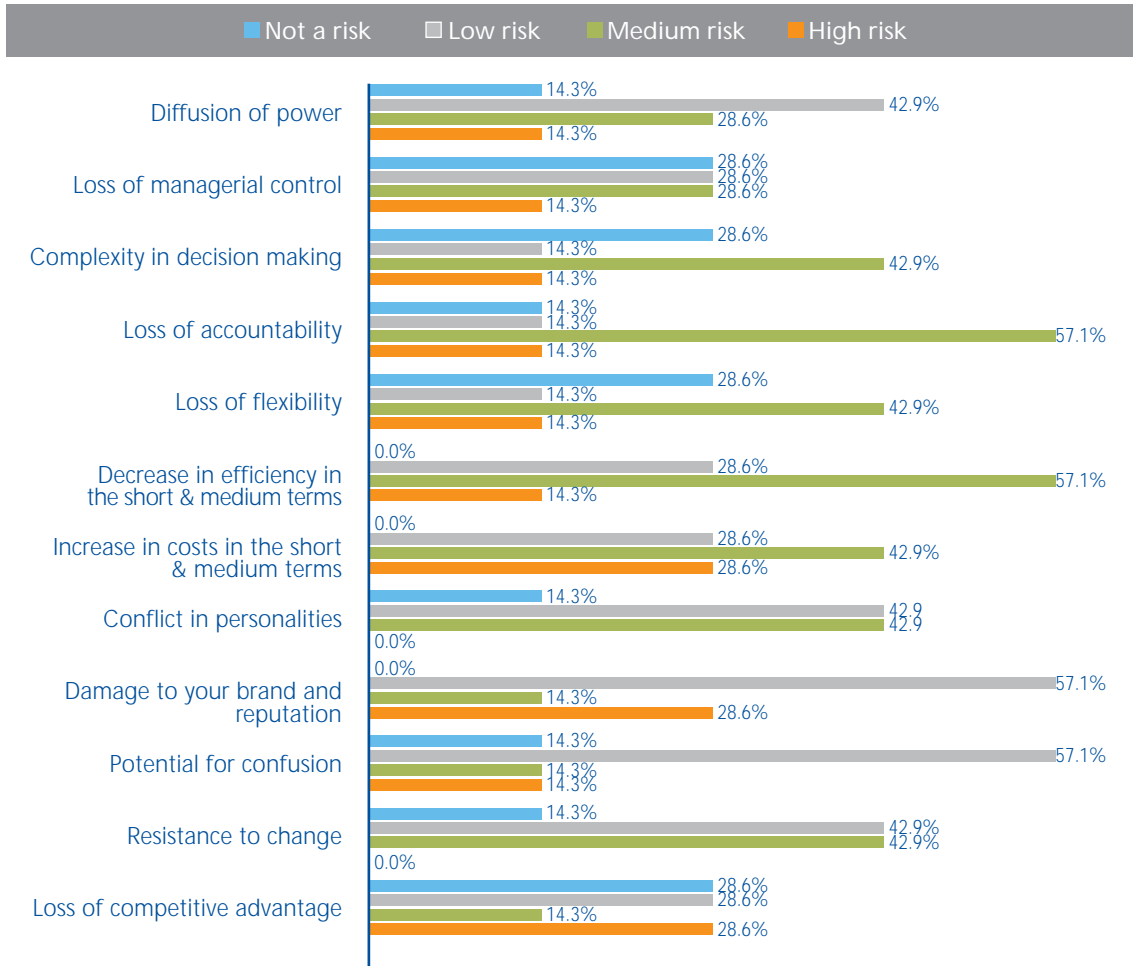
Please rate the following perceived risks that are associated with supplier collaboration.



Within the Complexity Masters, the highest areas of collaboration relate to areas around strategic planning, marketing and promotions and incentives.

Complexity Masters: Please rate the following perceived risks that are associated with supplier collaboration

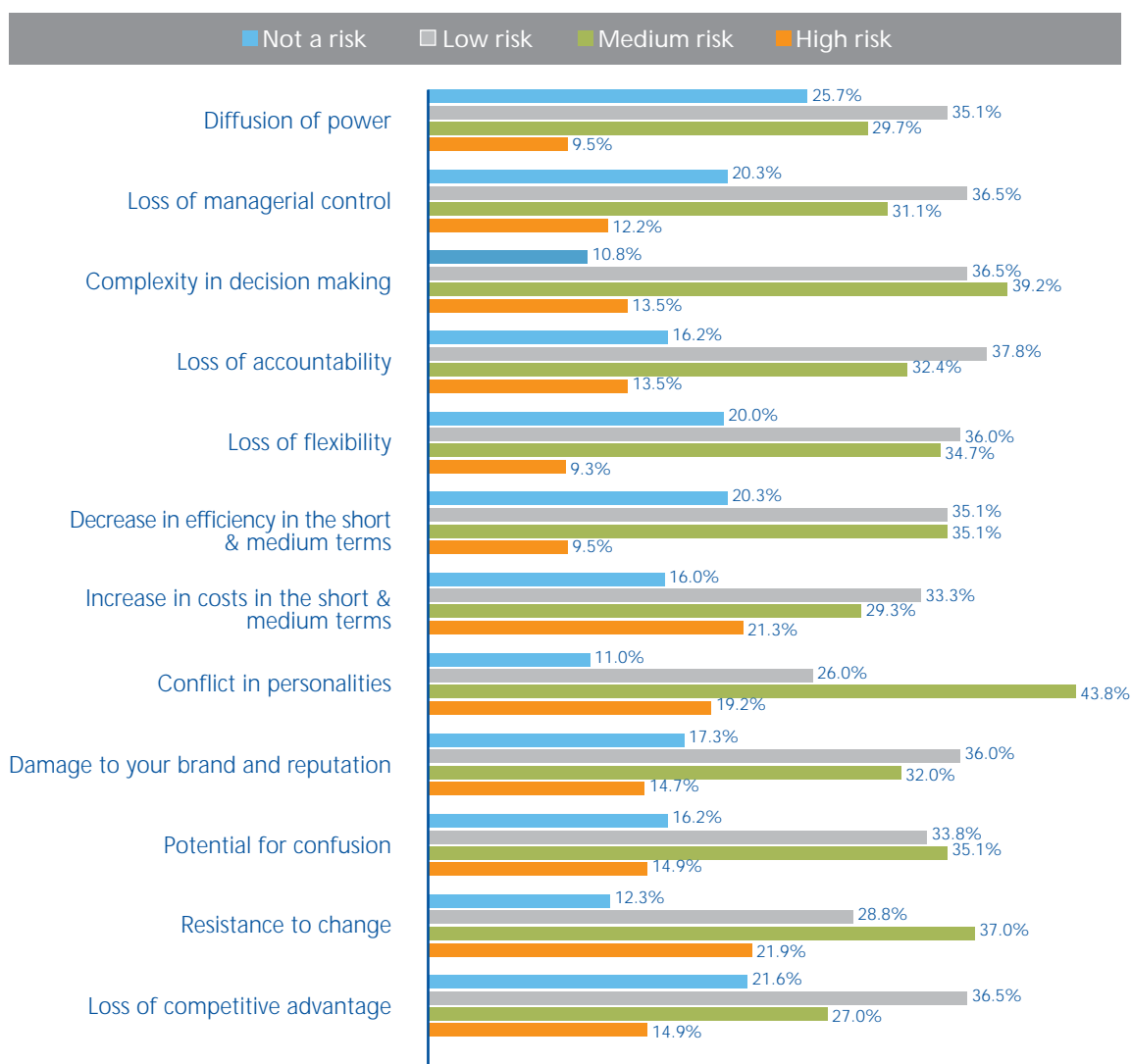
Please rate the following perceived risks that are associated with supplier collaboration.



