

**Opening the Way to Successful
Risk Management in
Purchasing and Supply**

**Report for
The Chartered Institute of Purchasing & Supply**

by

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March 2006

Acknowledgements

The author wishes to acknowledge the assistance of Andrew Myers, who undertook the statistical analysis for this study. Thanks also go to Liz Cullen and other members of the CIPS team for arranging the distribution of the surveys. Last but by no means least, the author wishes to thank all those members of the Institute who gave of their time and experiences by participating in this study.

Executive summary

The findings of this survey suggest that although high-profile events such as corporate governance scandals, international terrorism and civil contingencies requirements have propelled corporate risk management and security into the headlines, they appear to have had relatively little impact on awareness of risk management in purchasing and supply. The same can be said for insurance requirements. Instead this survey shows that the everyday concerns of the 'business of business' emerge overall as the stronger drivers. Responding to customers and changes in business strategy came through as primary drivers. Whilst the most frequently reported major factor in raising awareness of supply chain risk was recent experience of severe disruption or loss. Almost 30% of respondents reported this as a major influencer, with manufacturing businesses being the most likely to cite this factor.

Around 60% of organisations used on-going reviews of risk in purchasing and supply, or were currently engaged in a review. Nevertheless one in five respondents reported no knowledge of any such review having ever been undertaken within their organisations. The public sector, followed by manufacturing/utilities, fared worst in this respect.

Looking at how organisations approach risk identification and management in purchasing and supply, a dichotomy emerges. Organisations were most likely to opt for either formal analysis across the business or informal analysis within purchasing and supply. Service sector organisations were most likely to rely on high level formal analysis across the business, whilst manufacturers were more prone to opt for informal analysis within the purchasing and supply functions. The public sector was evenly split between the two.

When it comes to risk assessments in respect to their immediate supplier base, the survey shows that organisations engaged in transport/distribution/retail are most likely to require risk assessments for all first tier suppliers as part of their selection process. In contrast, financial/business services are more likely than other groups to overlook immediate suppliers in risk assessments. In terms of scope, the assessments vary, but the following provide some indications:

- Price competitiveness, quality approvals and previous performance are included in supplier selection and monitoring in over 90% of cases.
- Supplier's size and financial status was present in over 80% of cases.
- Around 57% of organisations considered the impact of supplier location on total lead times.
- The strategic direction of the supplier and the percentage of order book held by a respondent's organisation were considered in only 53% of cases.
- Mismatches with information systems or product/service lifecycles were included in less than 40% of supplier risk assessments.

- Less than 40% of organisations considered suppliers' business continuity planning in risk assessments
- Less than a third of organisations were likely to routinely monitor their suppliers' own procurement and risk sharing policies.

Turning from suppliers to customers, the research revealed that over 70% of respondents stated that lead times to customers were included in routine monitoring. Just over 60% also indicated that availability of company products/services was likely to be included. As ever though, the devil is in the detail and marked differences appear between the sectors.

Moving on to monitoring for specific scenarios, respondents were asked to indicate whether routine monitoring for a range of potentially disruptive events took place within (or was shared with) their own organisation's purchasing and supply functions. A number of scenarios were put forward, ranging from IT upgrades, mergers and acquisitions through to natural disasters and terrorist attacks. Results showed that significant changes in the trading environment topped the list, being routinely monitored in almost 60% of respondents' organisations. Again civil emergencies and natural hazards/disasters came in at the bottom, with only around 22% of respondents watching out for these. Looking a little deeper, clear sector differences again emerged:

- 80% of the transport/distribution and retail organisations routinely monitored for transport and communications and infrastructure failures, unlike half of all manufacturing/utilities and financial/business service firms.
- Only just over 40% of public sector organisations had infrastructure failures on the radar. Public sector organisations were much more likely to be vigilant when it came to disruptions from IT upgrades and new systems implementation. 38% of them also routinely monitored for man-made civil emergencies. Only just over 18% of manufacturing/utilities did the same.
- The manufacturers were most sensitive to the potential impacts of mergers and acquisitions, possibly resulting in consolidation or restructuring of their industry (over 68%).
- For the financial/business services companies, political and economic changes in the macro-environment that were most likely to feature (over 68%). Though the transport/distribution/retail cohort were even more likely to be monitoring these macro-environmental factors (over 73%)

When it came to the methods and tools currently in use to manage supply chain risk, the survey reveals that the two methods are very widely used. Almost three quarters of organisations (73%) reported using fixed price contracts to manage risk, nearly as many used close collaborative working with suppliers (71%). Collaborative working as a risk management approach was particularly prevalent amongst manufacturers (almost 82%). In contrast, technological solutions and simulation modelling are rarely used. Simulation modelling is most likely to be used in the transport/distribution/retail sector (11%). On a more general level, nearly three-

quarters of respondents (around 74%) indicated that significant supply chain failures were reported and recorded. Disappointingly, only 45% recorded or reported 'near misses'.

The final section of the survey investigated levels of satisfaction with approaches to risk management in purchasing and supply, within respondents' organisations. This study reveals that most respondents (over 65%) were satisfied with the risk management practices and procedures currently in place. A third of respondents were not. Representatives from financial/business service companies were most unhappy, whilst those from transport/distribution/retail were most likely to be satisfied. However over 41% of respondents identified insufficient time and resources within purchasing and supply as a fairly major or major issue, limiting the effectiveness of their organisations' management of supply chain risk. A third of those who replied identified lack of time and resources elsewhere in the organisation for as a significant problem. Almost 28% indicated that conflicting requirements at functional and strategic business level was major or fairly major limitation. Whilst 27% felt that limited knowledge or understanding of the available tools and techniques by colleagues elsewhere within the organisation was a significant hurdle. Difficulty in justifying investment in risk management (in terms of return on capital employed) was one of several other factors that were felt to present a major or fairly major barrier to better risk management for around a quarter of those who replied.

This study concludes that better risk management in purchasing and supply starts by recognising that there is diversity between sectors. This may reflect regulatory requirements or general competences within sectors, but it may also be an indication of the very different risk profiles associated with different businesses. Any assumption of a 'one size fits all' approach to risk management may be misplaced. A number of limiting factors are clearly in play within a significant proportion of respondents' organisations, not least the shortage of time and resources. Whilst encouraging organisations to devote more valuable time and resources to these matters is unquestionably a challenge, there are other shortcomings that can be addressed more readily. Greater awareness and understanding of available tools throughout the organisation, or recognition by senior management that there may be inherent conflicts between functional and strategic management concerns are amongst the issues highlighted in this study. Shortcomings of this kind need to be acted upon if organisations are to open the way to better risk management in purchasing and supply.

1. Introduction

Until recently purchasing and supply risk might have been regarded as nothing more than poor performance by the purchasing department, while risk management was a financial matter best left to financiers, actuaries and insurers. Not any more. The dawn of the 21st Century has produced a social and trading environment that is quite different from the 1990s.

Global sourcing and supply has become the norm for organisations around the world, and it is widely accepted that practices such as outsourcing and off-shoring can improve an organisation's competitiveness. But these practices carry downside risks as well as rewards. The self-inflicted damage to the brand reputations, incurred as a result of the indiscriminate outsourcing to organisations with poor labour relations or allegedly 'unethical' employment practices is arguably one of the best recognised sources of supply chain risk. Who is liable for the damages resulting from supply chain management failures is not always clear, but insurers are apparently increasingly mindful of supply chain matters.

The 'who dares wins' mentality is of course a feature of a competitive trading environment, but high profile corporate failures such as Enron and WorldCom in the US and companies like Royal Ahold and Parmalat in Europe have prompted regulators to draw new lines in the sand over the management and disclosure of risk. In the light of these failures in corporate governance, the post-9/11 security environment, and the experience of systemic supply chain disruptions in the UK from fuel protests or livestock diseases, supply chain risk has never been more prominent. New corporate governance and civil contingencies legislation, regulations on international trade, and the imminent introduction of British Standard for business continuity management are signs of the times. All carry explicit implications for the management of purchasing and supply. But what impact are they really having on organisations in the UK? Are they really changing the way organisations approach risk in purchasing and supply? If so, then how? And could organisations be doing better? This report aims to answer at least some of those questions.

2. The Survey

Mindful of the challenges facing its membership, The Chartered Institute of Purchasing and Supply joined together with Cranfield University to undertake a study into supply chain risk management. This report reveals the findings of a survey of CIPS members undertaken in the summer of 2005. The survey included four key themes:

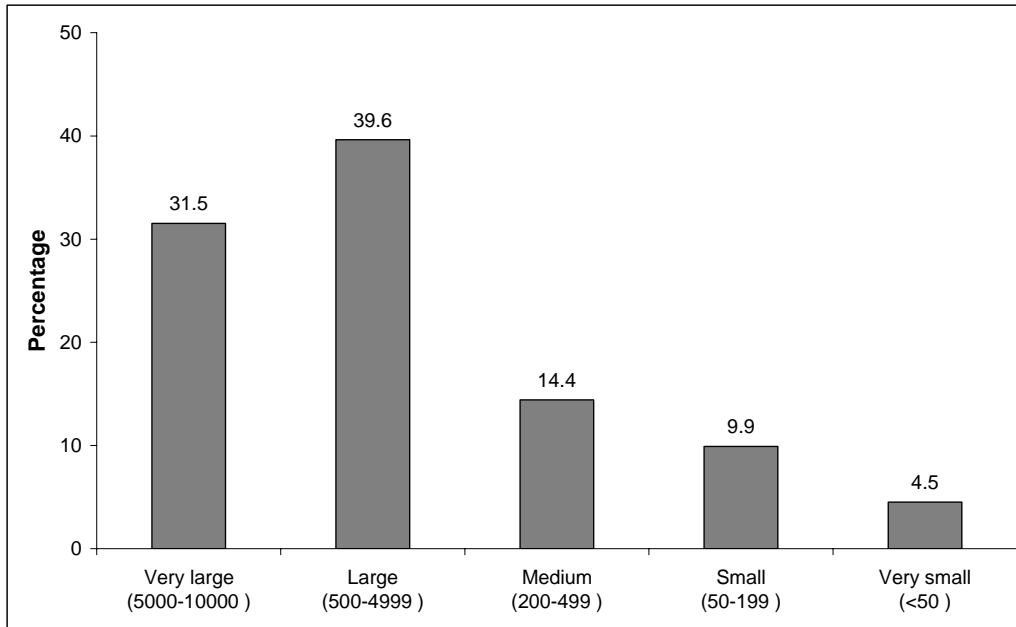
- Awareness of purchasing and supply chain related risk amongst members and their organisations
- Purchasing and supply chain related risk identification and assessment
- Methods or tools currently in use to manage these risks
- Achieving even better risk management

Building on a pilot study, distributed by hand to delegates attending the CIPS Premier Conference in London the previous October, the survey was distributed by post by CIPS to 2000 of the Institute's members, representing a cross section of commerce, industry and the public sector. The managers concerned were all registered as holding senior positions. Despite the interval between the pilot study and the main survey, overall there was no significant difference in responses between the two groups for just over 83% of the questions. Responses differed most in the number of unanswered questions – i.e. the main study received more complete questionnaires. A total of 111 usable questionnaires were returned and analysed, an overall response rate of 5.16%.