Respondents perceived a greater risk in collaboration with customers than with suppliers, however the converse for the Complexity Masters was true.

Quadrant 1: Please rate the following perceived risks that are associated with customer collaboration

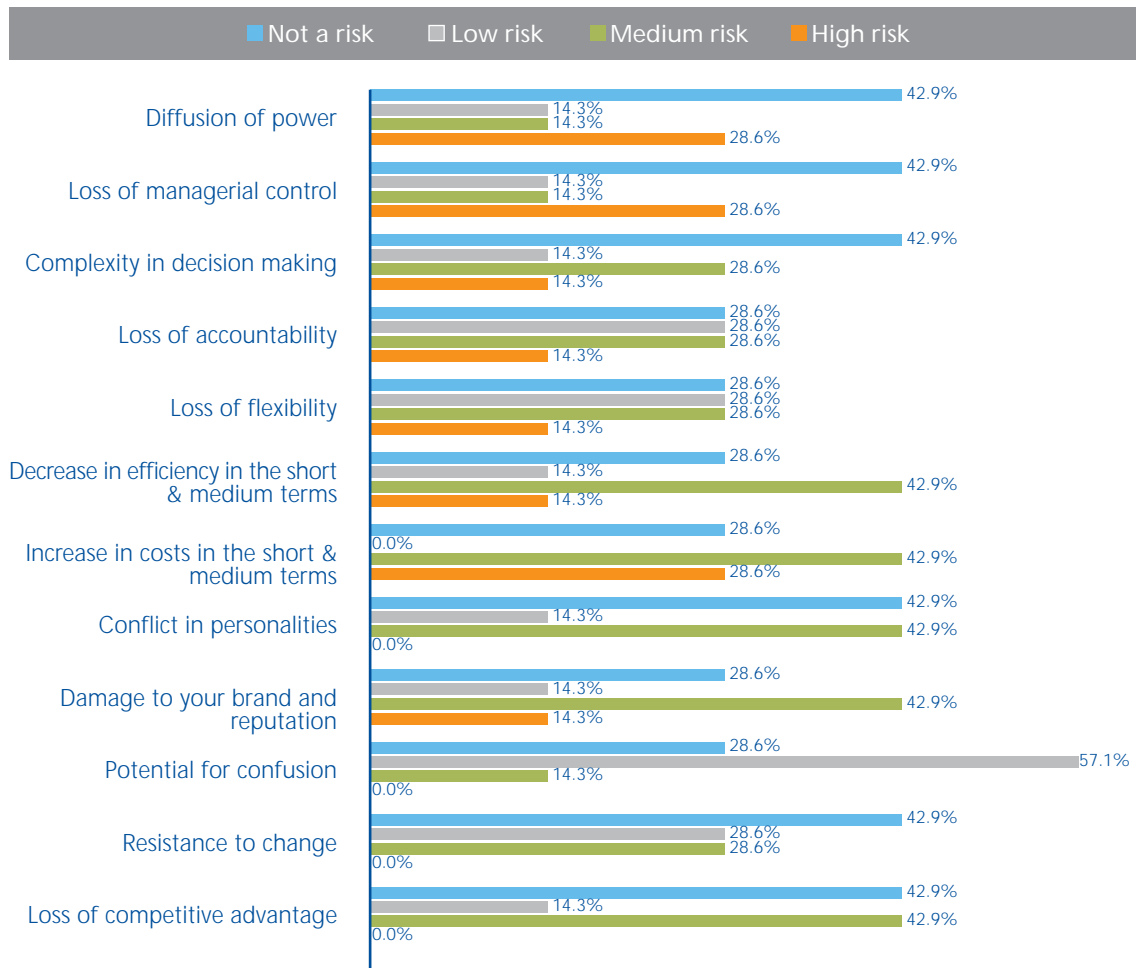
Please rate the following perceived risks that are associated with customer collaboration.



The only area in which the Complexity Masters are really collaborating with their competitors are around industry-related matters.

Complexity Masters: Please rate the following perceived risks that are associated with customer collaboration

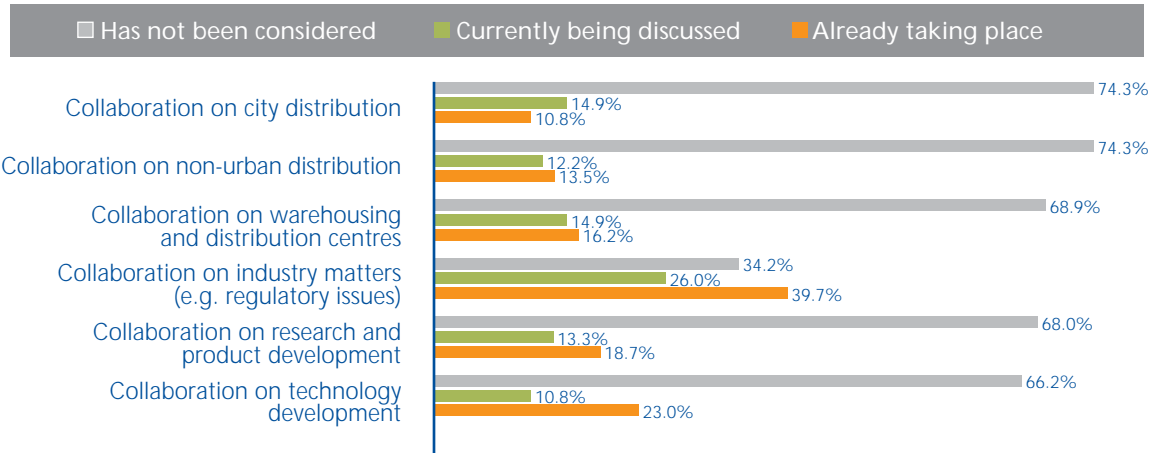
Please rate the following perceived risks that are associated with customer collaboration.



Interestingly, the Complexity Masters are not collaborating, or planning on collaborating, significantly more with their competitors than those respondents in quadrant 1. The only area in which the Complexity Masters are really collaborating with their competitors are around industry-related matters – an area in which there is not likely to be any risk of losing their competitive advantage. Perhaps another reason why they chose not to collaborate with their competitors is that their own systems and practices are far more advanced from their competitors, making collaborative efforts between the parties more difficult to implement.

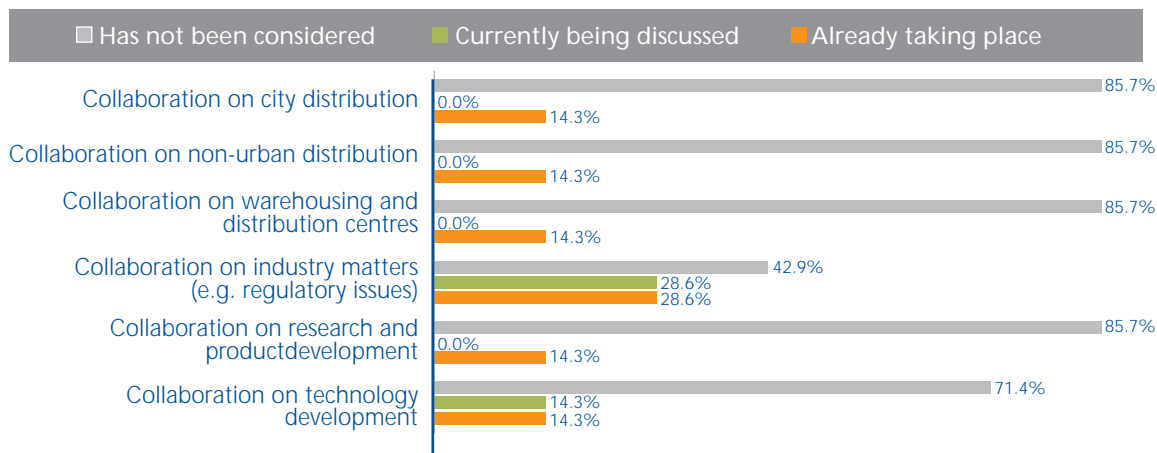
Quadrant 1: Please indicate the level of collaboration between your company and its competitors with respect to the following

Please indicate the level of collaboration between your company and its competitors with respect to the following



Complexity Masters: Please indicate the level of collaboration between your company and its competitors with respect to the following

Please indicate the level of collaboration between your company and its competitors with respect to the following

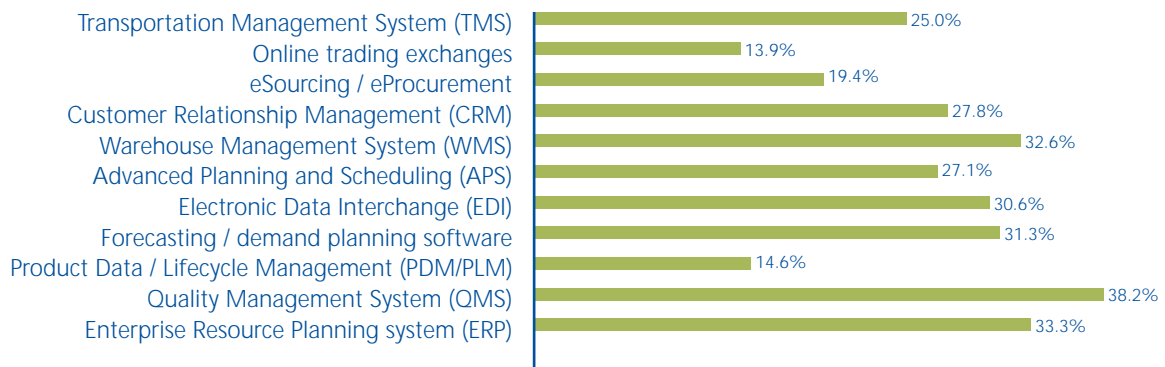


Technology

As already demonstrated in this report, the Complexity Masters enjoy greater supply chain visibility, aided by greater levels of collaboration. In addition, and by their very definition, the Complexity Masters have the capability to effectively manage their complex supply chain. To this end, it is quite expected for them to be greater users of technology; an enabler to achieving these high levels of efficiency and intricacy. When compared against the responses from quadrant 1, the Complexity Masters are greater users of all types of technologies.

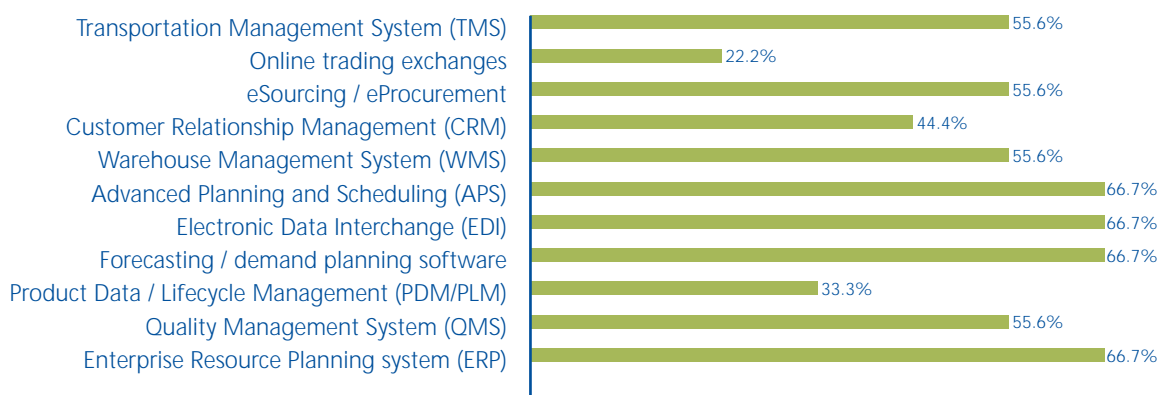
Quadrant 1: Please indicate which technologies your company uses in its operations

Please indicate which technologies your company uses in its operations



Complexity Masters: Please indicate which technologies your company uses in its operations

Please indicate which technologies your company uses in its operations



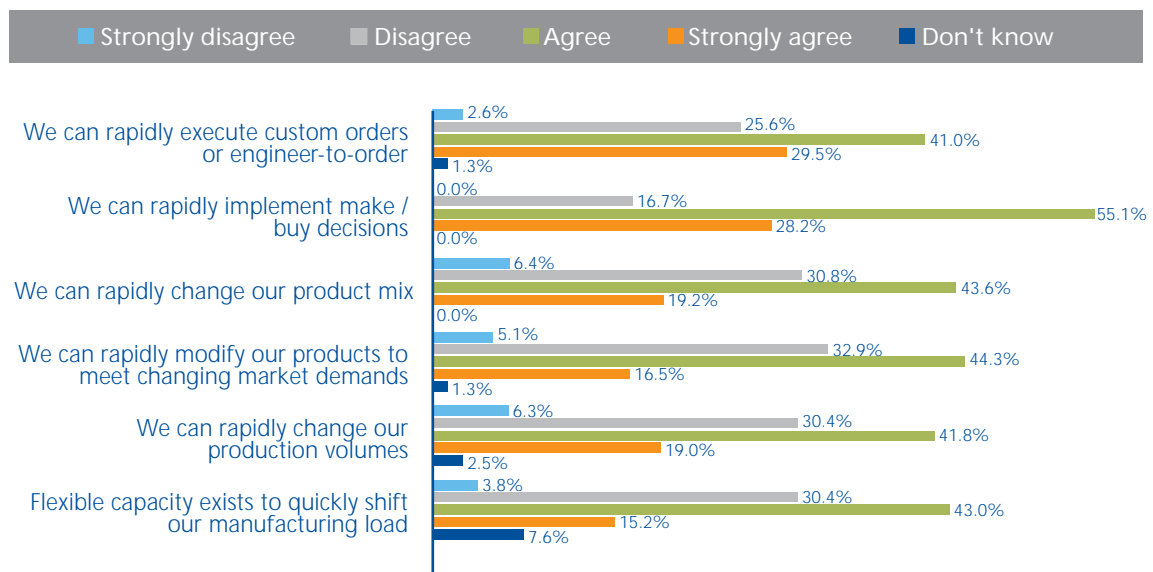
Supply Chain Reactivity

To gauge the levels of supply chain reactivity or flexibility, the respondents were asked to indicate their level of agreement with a series of statements relating to their ability to react to changes in demand.

A total of 68.5% of the total sample agreed or strongly agreed with the statements, with marginally less of the quadrant 1 participants agreeing to some degree (66.1%). However, a very high percentage of the Complexity Masters indicated their agreement with the statements (95.2%), demonstrating their high level of supply chain reactivity/flexibility compared to the sample.