3. Who replied?

The majority of respondents, some 71%, work in large or very large organisations employing 500 people or more. Only 4.5% represented the smallest businesses with 50 or less employees (see Figure 3.1).

Figure 3.1: Size of respondents' organisations/enterprises



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In terms of sector representation, Table 3.1 shows that over a third of respondents (36%) work in the manufacturing sector. A high proportion stated 'other'. In many cases these were in the services/professional services, education and construction sectors.

Table 3.1: Sector representation

Sector	%
Manufacturing – Aerospace and defence	3.6
Manufacturing – Automotive	0.9
Manufacturing – Consumer electronics	0.9
Manufacturing – Fashion and textiles	0.9
Manufacturing – Food and drink	7.2
Manufacturing – Chemicals	3.6
Manufacturing – Other	18.9
Electricity, gas and water	3.6
Finance	6.3
National and local government	14.4
Transport and distribution	6.3
Wholesale and retail	5.4
Other	27.9

N=111

As for respondents' job titles or their roles within their organisations, Table 3.2 shows that just over 44% classified themselves as Head of Purchasing or Procurement. Almost 20% operated in purchasing or procurement at director level. Within 'Other', the majority of respondents indicated that they were at the next level down – i.e. manager level, with 9% of all respondents stating that they worked as a purchasing or procurement manager.

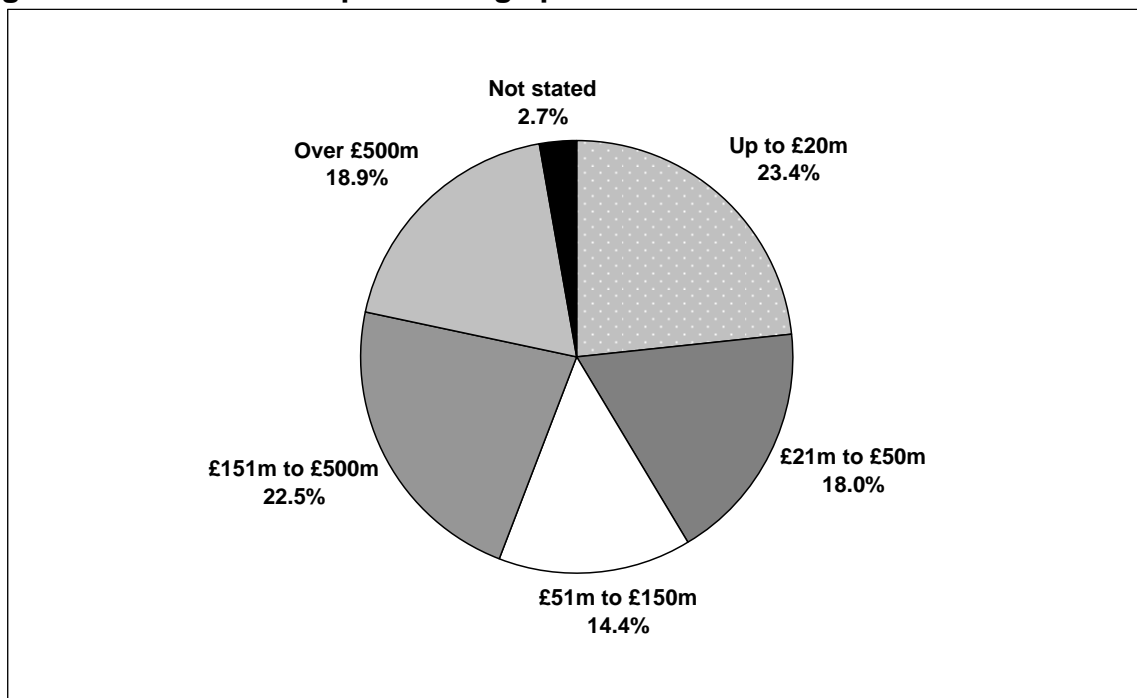
Table 3.2: Job title/role

Job title/role	%
Purchasing or Procurement Director	19.8
Manufacturing or Operations Director	0.9
Supply Chain Director	1.8
Head of Purchasing or Procurement	44.1
Head of Finance	0.9
Head of Manufacturing or Operations	0.9
Other	31.5

N=111

Total annual purchasing spend ranged from £1.5m to £20bn. Overall, 41.4% of respondents reported that the total annual purchasing spend for their organisation was up to £50m (see Figure 3.2). On the other hand, exactly the same proportion stated that their organisation's annual purchasing spend was over £150m. Not surprisingly the larger the organisation, the greater the annual spend.

Figure 3.2: Total annual purchasing spend



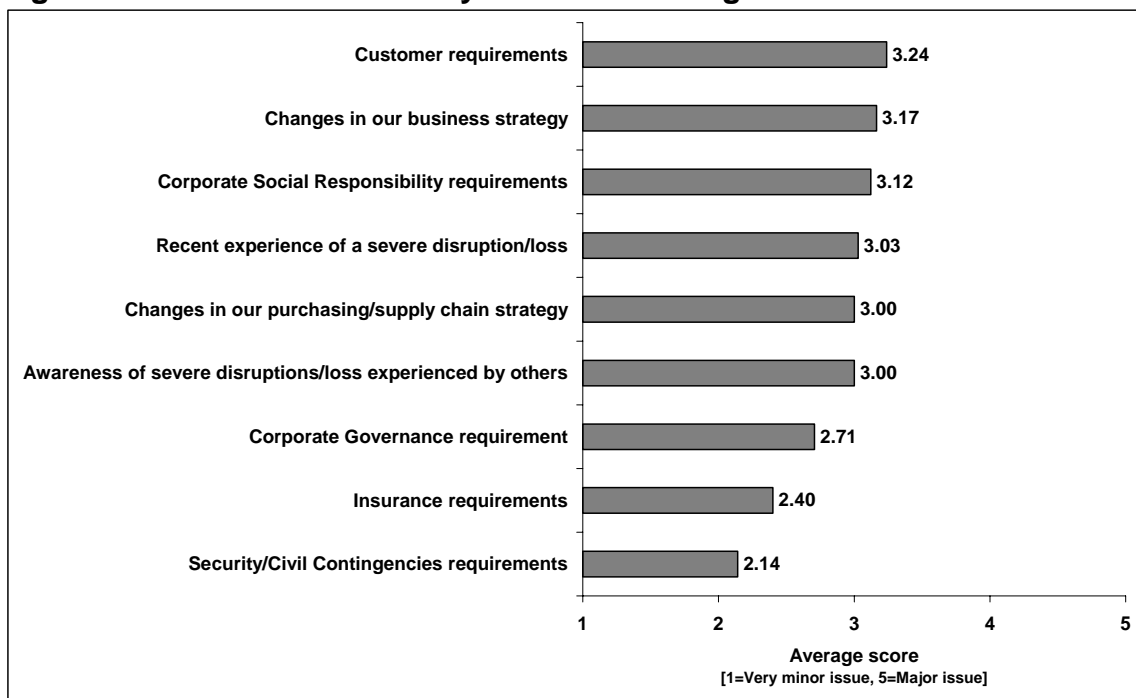
4. Awareness of purchasing and supply chain-related risk

Having established the profile of respondents, the survey began with a section that looked at the relative importance of a range of well-publicised factors. It included some factors which might be considered to be internal and some external to the organisation that may have influenced overall awareness of supply chain risk. Respondents were asked to rate each on a scale of 1 to 5 (where 1 = very minor issue and 5 = major issue).

4.1 Cross-sector analysis of influencing factors

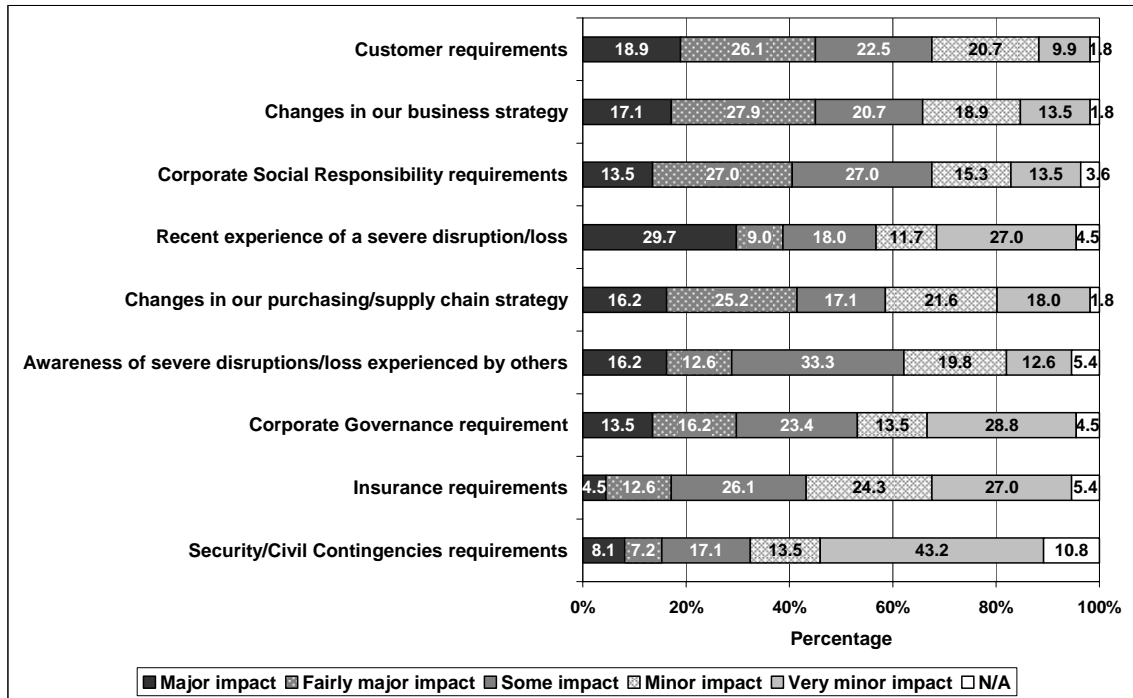
Despite the headline grabbing post-9/11 emphasis on security, this study shows that security and civil contingencies have had the least overall impact of any of the factors listed. Insurance requirements were also revealed to have had a minor impact overall. In fact, cross-sector analysis (taking mean averages) shows that customer requirements emerged overall as the strongest driver, slightly ahead of changes in business strategy (see Figure 4.1). Across the board it seems that most of the factors listed had only a moderate effect on respondents' organisations. However more in depth analysis paints a different picture. Figure 4.1a shows that each of the factors emerged as major issues for some organisations. For example, almost 30% of respondents identified recent experience of severe disruptions as a major influencer when it came to risk awareness in purchasing and supply (Figure 4.1b).