Quadrant 1: Please indicate your level of agreement with the following statements as they relate to your company's supply chain

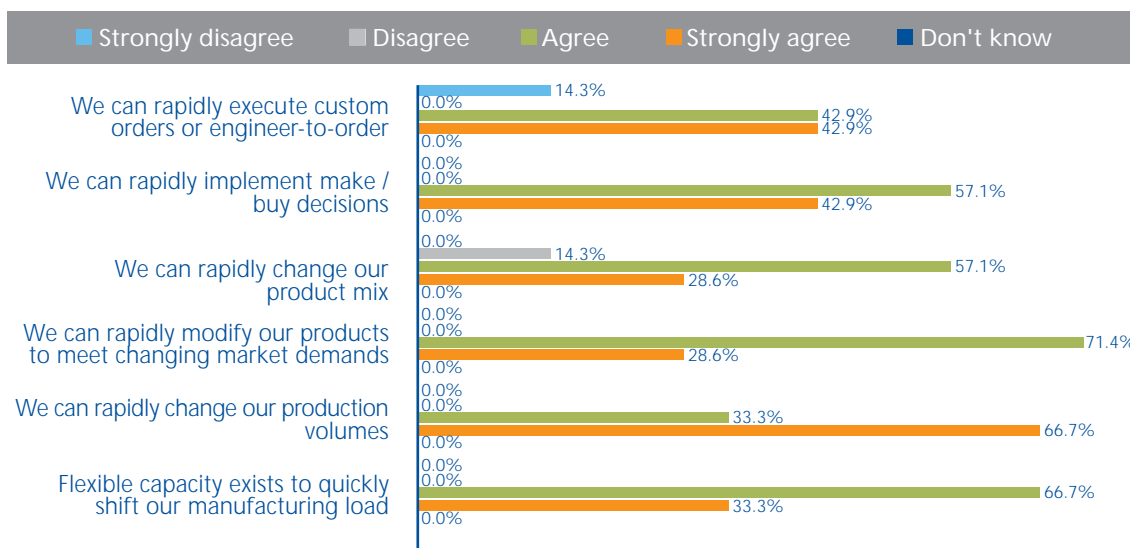
Please indicate your level of agreement with the following statements as they relate to your company's supply chain.



The reactivity of the Complexity Master's supply chain is far greater than that of quadrant 1 (95% vs 66%)

Complexity Masters: Please indicate your level of agreement with the following statements as they relate to your company's supply chain

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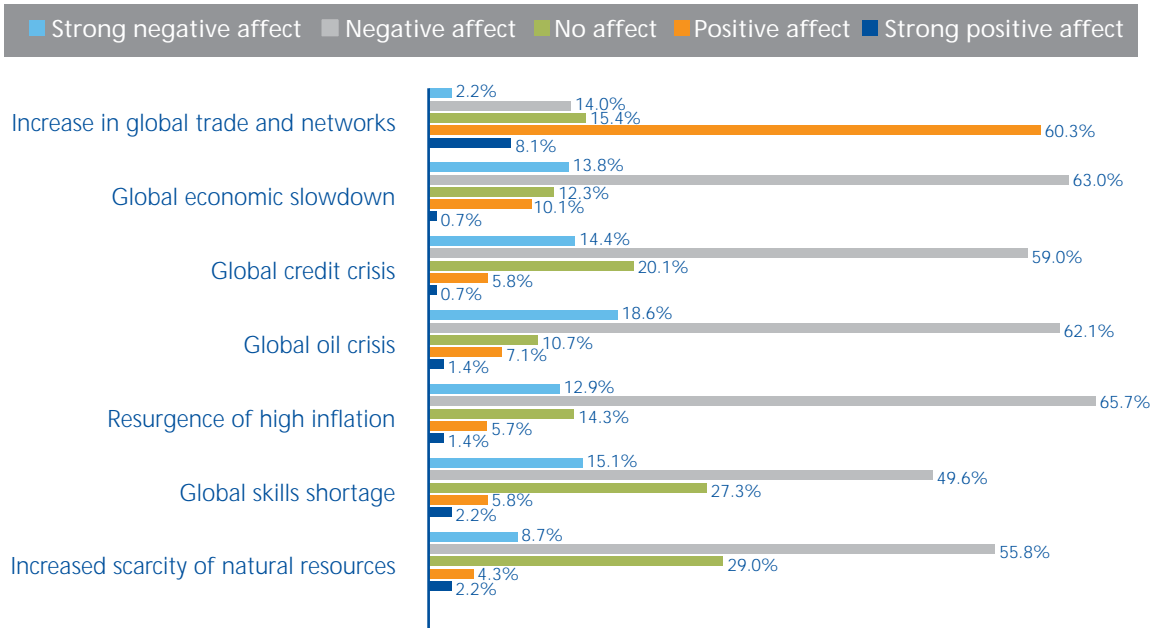
The Effects of the Perfect Storm

The world's markets and economies are continually being shaped and affected by powerful forces. Some of these forces are driven internationally, sending ripples across the entire globe. Others are secular to a particular country or region and have little effect beyond those borders. Most often, these various "elements of change" sweep over the market at their own pace and in their own time – very seldom do they all conspire to assault the market at once. However, in 2008, the darkest storm clouds started to gather, the winds started to blow, and in the last quarter of the year the rains began to fall. The "Perfect Storm" had begun.

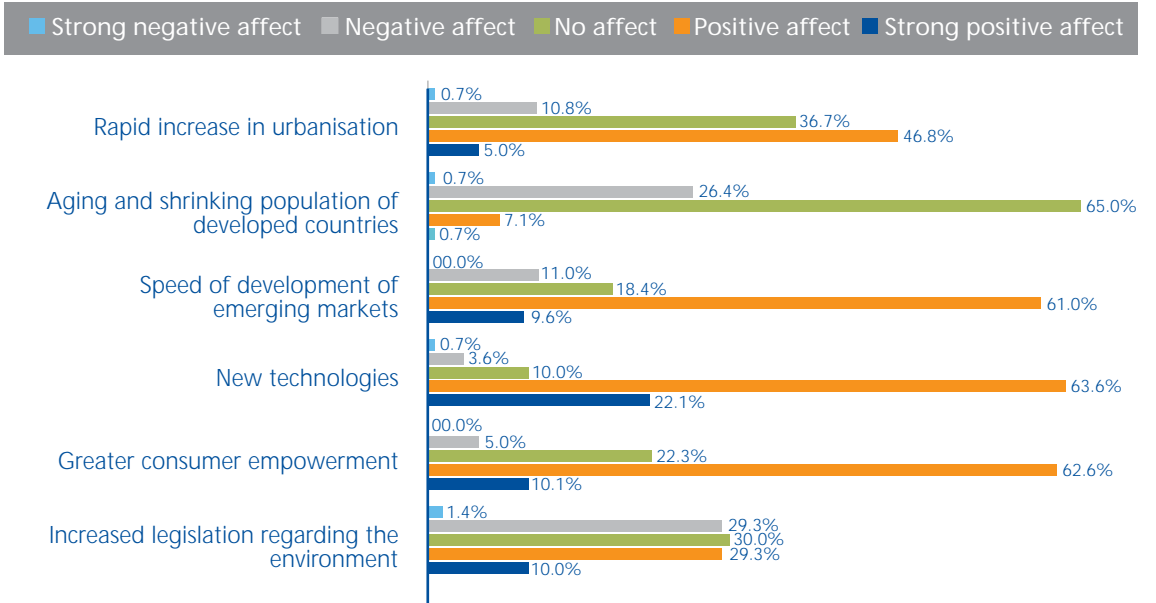
Prior to the eruption of the Perfect Storm, SCIR 2009 was designed and launched for the collection of data. One section of the questionnaire asked respondents how the current and pending, market-changing events are affecting or likely to affect their businesses and supply chains. As would be expected, some of the changes were yielding a positive effect, while others were causing a negative result. This was true for the total sample, quadrant 1 and quadrant 4 participants – however, for the most part, the Complexity Masters appears to feel the effects a more intensely than their peers. This is in part due to their highly complex (which includes global complexity) supply chains.

Total Sample: What affect have the following global trends and events had/likely to have on your supply chain within the next 3 years?

What affect have the following global trends and events had/likely to have on your supply chain within the next 3 years? (Part 1)

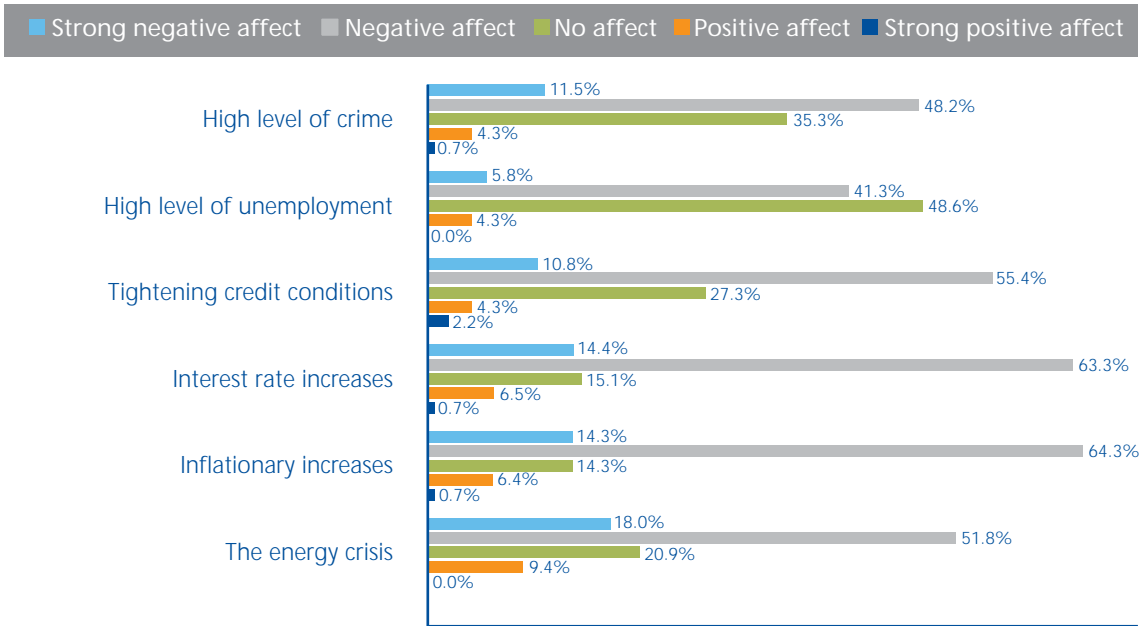


What affect have the following global trends and events had/likely to have on your supply chain within the next 3 years? (Part 2)

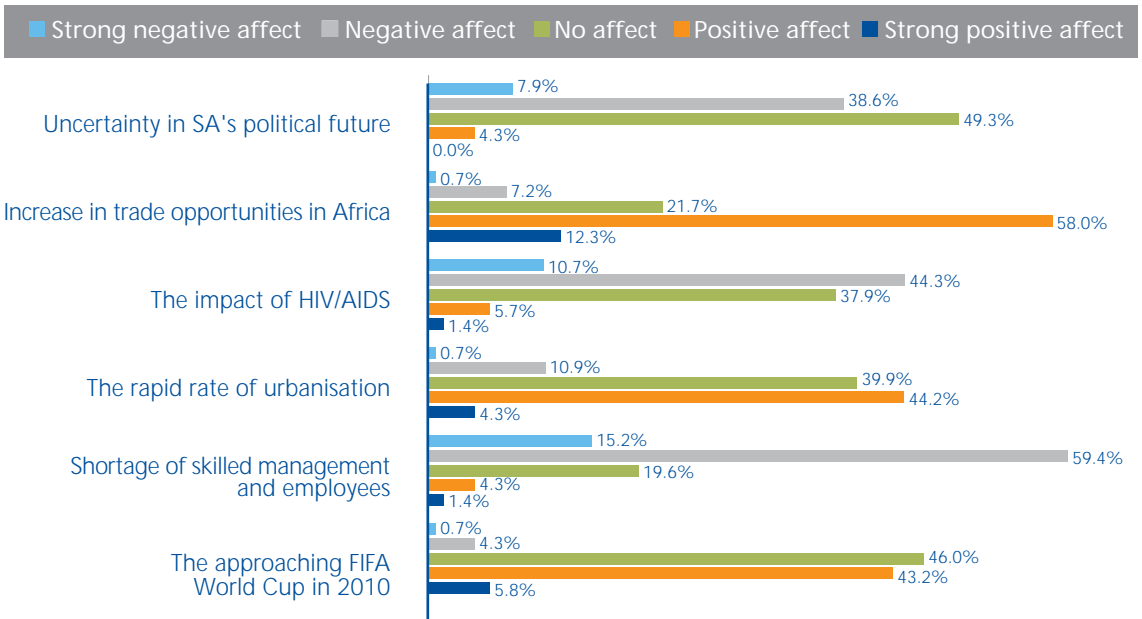


Total Sample: What affect have the following local trends and events had/likely to have on your supply chain within the next 3 years?

Which of the following local trends and events have had an affect on your supply chain operations (Part 1)



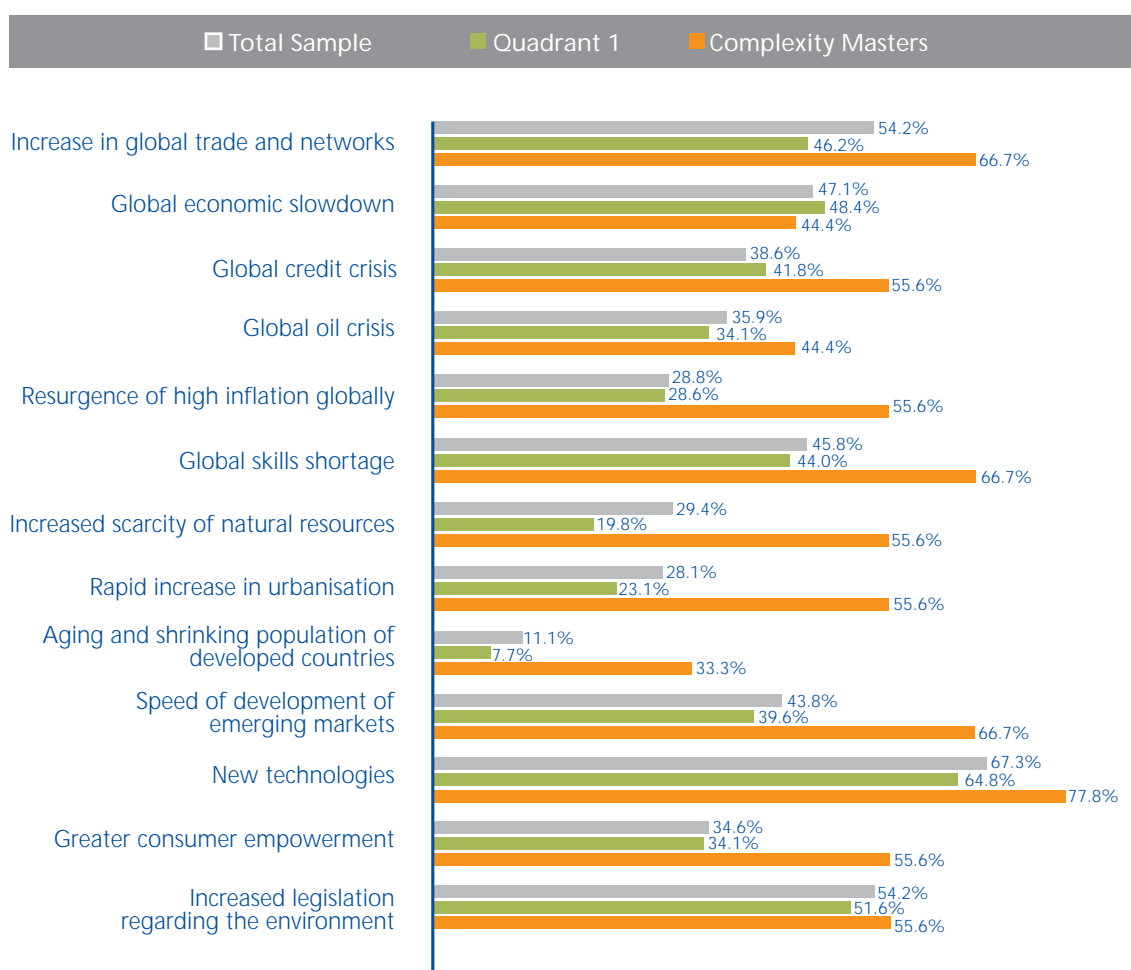
Which of the following local trends and events have had an affect on your supply chain operations (Part 2)



While the effects of the Perfect Storm on local companies could easily be predicted, it is the amount and quality of the reaction from the respondents that is interesting. While many companies are doing something to capitalise on, or mitigate the effects of the Perfect Storm, it is the Complexity Masters that are demonstrating a far higher degree of sensitivity and action regarding these events – in particular, around the areas of skills, changing and developing markets (i.e. urbanisation and emerging economies) and technology.