Figure 4.1a: Cross-sector analysis of influencing factors



N=111

Figure 4.1b: Influencing factors - cross sector frequency analysis



4.2 The most influential factor(s)?

Respondents were also asked to describe what they believed to be the single most important factor influencing awareness of purchasing and supply risk within their own organisations. A full listing of their replies is presented in Appendix 1.

Customer requirements had emerged as the overall front runner when it came to raising risk awareness. Some of the respondents who rated it as a major issue and the most influential factor in raising their own awareness gave the following illustrations - one concerned with spreading financial risk back through the chain, the other mindful of the life and death consequences of an operational failure.

“Our customers pass significant project risk to us and we look at where (some of) this should be passed to our suppliers” – Construction Company

“Customers are health professionals at front-line making life or death choices” - Health Sector Organisation

Regarding the impact of changes in business strategy, it is worth noting that respondents who rated this as a major factor also highlighted other (potentially) contributory factors, notably the desire to get better service from suppliers:

“Business strategy has changed to obtain better service levels by our

suppliers” – Transport Company

“Tough retail trading conditions have forced a decision to buy smaller quantities and push suppliers to be more responsive” – Clothing retailer

For others it was the consequences of strategic change that raised awareness of supply chain risk and how the organisations dealt with it:

“The division was sold from one company to another and the integration of systems/policies/procedures has caused many supply problems”- Manufacturer

“Changed from anarchy to a structured approach” – Airline

4.3: Influencing factors by sector

When responses are categorised into broad sector grouping, a more complex picture with some more distinct differences between sectors begins to emerge (see Figure 4.3 and Table 4.3).

Figure 4.3: Influencing factors by sector

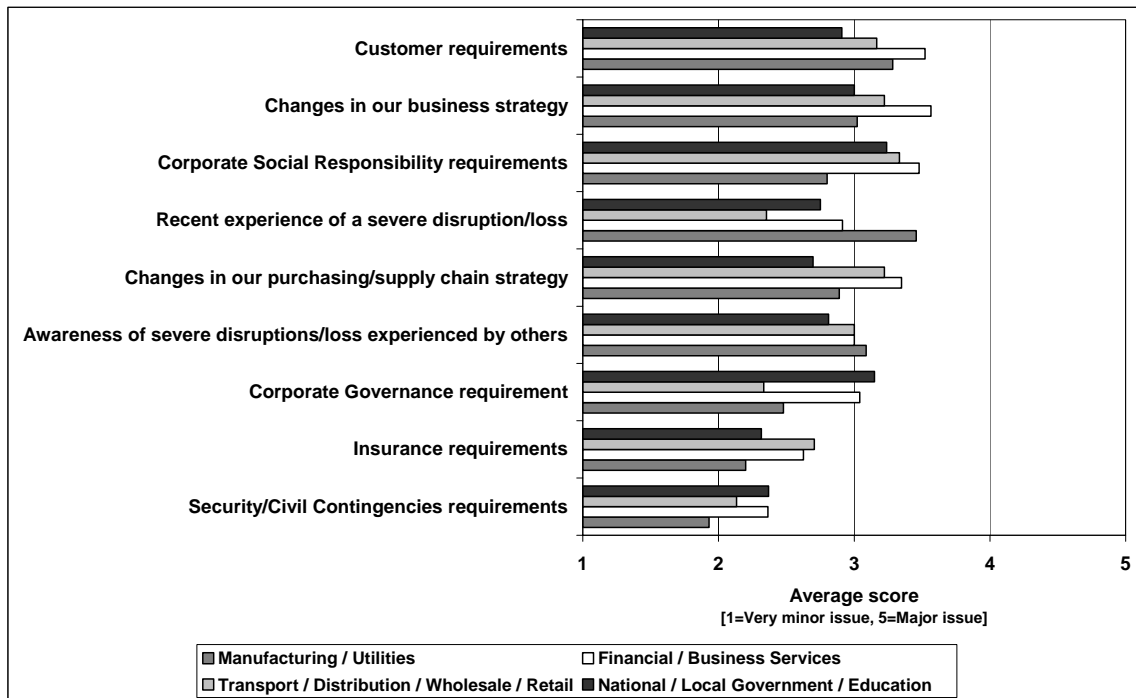


Table 4.3: Influencing factors by sector

Influencing factor	Sector (Averages)			
	Manufacturing / Utilities	Financial / Business Services	Transport / Distribution / Wholesale / Retail	National / Local Government / Education
Recent experience of a severe disruption/loss	3.46	2.91	2.35	2.75
Awareness of severe disruptions/loss experienced by others	3.09	3.00	3.00	2.81
Changes in our purchasing/supply chain strategy	2.89	3.35	3.22	2.70
Changes in our business strategy	3.02	3.57	3.22	3.00
Customer requirements	3.28	3.52	3.17	2.91
Insurance requirements	2.20	2.63	2.71	2.32
Corporate Governance requirement	2.48	3.04	2.33	3.15
Corporate Social Responsibility requirements	2.80	3.48	3.33	3.24
Security/Civil Contingencies requirements	1.93	2.36	2.13	2.37

For the financial and other business services sectors, changes in business strategy are still the strongest overall influencer (3.57), fractionally ahead of customer requirements (3.52). Curiously, even though respondents score changes in business strategy very highly as an influencer, these service providers tended to go on to describe other issues as primary drivers.

“All brand impacts must be managed” – Financial Services Company

“Customer requirements dictate reactive rather than proactive steps”.- Facilities Management Provider

“CSR and environmental procurement policy implemented and now a key component of supplier selection process” –Financial Services Company

Across the transport, distribution and retail businesses grouping, corporate social responsibility leads (3.33). The same is true for the public sector (3.24), where some managers were taking action:

“Extension of contractor pre-qualification - development of purchase policy with regard to ethical operations” – Parts Distribution Company

“Developing a questionnaire for suppliers to fill and including within existing tender documents” – Higher Education

Finally, the largest contingent in our survey – manufacturing industry (taken together with the small number of utilities) - reports recent experiences of a severe disruption/loss as the strongest influence on awareness of purchasing and supply chain risk (3.46).

“Bad supply management has resulted in our major outsourced supplier not giving us production for 2 months” – Defence Industry Manufacturer

“Major performance failure of a contractor has prevented the generation of electricity at one of our power stations” – Utility Company

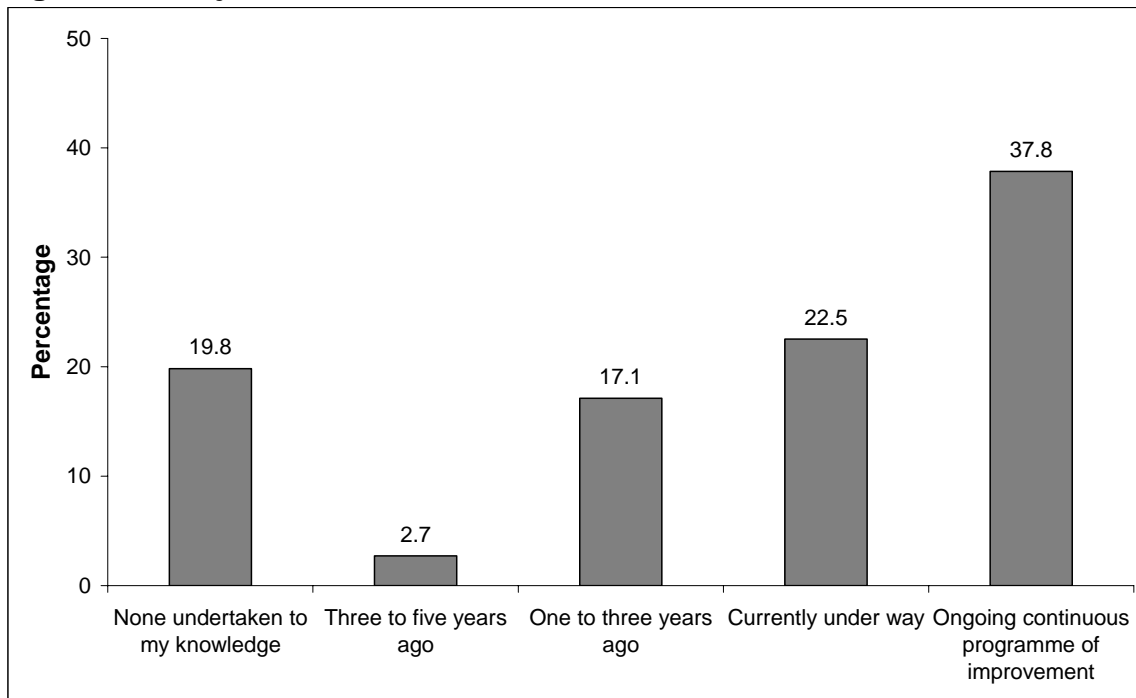
5. Reviews and risk identification

This section reports on the findings with regard to policies and procedures for identifying purchasing and supply chain-related risk.

5.1 Major reviews

First, the managers were asked when their organisations last undertook a major review of purchasing and supply chain related risk. Just over 60% indicated that reviews were part of an on-going programme of improvement or that a major review was currently underway (see Figure 5.1).

Figure 5.1: Major review



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However, nearly one in five respondents reported that no major review of risk had ever been undertaken to their knowledge. Analysis of sector grouping showed that the public sector fared worst in this respect (see Table 5.1), though astonishingly more than 20% of managers in manufacturing also reported no knowledge of a major review of purchasing and supply chain related risk ever being undertaken by their companies.