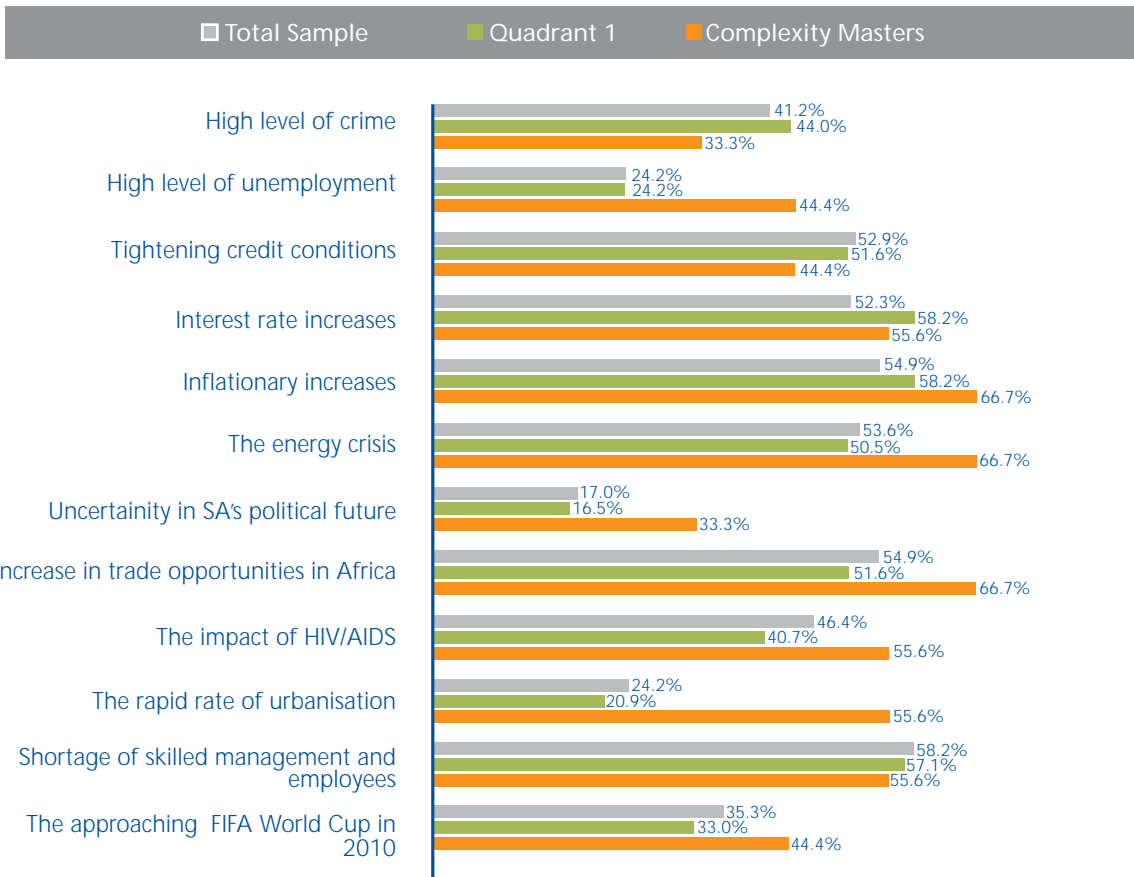
Which global trends has your company taken action/made provision for, so as to mitigate /capitalise on their affects?

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Which local trends has your company taken action/made provision for, so as to mitigate /capitalise on their affects?

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While the effects of the 'Perfect Storm' on local companies could easily be predicted, it is the amount and quality of the reaction from the respondents that is interesting.

A Lack of Concern for the Environment

As the world changes and is faced with new opportunities and challenges, so too do our measures of success. Sustainability is now a key partner to profitability. Lack of attention to environmental and social issues can have profound negative effects on long term success. The respondents were asked to indicate whether any of the KPIs (Key Performance Indicators) from the list provided are or will be forming part of their supply chain measurement metrics. These KPIs are beginning to be incorporated by many companies in developed economies due to legislation, regulation and/or consumer expectation. Undoubtedly, given the changing of the guard that is currently underway in the world, they will begin to filter into the global operations of multinationals, and also into dominant companies that hail from the developing world.

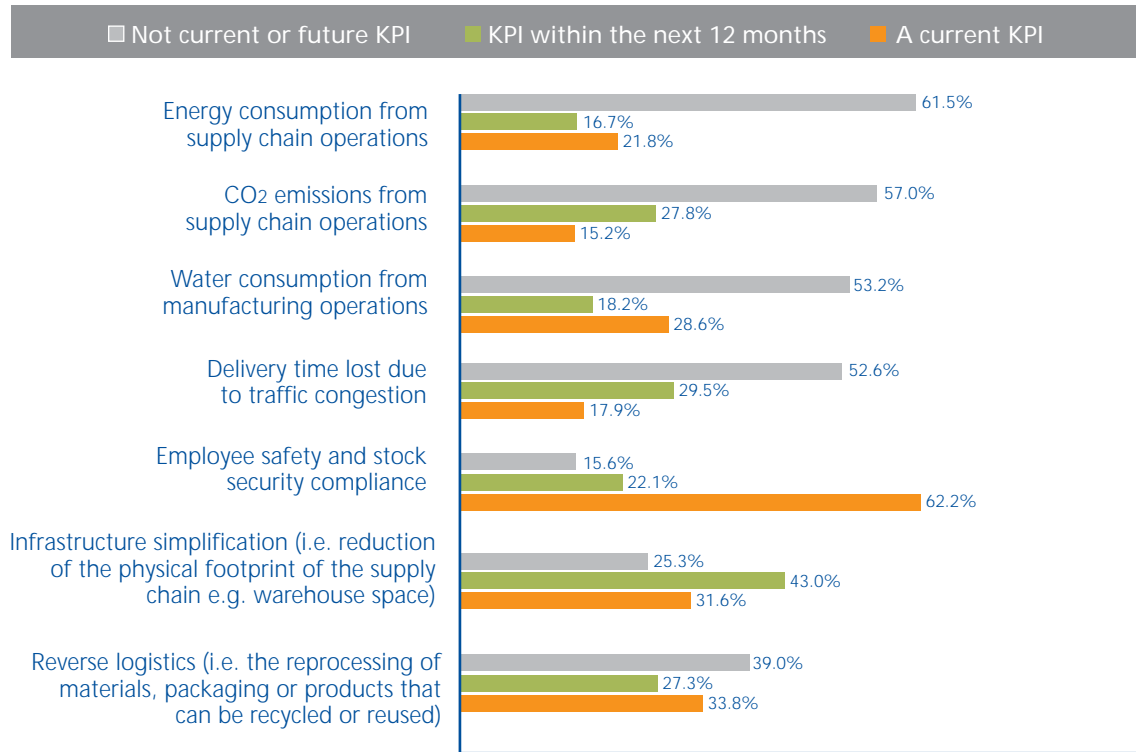
Surprisingly, many South African companies do not have any measures regarding the impact of their supply chains and operations on the environment, nor do they plan to introduce any of these measures within the next 12 months. This revelation is quite startling considering the long publicised and growing concern about the environment globally.

When examined by quadrants however, again the views of the Complexity Masters cast a different picture. Only 11.4% of Complexity Masters state that they do not have or plan to introduce metrics to measure their impact on the environment, compared to 41.3% for the total sample and 47.2% for quadrant 1 respondents. Perhaps this progressive behaviour is partly driven by their global complexity and the fact that they are required to conform to certain standards in international markets. Perhaps the Complexity Masters are more sensitive to changing consumer, employee and shareholder expectations and believe that they can boost their long term sustainability by being proactive in this regard.

Many South African companies do not have any measures regarding the impact of their supply chains and operations on the environment.

Quadrant 1: Which of the following items currently, or will within the next 12 months, form part of your company's supply chain KPIs?

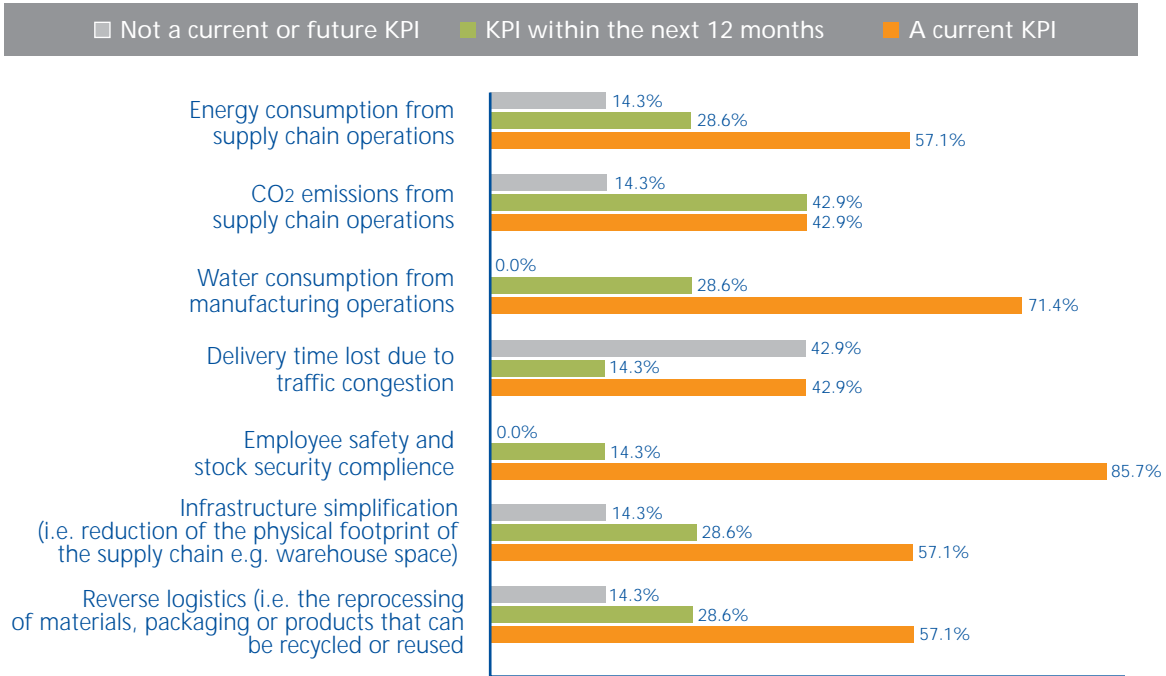
Which of the following items currently, or will within the next 12 months, form part of your company's supply chain KPI's?



Lack of attention to environmental and social issues can have profound negative effects on long term success.

Complexity Masters: Which of the following items currently, or will within the next 12 months, form part of your company's supply chain KPIs?

Which of the following items currently, or will within the next 12 months, form part of your company's supply chain KPI's?



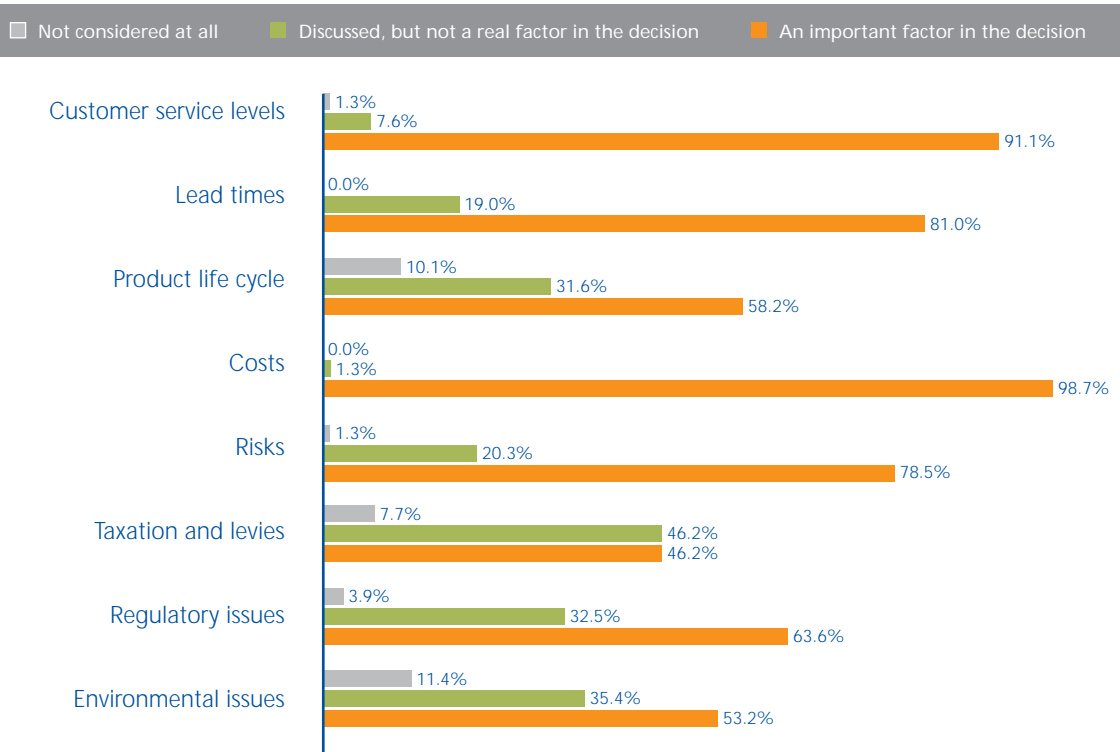
Sustainability is now a key partner to profitability.

The Importance of Thorough Planning

The respondents were asked how much consideration is given to a list of issues before making important supply chain decisions. Again, the Complexity Masters pay far more attention to a broad range of matters before making these decisions – particularly in the areas of taxation, product life cycle and environmental issues. This thorough approach to planning is part of the behaviour of the Complexity Masters that ensures their greater success.

Quadrant 1: How much consideration is given to the following when making decisions about sourcing, manufacturing, NPD or entering new markets?

How much consideration is given to the following when making decisions about sourcing, manufacturing, NPD or entering new markets?