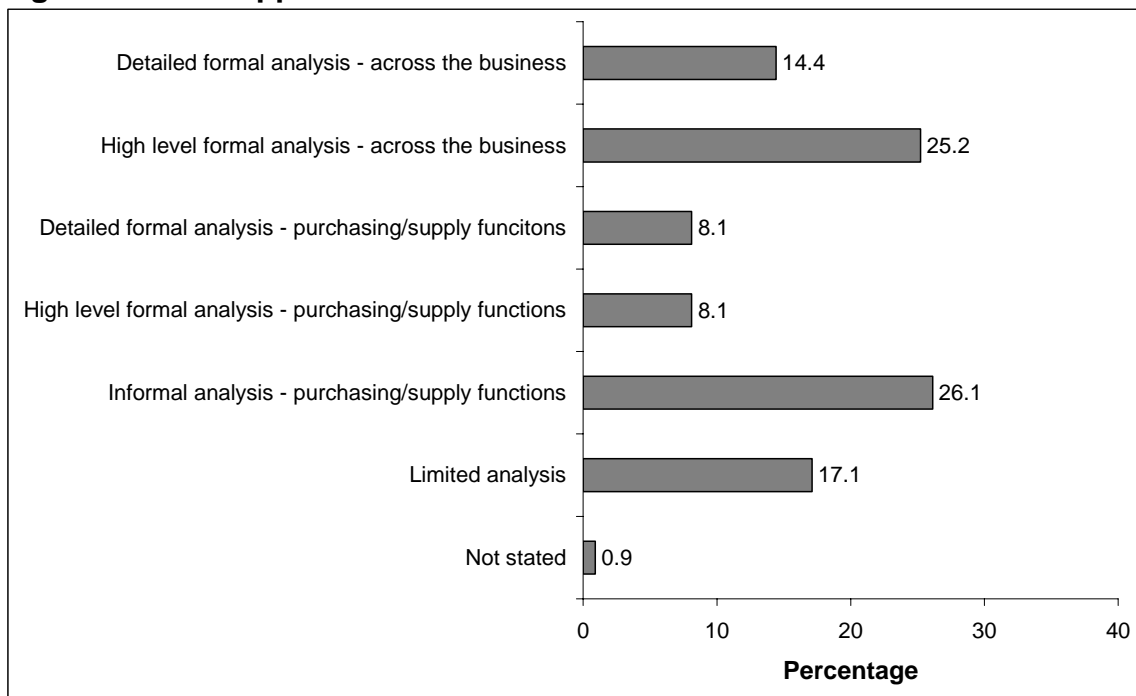
Table 5.1: Major review by sector

Last undertook a major review	Sector (%)			
	Manufacturing / Utilities	Financial / Business Services	Transport / Distribution / Wholesale / Retail	National / Local Government / Education
None undertaken to my knowledge	21.7	12.5	16.7	26.1
Three to five years ago			5.6	8.7
One to three years ago	17.4	20.8	16.7	13.0
Currently under way	17.4	33.3	16.7	26.1
Ongoing continuous programme of improvement	43.5	33.3	44.4	26.1

5.2 Approaches to purchasing & supply chain risk identification

Next, respondents were asked to indicate the approach that best describes how purchasing and supply chain-related risks are identified and dealt with in their organisation. The responses highlight a dichotomy. Just over 25% of organisations undertake a high level formal analysis with monitoring, management or mitigation actions agreed and built into future operating policies or contingency planning across the business. A fractionally higher proportion (26.1%) undertake informal analysis with discretionary monitoring, management or mitigation undertaken for the purchasing supply functions only (see Figure 5.2).

Figure 5.2: The approach



Again, sector groupings indicate different tendencies between sectors. Manufacturers being more inclined to rely on analysis within the purchasing and supply functions, with a third opting for informal risk identification procedures. In contrast financial & business service organisations, along with the transport distribution and retail sectors were more inclined to use formal, business-wide approaches to risk identification. The public sector is fairly evenly split between the two (see table 5.2).

Table 5.2: Approaches to risk identification

How purchasing and supply chain-related risks are identified	Sector (%)			
	Manufacturing / Utilities	Financial / Business Services	Transport / Distribution / Wholesale / Retail	National / Local Government / Education
Detailed formal analysis - across the business	10.9	16.7	23.5	13.0
High level formal analysis - across the business	19.6	33.3	29.4	26.1
Detailed formal analysis – purchasing/supply functions	8.7	8.3	5.9	8.7
High level formal analysis – purchasing/supply functions	6.5	8.3	11.8	8.7
Informal analysis - purchasing/supply functions	32.6	20.8	17.6	26.1
Limited analysis	21.7	12.5	11.8	17.4

6. Extent of purchasing & supply chain risk identification and assessment

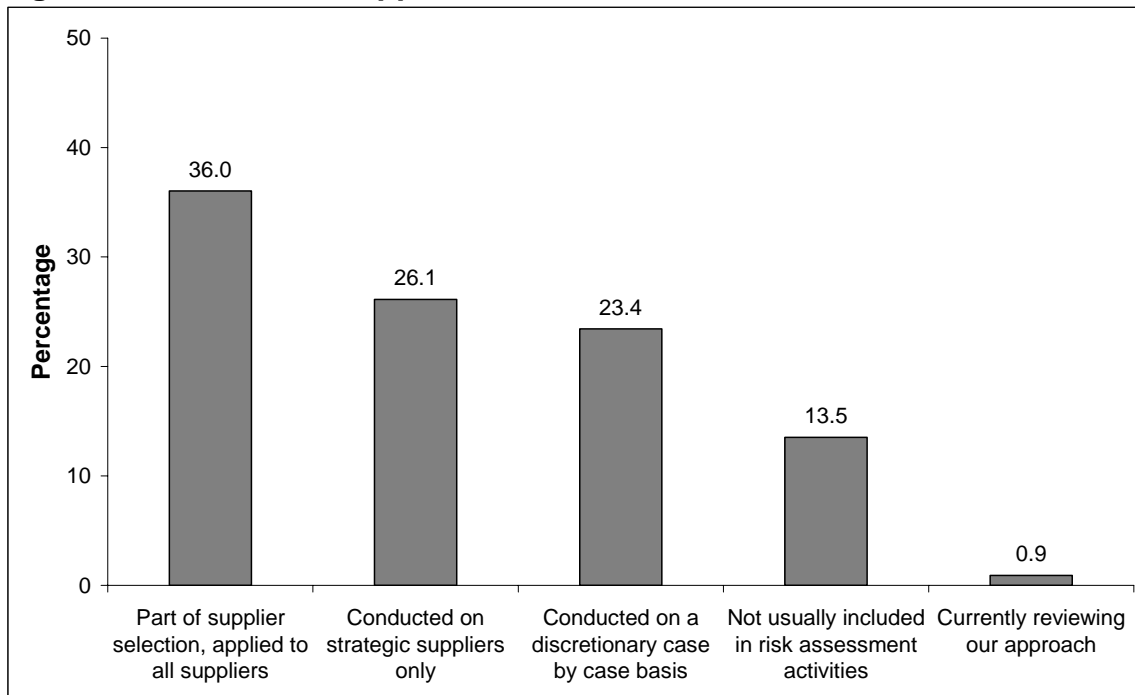
This section reports on the extent of purchasing and supply chain-related risk identification and assessment undertaken by organisations in terms of:

- Immediate supplier base
- Supplier selection and monitoring
- Supply chain performance indicators
- Potential disruptive events

6.1 Risk assessments of first tier suppliers

When asked to indicate the approach that best describes their organisations' policy towards risk assessments in respect of their immediate supplier base, over a third reported that risk assessment is part of routine supplier selection activities, and that it is applied to all suppliers (see Figure 6.1). A further 26% stated that risk assessments are conducted on strategic suppliers (highest value or volume inputs) only. Slightly over 23% of respondents indicated that risk assessments on suppliers are conducted on a discretionary case by case basis.

Figure 6.1: Immediate supplier base



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Between sector groupings the picture is equally diverse, though Table 6.1 shows that the transport, distribution and retail organisations are the ones most likely to require risk assessments for all first tier suppliers as part of their selection process. In contrast, financial and business services are more likely than other groups to overlook immediate suppliers in risk assessments.

Table 6.1: Risk assessment of immediate supplier base

Organisation's policy towards risks assessments of immediate supplier base	Sector (%)			
	Manufacturing / Utilities	Financial / Business Services	Transport / Distribution / Wholesale / Retail	National / Local Government / Education
Part of supplier selection, applied to all suppliers	32.6	37.5	44.4	34.8
Conducted on strategic suppliers only	23.9	29.2	33.3	21.7
Conducted on a discretionary case by case basis	30.4	12.5	16.7	26.1
Not usually included in risk assessment activities	13.0	20.8	5.6	13.0
Other	0.0	0.0	0.0	4.3

6.2 Supplier selection and monitoring – looking upstream

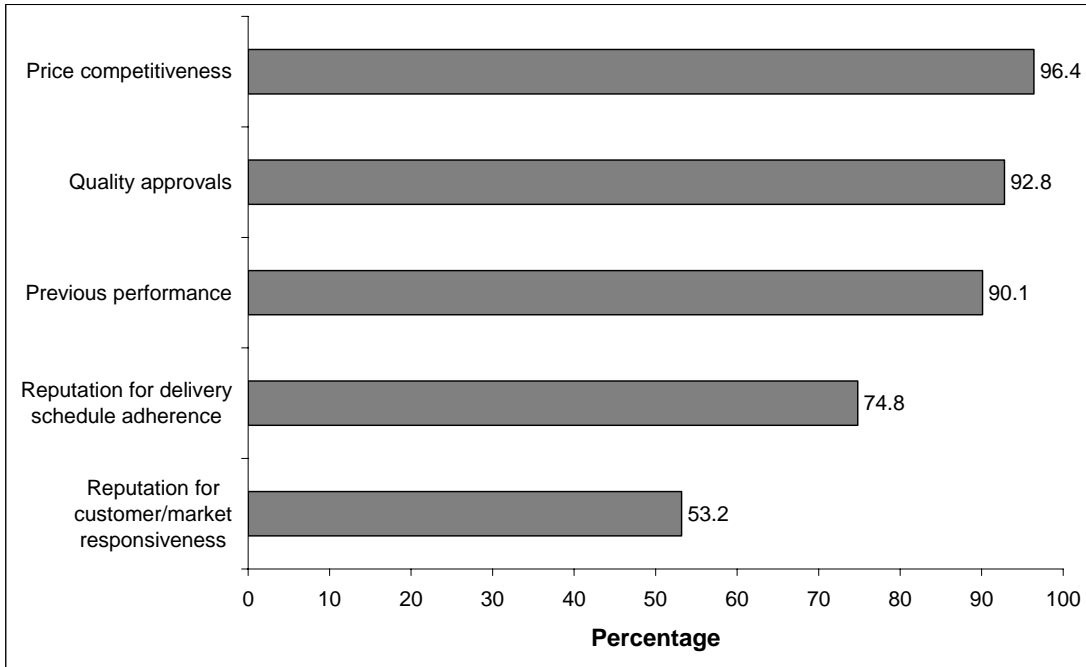
The following series of charts (Figures 6.2a to 6.2d) summarise the criteria that are routinely included in supplier selection and monitoring, beginning with basic performance qualifiers (Figure 6.2a). The findings show that price competitiveness, quality approvals and previous performance are included in supplier selection and monitoring in well over 90% of cases.

Table 6.2 gives a more detailed sector by sector profile. It shows that price competitiveness was present in 100% of public sector supplier selection and monitoring programmes, whilst quality approvals, reputation for delivery schedule adherence, previous performance were there in 87% of public sector cases. In financial and business services, previous performance was equally likely to feature as price competitiveness (95.8%). Quality approvals came in third for this group at 87.5%. For manufacturing/utilities 96% of respondents confirmed that price competitiveness was included, only quality approvals were more prevalent (97.8%) For transport/distribution/retail companies price and quality approvals were both present in 94.4% of instances, followed by previous performance at 83.3%.