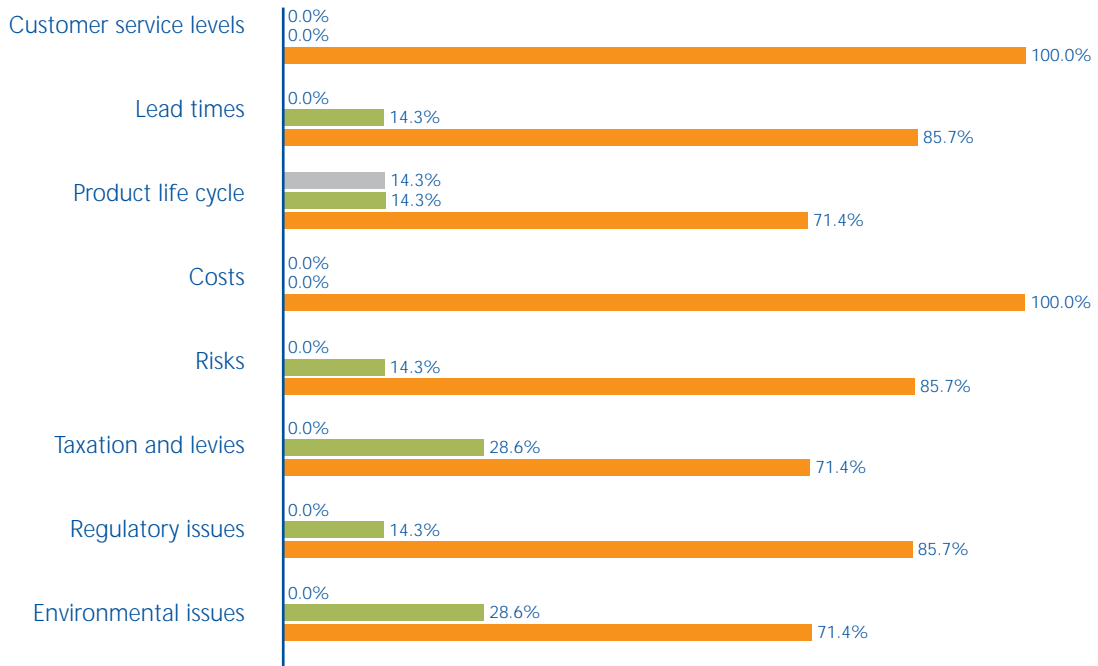


Complexity Masters pay far more attention to a broad range of matters before making important decisions.

Complexity Masters: How much consideration is given to the following when making decisions about sourcing, manufacturing, NPD or entering new markets?

How much consideration is given to the following when making decisions about sourcing, manufacturing, NPD or entering new markets?

□ Not considered at all ■ Discussed, but not a real factor in the decision ■ An important factor in the decision



This thorough approach to planning is part of the behaviour of the Complexity Masters that ensures their greater success.

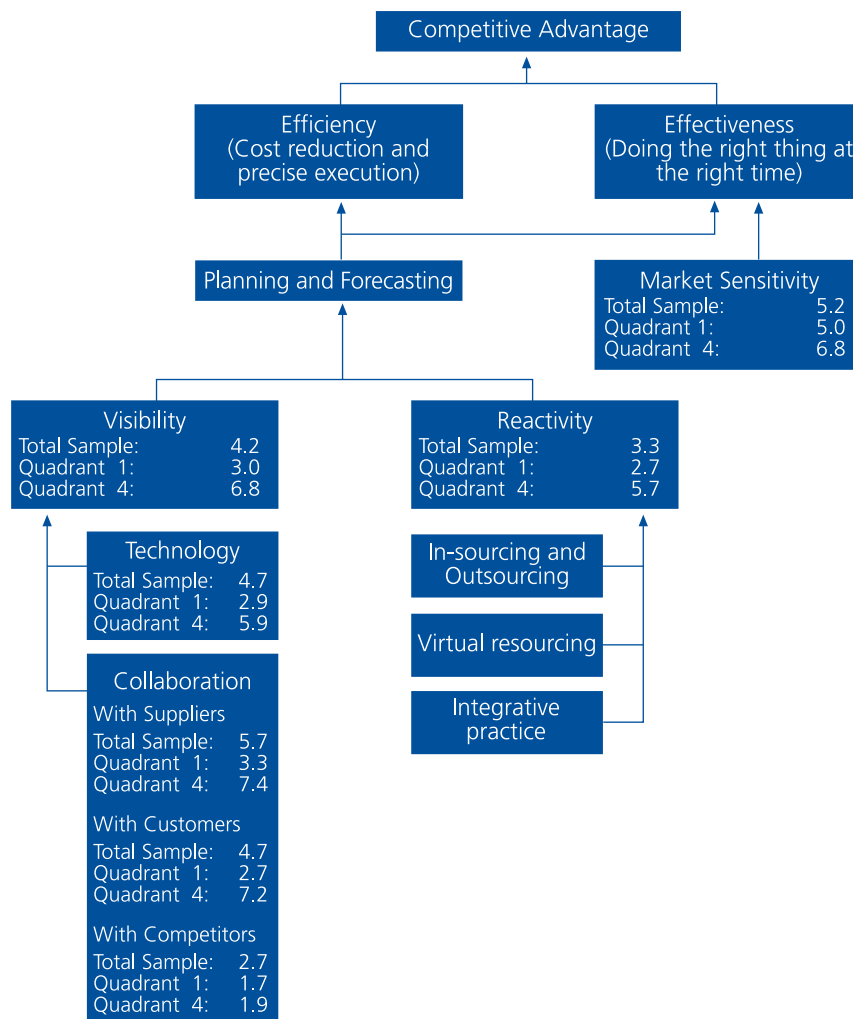
Conclusions

SCIR 2009 set out to test the hypothesis that the planning and forecasting challenge can only truly be addressed through increasing visibility along the supply chain and improving the reactivity/flexibility of the supply chain and operations. By utilising the Complexity Masters theorem developed by Deloitte and contrasting the activities and behaviour of the Complexity Masters, with particularly the behaviour of the 60% of companies to be found in quadrant 1, conclusive evidence to support this hypothesis has been found.

Our model hypothesises that competitive advantage from a value chain point of view (as measured by our sustainable success measures) emanates from a company's ability to operate both more efficiently and more effectively. Both of these measures are enabled by improved forecasting and planning, something the marketplace is under increasing pressure to achieve.

The evidence clearly shows a significantly better performance from Complexity Masters than from the rest of the sample.

The SCIR Hypothesis: Effectively Addressing the Planning and Forecasting Challenge



The hypothesis further postulated that in high change environments, companies need to improve supply chain visibility in order to allow them the maximum lead time to change plans to suit the changing environment. This visibility, we maintain, is enabled by the use of appropriate technology and by collaboration both up and down the supply chain. Again, the evidence of the study finds Complexity Masters to be significantly higher users of technology, and to be much more collaborative.

Once a business has some degree of visibility, our hypothesis continues, its success will depend on its relative ability to react with agility and flexibility. We believe that the essential components of reactivity are flexibility with respect to the ability to deploy supply chain assets, and the ability to assemble a virtual 'best of breed' supply chain team that can redesign, implement and operate what will need to be almost an organic supply chain. One that changes, learns and evolves continuously.

Clearly, organisations that have integrated systems that can turn fixed costs to variable costs through in- or outsourcing, and those that have strategic relationships with supply chain partners that give them a virtual 'best of breed' team are better able to react to the change that is so inevitable. Once again, the evidence is that Complexity Masters do this more than the rest of the sample. They outsource to 3PLs more, they use consultants continuously, and they are bigger users of logistics solution providers.*

An additional discovery that was gained from this study is the importance of "market sensitivity", i.e. the ability to read the signs of the changing market and make provision for their impact before the event horizon. This ability (whether intuition or just meticulous observation) is a definite characteristic of the Complexity Masters and is likely to be a large part of their success and sustainability. One such example is their incorporation of metrics to measure the impact of their operations and supply chain on the environment. While internationally in many mature markets this is already a mainstream KPI, locally it is only just beginning to be considered by some companies. Yet, the Complexity Masters are already incorporating these issues into their own management measures – pre-empting the inevitable change in legislation and the growing cry of their consumers. It is this type of foresight that helps to give them an edge over their competitors.

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* Refer to supplychainforesight 2008