Table 6.2: Supplier selection and monitoring criteria – sector analysis

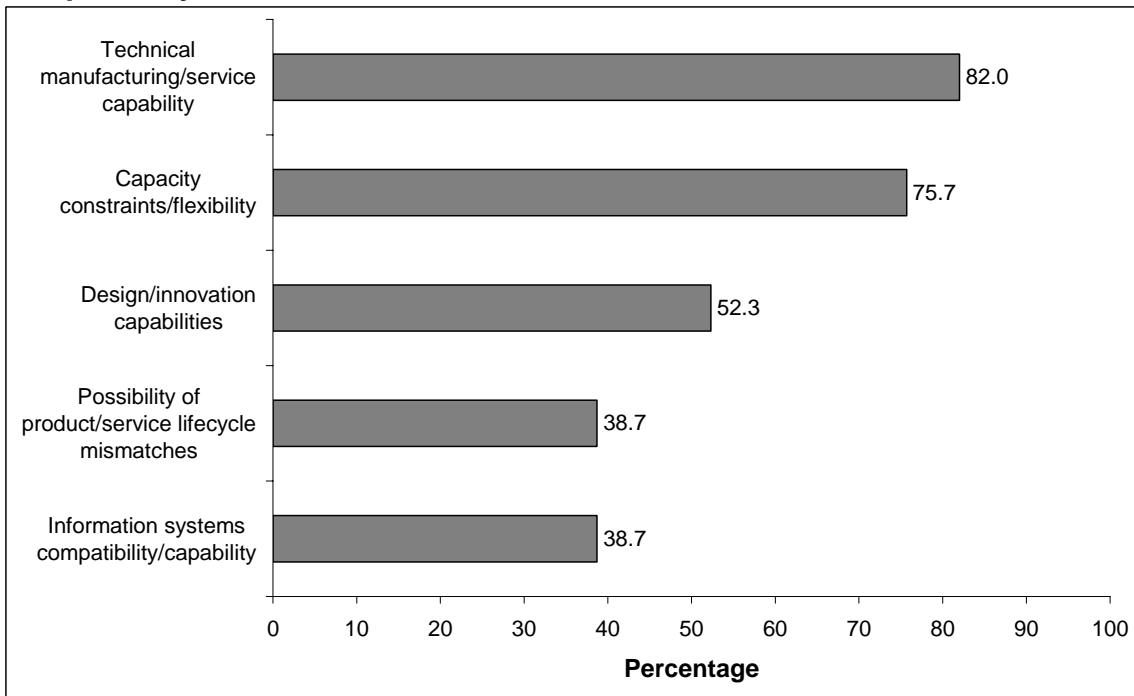
Supplier selection and monitoring	Sector (%)			
	Manufacturing / Utilities	Financial / Business Services	Transport / Distribution / Wholesale / Retail	National / Local Government / Education
Basic Qualifiers				
Price competitiveness	95.7	95.8	94.4	100.0
Quality approvals	97.8	87.5	94.4	87.0
Reputation for delivery schedule adherence	80.4	58.3	66.7	87.0
Reputation for customer/market responsiveness	50.0	54.2	44.4	65.2
Previous performance	91.3	95.8	83.3	87.0
Capability, capacity & compatibility				
Capacity constraints/flexibility	87.0	54.2	72.2	78.3
Technical manufacturing/service capability	91.3	66.7	72.2	87.0
Design/innovation capabilities	58.7	41.7	50.0	52.2
Information systems compatibility/capability	30.4	45.8	33.3	52.2
Possibility of product/service lifecycle mismatches	32.6	37.5	55.6	39.1
Supplier policies & location				
Supplier's procurement policies	34.8	25.0	22.2	34.8
Supplier's risk sharing policy	32.6	33.3	16.7	30.4
Supplier's business continuity planning	41.3	45.8	33.3	34.8
Proximity of source of supply	58.7	33.3	38.9	39.1
Country of supply	50.0	45.8	27.8	26.1
Impact of supplier location on total lead times	76.1	33.3	50.0	47.8
Power, dependency & strategic direction				
Supplier's size and financial status	80.4	75.0	72.2	91.3
Percentage of order book held by your organisation	63.0	50.0	33.3	52.2
Strategic direction of supplier	67.4	37.5	55.6	39.1
Supplier's other customers	54.3	45.8	55.6	47.8
Other	10.9	25.0	5.6	4.3

Figure 6.2a: Cross-sector supplier selection and monitoring - basic performance qualifiers



Moving on to issues of capability, capacity and compatibility in supplier selection and monitoring, Figure 6.2b gives details of cross-sector findings.

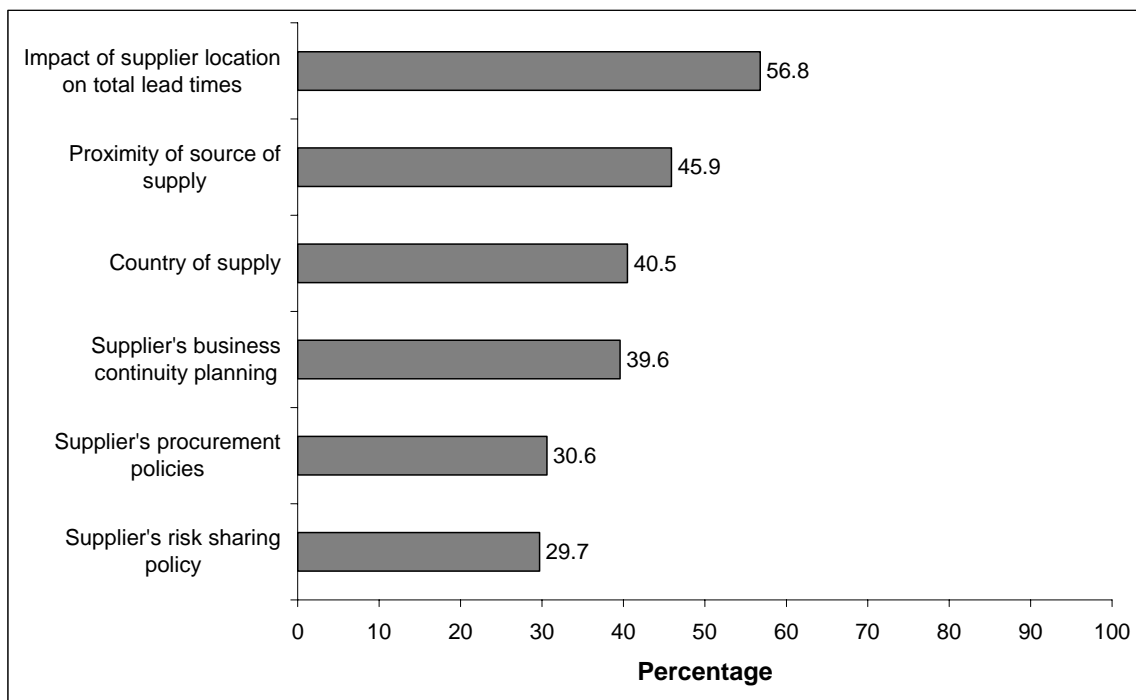
Figure 6.2b: Supplier selection and monitoring: capability, capacity and compatibility



For issues of capability, capacity and compatibility, the survey reveals that technical manufacturing / service capability and capacity constraints / flexibility are included in supplier selection and monitoring in over three quarters of cases. In all sectors technical capability is the primary concern, being present in over 91% of manufacturing/utilities; 87% of public sector cases; just over 72% of transport/distribution and retail companies; and almost 67% of financial and business service organisations. Capacity constraints followed, with around 87%, 78% 72%, and 54% respectively.

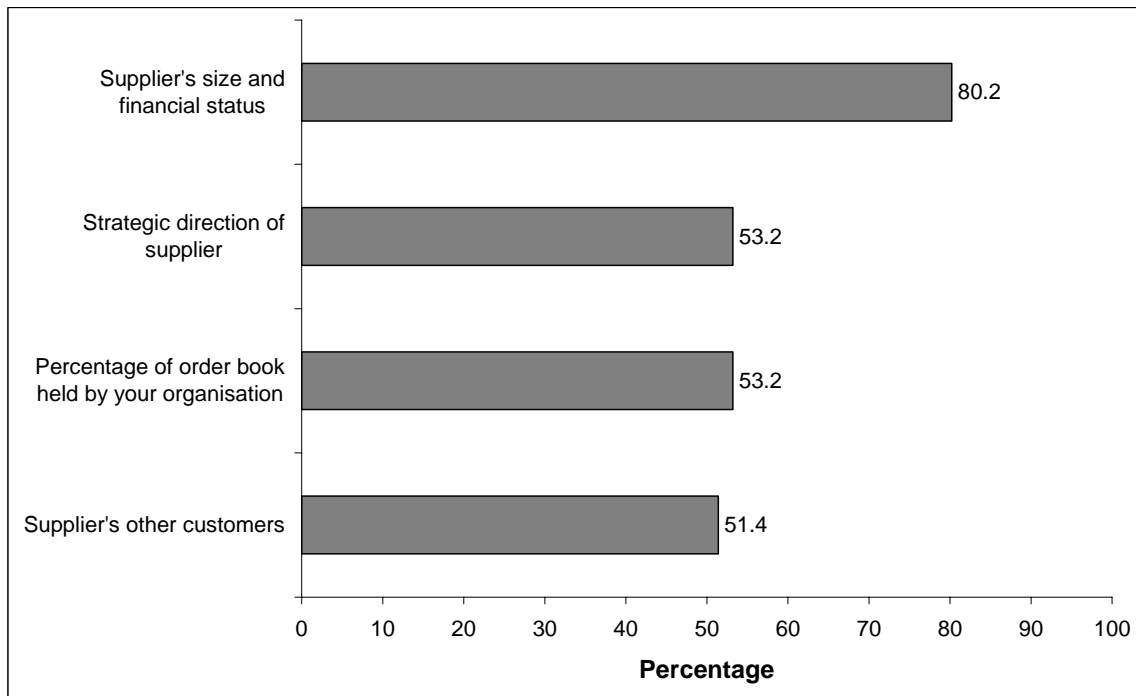
In terms of suppliers' own policies and location, these factors were amongst the least likely to be included in selection and monitoring programmes (Table 6.2c). The impact of supplier location on total lead times is routinely included in around only around 57% of cases (see Figure 6.2c), whilst risk sharing policy is likely to be included in less than a third of all selection and monitoring programmes.

Figure 6.2c: Supplier selection and monitoring- supplier policies and location



The final set of questions in this supplier selection and monitoring section related to issues of financial strength, relative power and dependency within supply chains, together with the possibility of divergent business strategies. The results show that supplier's size and financial status is included in over 80% of cases (see Figure 6.2d), though only around half of respondents' organisations appeared to be so interested in who else was doing business with their suppliers.

Figure 6.2d: Supplier selection and monitoring



6.3 Supply chain performance indicators – internal and downstream

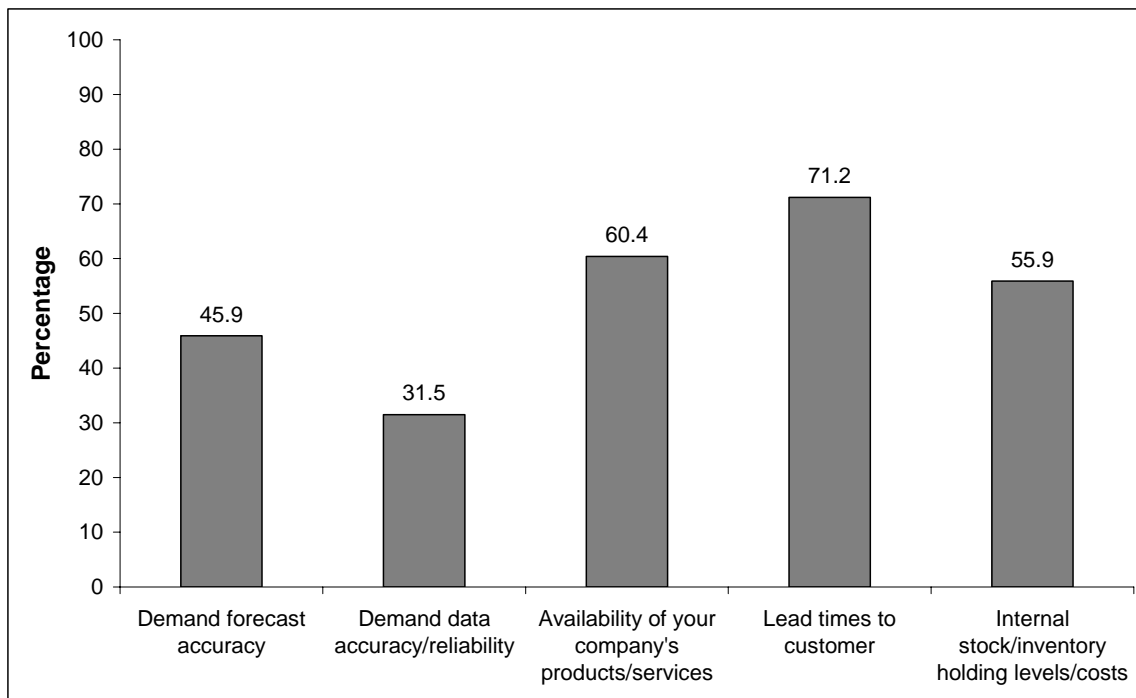
This section focused on internal and downstream indicators. Respondents were asked to indicate which of the supply chain performance indicators (highlighted in Figure 6.3 below) are included in routine monitoring by (or shared with) the purchasing and supply function(s).

In nearly three in four cases (71.2%) respondents stated that lead times to customer is included in routine monitoring. Just over 60% also indicated that availability of company products/services was also routinely included. As ever, the devil is in the detail and marked differences appear between the sectors (Table 6.3). Lead time to customer featured in routine monitoring in 95% of public sector organisations, over 81% of the manufacturing businesses, nearly 65% of the transport, retail & distribution sector and under 64% of financial/business services.

Table 6.3: Supply chain performance indicators – internal and downstream by sector

Supply chain performance indicators	Sector (%)			
	Manufacturing / Utilities	Financial / Business Services	Transport / Distribution / Wholesale / Retail	National / Local Government / Education
Demand forecast accuracy	53.5	50.0	70.6	25.0
Demand data accuracy/reliability	46.5	31.8	23.5	20.0
Availability of your company's products/services	67.4	54.5	82.4	60.0
Lead times to customer	81.4	63.6	64.7	95.0
Internal stock/inventory holding levels/costs	72.1	45.5	76.5	40.0
Other	7.0	18.2	5.9	0.0

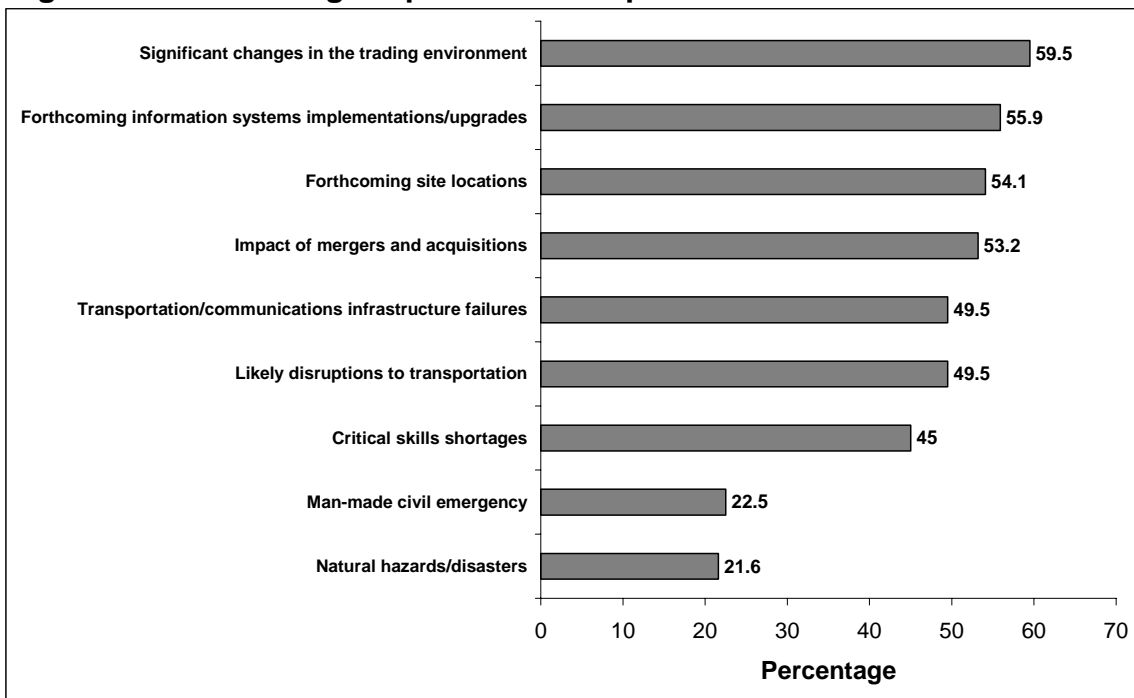
Figure 6.3: Supply chain performance indicators – internal and downstream



6.4 Monitoring for potentially disruptive events

Respondents were asked to indicate whether routine monitoring for potentially disruptive events took place within (or was shared with) the purchasing and supply functions in their organisation. A number of scenarios were put forward, ranging from IT upgrades, mergers and acquisitions through to natural disasters and terrorist attacks. Figure 6.4 reveals which were likely to feature in routine monitoring across the sectors. Significant changes in the trading environment topped the list, being routinely monitored in 59.5% of respondent's organisations. Again civil emergencies or natural hazards/disasters came in at the bottom, with only around 22% of organisations watching out for these.

Figure 6.4: Monitoring for potential disruptive events



N=111

Table 6.4 again reveals quite different perspectives between sectors. Not surprisingly 80% of the transport/distribution and retail organisations routinely monitored for transport and communications and infrastructure failures - unlike half of all manufacturing/utilities and financial/business service firms. Only just over 40% of public sector organisations had infrastructure failures on the radar. Public sector organisations were much more likely to be vigilant when it came to disruptions from IT upgrades and new systems implementation. 38% of them also routinely monitored for disruptions from man-made civil emergencies, only just over 18% of manufacturing/utilities did the same. The manufacturers were most sensitive to the potential impacts of mergers and acquisitions, possibly resulting in consolidation or

restructuring of their industry (68.2%). For the financial/business services companies it was political and economic changes in the macro-environment that were most likely to feature (68.2%). Though the transport/distribution and retail cohort were even more likely to be monitoring these macro-environmental factors (73.3%)

Table 6.4: Monitoring for potentially disruptive events – by sector

Potentially disruptive events	Sector (%)			
	Manufacturing / Utilities	Financial / Business Services	Transport / Distribution / Wholesale / Retail	National / Local Government / Education
Forthcoming site relocations (yours, suppliers or customers)	65.9	54.5	33.3	66.7
Forthcoming information systems implementations/upgrades (supplier/internal/customer)	54.5	63.6	53.3	76.2
Impact of mergers and acquisitions (consolidation/restructuring of your industry)	68.2	40.9	53.3	57.1
Likely disruptions to transportation	61.4	50.0	53.3	42.9
Transportation/communications infrastructure failure	50.0	54.5	80.0	42.9
Critical skills shortages (e.g. engineers, drivers)	52.3	54.5	26.7	52.4
Significant changes in the trading environment (political, economic, social and technological - including legal and regulatory)	63.6	68.2	73.3	57.1
Natural hazards/disasters (metrological, geological, pathological - e.g. disease)	36.4	9.1	6.7	23.8
Man-made civil emergency (e.g. terrorist attack, nuclear incident, war etc)	18.2	27.3	20.0	38.1
Other	4.5	4.5	13.3	4.8

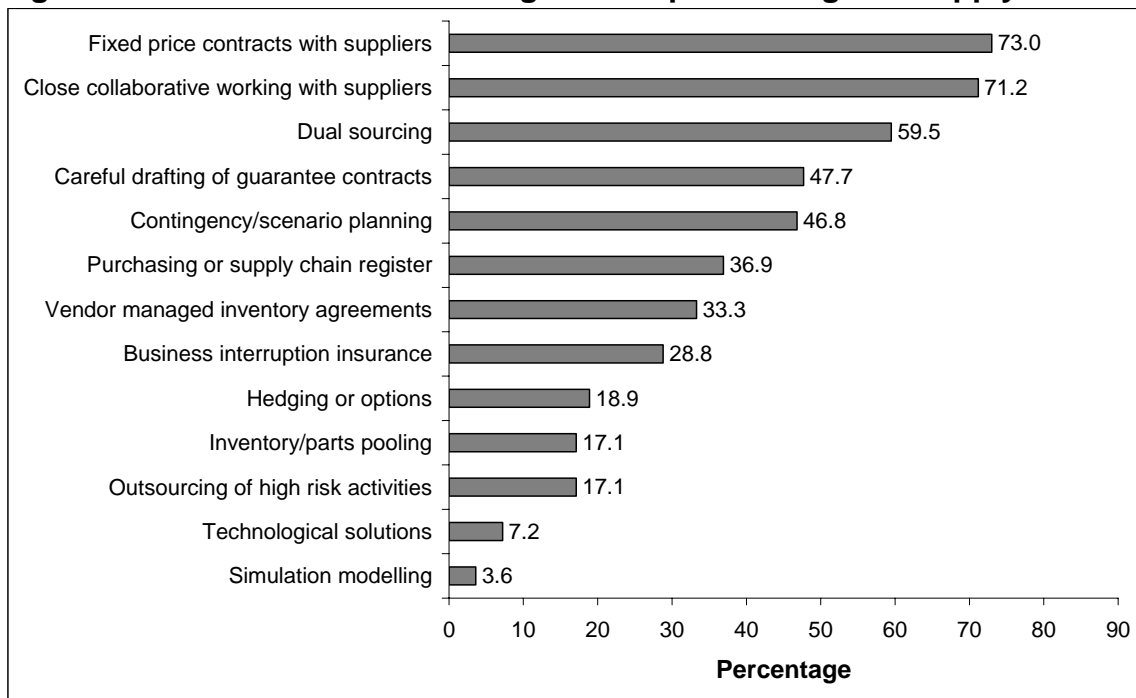
7. Purchasing and supply chain risk management methods or tools in use

This section reports on the methods or tools used by the organisations to identify, assess, manage and record supply chain-related risk.

7.1 Risk management methods used

The survey reveals that the two methods are widely used to manage purchasing and supply risk. Almost three quarters of organisations (73%) reported using fixed price contracts, nearly as many used close collaborative working with suppliers (71.2%). See Figure 7.1 for more detail of the methods and tools employed.

Figure 7.1: Methods used to manage risk in purchasing and supply



Collaborative working as a risk management approach was particularly prevalent amongst manufacturers (81.8%), but was also used by three quarters of financial/business services companies (75%) and nearly as widely used in transport/distribution and retail (72.2%). It was least likely to be seen in the public sector, but even there more than half of respondents (57.1%) reported favoured applied the approach. Fixed price contracts were in use in more than nine out of ten (91.7%) of financial/business service companies, and in 77.8% of transport/distribution and retail organisations, with 70.5% of manufacturers using them and 66.7% of the public sector organisations. In contrast, some of the most

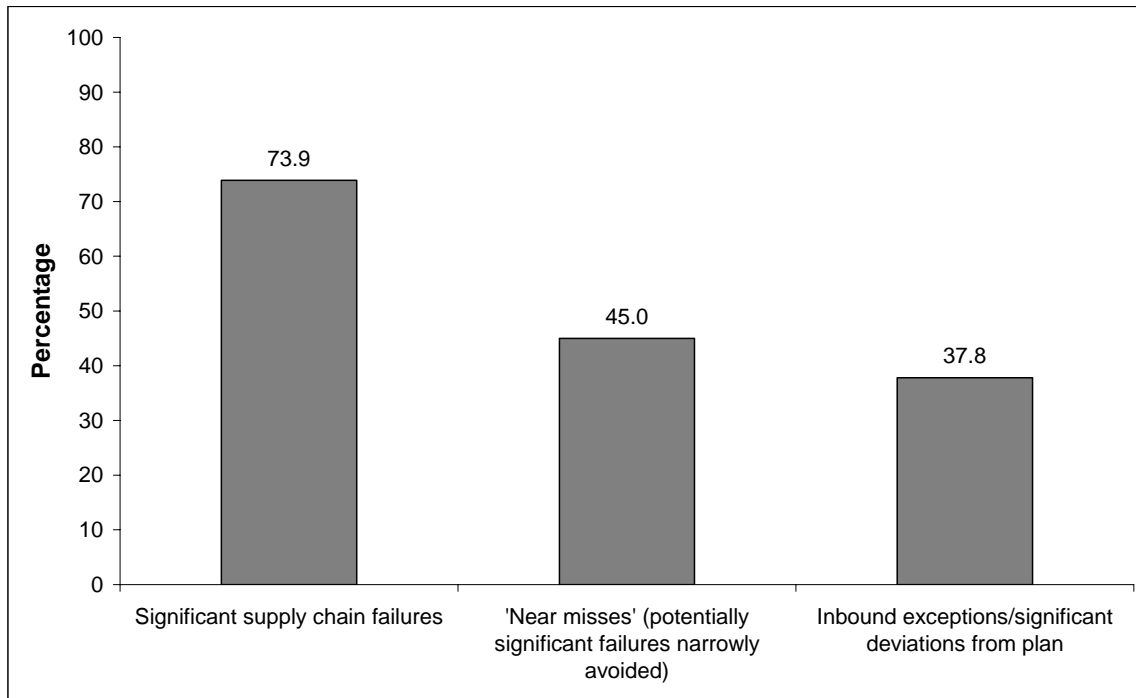
widely discussed supply chain risk management methods, including outsourcing of high risk activities, are far less widely used than scenario/contingency planning or business interruption insurance. Technological solutions and simulation modelling are rarely used. Simulation modelling is most likely to be used in the transport/distribution/retail sector (11.1%).

7.2 Risk reporting and recording

This section aimed to find out what was being recorded in terms of actual events and indicators of emergent problems. Nearly three-quarters of respondents (73.9%) indicated that significant supply chain failures were reported and recorded (see Figure 7.2). Disappointingly, only 45% recorded or reported near misses.

Over 68% of respondents from manufacturers/utilities stated that their significant deviations from plan were likely to be recorded and reported within their organisations, making them more than twice as likely as other sectors to report and record these events.

Figure 7.2: Risk indicators reported and recorded



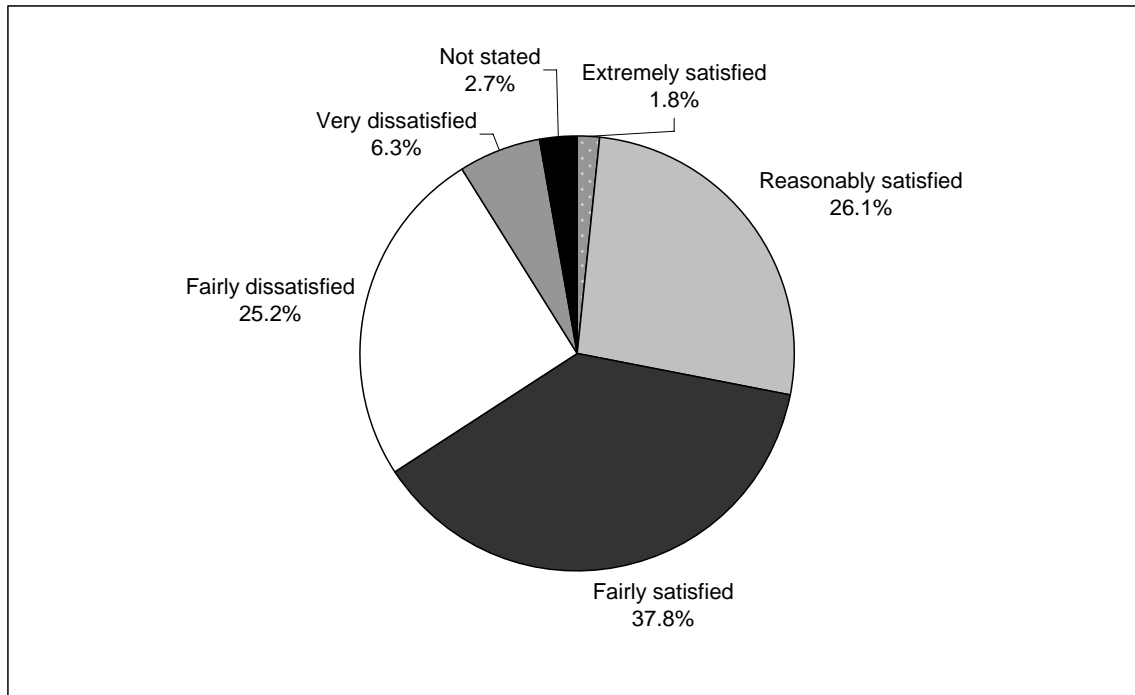
8. Achieving even better risk management

The final section of this report looks at whether respondents were satisfied with purchasing and supply related risk management within their organisations, and whether there is an appetite for better, more effective, risk management within the discipline.

8.1 Level of satisfaction

Figure 8.1 shows that the majority (65.7%) of respondents were satisfied with risk management policies and practices currently in place within the organisation, but a third of respondents were not. Financial/business services were most unhappy with 45.8% of this cohort expressing dissatisfaction with current provision. In contrast transport/distribution/retail organisations were most likely to be satisfied with their current provision, only just over 11% were (fairly) dissatisfied. Around a third of manufacturers (31.8%) were dissatisfied, as were a similar proportion of public sector respondents (36.4%).

Figure 8.1: Level of satisfaction

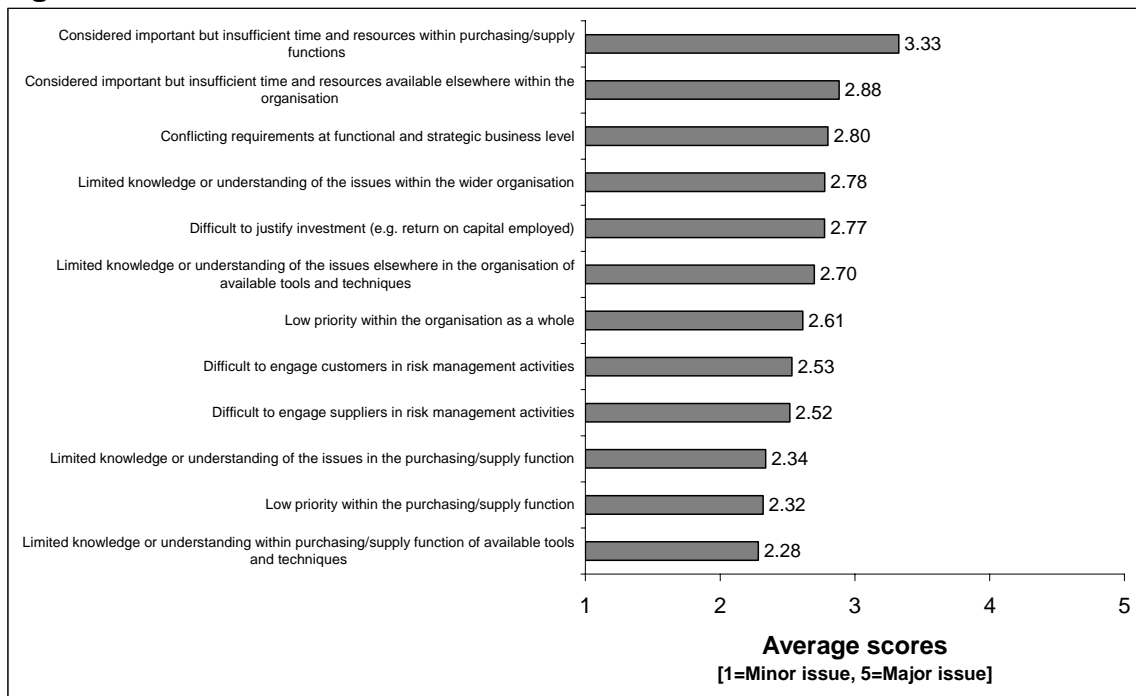


N=111

8.2 Effectiveness

Respondents were asked to indicate to what degree the issues highlighted in Figure 8.2 limited the effectiveness of purchasing and supply chain risk management within the organisation. Overall, little stood out, with only the issue of insufficient time and resources within the purchasing/supply functions rising above the average score (Figure 8.2). But behind the aggregate figures, more in-depth analysis revealed that over 41% of respondents had identified insufficient time and resources within purchasing and supply as a fairly major or major issue, limiting the effectiveness of supply chain risk management in their organisations. A third of all respondents also identified lack of time and resources elsewhere in the organisation for as a major or fairly major factor. In fact there were several issues that emerged as significant barriers to better risk management for a sizable minority of organisations. For example, 27% of respondents felt that limited knowledge or understanding of the available tools and techniques by colleagues elsewhere within the organisation was a significant hurdle. A slightly higher proportion (27.9%) indicated that conflicting requirements at functional and strategic business level was major or fairly major factor and that difficulty in justifying investment in risk management (in terms of return on capital employed) also played a significant part¹. Whilst around a quarter of respondents (24.3%) felt that purchasing and supply risk management was a low priority for their organisation², and a similar proportion felt that limited knowledge or understanding of the issues within the wider organisation was a major or fairly major barrier (23.4%).

Figure 8.2: Effectiveness



¹ The main study reflected a greater spread of responses than the initial pilot, though this may reflect the small numbers in the pilot study.

² This is the issue where responses to the pilot and main study showed the greatest variance with conference delegates more likely to see this as a significant issue than the wider survey population.

9. Other issues

Last of all, respondents were given the opportunity to add any additional thoughts as to what impacts, inhibits or improves the management of purchasing and supply chain-related risk. Fourteen respondents' commented and their responses are presented below:

"Answers are directly related to high value contracts with high strategic content. In a decentralised procurements system it isn't possible to assess other areas completely" [Higher education].

"Market is changing so fast it is difficult to keep up with them" [Food manufacturing company]

"General lack of understanding at board level to the impact and contribution of purchasing to company strategy" [Homecare products company]

"Basically we have insufficient resources to adequately address this area". [Motor retailing & service]

"Better understanding of freight management" [Multi-media company].

"Difficulty in buy in from user departments internally". [Port company]

"Fundamentally understood within management structure" [Chemical company].

"In my industry there are a small number of suppliers selling specialised products. Most are good. However there is a great reliance on these few and their good performance"
[Manufacturing company]

"Lack of appreciation at the top of risk management issues and assumptions about the operating environment" [Higher education]

"Lack of time, manufacturing is at the moment very fire-fighting through the integration, and some things have been put to the bottom of the list" [Building products manufacturer].

"Local government, i.e. town/parish councils look at 'sector' issues and good procurement needs much more sector promotion" [Local government]

"Main issue: resource/budget/availability in project environment. Secondary - process knowledge needs improvement" [Manufacturer of transport vehicles]

"The bureaucracy of EU procurement law and the prescriptive nature of standing orders"
[Local government]

"Time to market pressures general attitude/appetite for risk" [Investment bank]

10. Conclusions

The findings of this survey suggest that although high-profile events such as epic corporate governance scandals, the impact of international terrorism, and civil contingencies requirements have captured the headlines, they appear to have had very little impact on awareness of risk management in purchasing and supply professionals. The same appears to be true of insurance requirements. Instead it is issues connected with the much more mundane 'business of business' that emerge overall as the stronger drivers. The commercial necessities of customer requirements and strategic change, followed by corporate social responsibility concerns, were found to hold the greatest sway. However it is worth noting that although a number of other factors listed appeared overall to have little impact on awareness of risk in purchasing and supply. The survey revealed that several of the factors did represent a very significant issue to a minority of the organisations surveyed. The most frequently reported major influencer of supply chain risk was actually recent experience of severe disruption or loss. Around 30% of all those surveyed rated this as a '5 out of 5' for magnitude. For manufacturing businesses (the single largest group to respond to this study) experience of recent disruptions to supply figured more strongly than all other concerns. For other sectors this was not the case.

In fact one theme that emerges throughout this study is that that when it comes to risk management in purchasing and supply, one size is unlikely to fit all. There are quite significant differences between organisations and sectors. The frequency with which major risk reviews are conducted, the wider scope of supplier selection and monitoring programmes, through to the types of potentially disruptive scenario organisations routinely monitor for, all vary between organisations and between sectors. These may reflect inherent differences in risk profiles between sectors.

Certain, arguably predictable, commonalities are present in supply chain risk management methods. For example, the tried and trusted supplier management 'qualifiers' including price competitiveness, quality assurance and delivery schedule adherence or previous performance, are almost universally applied. Similarly, fixed price contracts were the mostly widely used risk management tools, whilst close collaborative relationships with suppliers were also widely employed, particularly in manufacturing businesses. However, looking beyond these 'old chestnuts', this survey reveals a picture of great diversity.

In terms of whether there is an appetite for more effective risk management in purchasing and supply, the initial response *could* be 'probably not', as on average, the majority of respondents seemed broadly satisfied with current approaches to risk management. However a sizable minority of respondents are clearly not happy with their current provision. Could most do better? The answer is probably yes. This survey found that a whole range of factors create real barriers to improvement for a

significant minority of organisations. To dismiss these as insignificant to those concerned would be to sweep their difficulties under the carpet. This study therefore concludes that better risk management in purchasing and supply starts by recognising that there is diversity between sectors. Some 'best practice' approaches to supply chain risk management may be universal, but others may not. Moreover a number of limiting factors are in play within a significant proportion of respondents' organisations, not least the shortage of time and resources. Whilst encouraging organisations to devote more valuable time and resources to these matters is unquestionably a challenge, there are other shortcomings that can be addressed more readily. Greater awareness and understanding of available tools throughout the organisation, or recognition by senior management that there may be inherent conflicts between functional and strategic management concerns are amongst the issues highlighted in this study. Shortcomings of this kind need to be acted upon if organisations are to open the way to better risk management in purchasing and supply.

Appendix 1:

The Most Influential Factor

Most influential factor
A realisation of risks of failure of supply chains and a new social responsibility environment has caused a new interest in supply chain issues
All brand impacts must be managed
Any changes in requirements and strategy will always have a bearing on risk and should be assessed as a matter of course
Bad supply management has resulted in our major outsourced supplier not giving us production for 2 months!
Before the new [Football] stadium orders were one-off/random now currently doing full contracts, cleaning, construction
Better co-operation across functions to qualify new sources, to avoid repetition
Business strategy has changed to obtain better service levels by our suppliers
Change in policies post acquisition very difficult to implement new procedures
Change of suppliers required
Changed from anarchy to a structured approach
Client demand
Client policy demands a reactive rather than proactive, e.g. Shell, BP, CND, etc
Closer supply monitoring and stock control
Contracts better authorised/checked by purchasing and legal. Purchasing realised as important
Corporate governance has required some activities to be more clearly defined, documented and signed off
Corporate governance - procurement manager attends audit - risk combatable - sub committee of board
CSR and environmental procurement policy implemented and now a key component of supplier selection process
Customer requirements dictate reactive rather than proactive steps
Customer requirements impact on our finished goods and raw material stock holding. As well logistics in delivery of existence and new products within limited timescale
Customers are health professionals at front-line making life or death choices
Delay to build and customer delivery
Developed new purchasing organisation
Developing a questionnaire for suppliers to fill and including within existing tender documents
Devolution and dispersal of demand-side; challenge in customer buy-in; impact on procurement influence
Disruption to customers, staff time in resolving difficulties, perception of purchasing organisation influenced by poor supplier performance
Disruption of supply to our customers has caused some difficulties
Dramatically increased the influence of procurement overall areas of non-performance (due to recent financial risk)
Emergency action in form of contingency plan to avoid disruption to manufacturing
Environmental and CSR
Exposure to reduced supplier base in terms of choice
Extension of contractor pre-qualification - development of purchase policy with regard to ethical operations
F1 [pressure on budget] has resulted in B1[changes in purchasing and supply strategy] and this has

resulted in the mounting of a supply chain initiative
Focus on liquidated damages and service level agreements
Freak weather conditions becoming more frequent, comprehensive strategic stocks. In more than one location

Most influential factor
Greater emphasis on cost reduction to the detriment of other factors such as quality
Greater emphasis on understanding the risk associated with sourcing certain suppliers
Greater focus at corporate level on contracts - governance pre and post contract
Health safety and environmental are key issues to our company and are part of contractor/supplier selection
Increased awareness. Planning programme internally and externally to minimise risk
Increased resources, better coordination between us and end users
Increased workload/servicing etc
Led to resourcing of major product lines away from poor performing supplier
Loss of experienced staff
Major performance failure of a contractor has prevented the generation of electricity at one of our power stations
Major procurement reform programme in place affecting all areas of purchasing
Major re-sourcing exercise. Inventory levels re-assessed
Merger of 2 government departments and internal restructuring means customer structure has changed
More involvement in corporate issues , e.g. SOX, CSR
More responsive suppliers in the chain preferred. Customer forecasts and production schedule much more efficient. Emphasis on lean manufacture/reliability of equipment
Need for statement of corporate governance being driven by Audit Commission in Government sector. Procurement system weak in local government
Needed to rethink purchasing strategy and supplier relationships required going forward
New business strategy making us comply with European public procurement directives
New purchasing strategy being developed
New purchasing structure
Oil pricing
Our customers pass significant project risk to us and we look at where (some of) this should be passed to our suppliers
Poor retail sales
Prevents source change, drives costs up and maintains poor delivery
Provided justification for cross-function risk mitigation action plans
Raised profile and additional resources
Reinforcement of quality process
Relies heavily on ability of supplier/contractor to react to changes in operations and therefore/increased cost
Required a review of the supply bases and their capabilities
Review of budgetary implementations
Revision of existing poor practices
Revisited purchasing procedures to ensure they met the requirements of Sarbanes-Oxley Act
Shortages of steel supply have necessitated increased stockholding over the past year
Single sourcing involves annual QC and ETJ audits
Sole sourced item and the supplier unable to supply. The supply strategy now allows for the management of risk and exposure minimised
Sarbanes-Oxley - greatly increases administration and audit of process management

Specific action taken in the specific area affected
Spending cut back to essential/safety related purchasing only

Most influential factor
Stocks increased to cater with projected shortfalls and manufacturing difficulties
Stronger contracts; stronger contingencies
Supplier management/relationship
Supplier unable to pay sub suppliers due to cash flow problems - no product supplied
Suppliers changes in strategy resulting in a short notice re-sourcing exercise
Supply shortages due to manufacturing problems; relocation required require increased contingency, i.e. increased stock holding, alternative sources
Supporting a war effort!
The division was sold from one company to another and the integration of systems/policies/procedures has caused many supply problems
The Oracle e-proc system crashed for 24 hours leaving the whole organisation without a P2P capability. We have had to introduce a manual emergency order pad to facilitate procurement if that happens again
Tough retail trading conditions have forced a decision to buy smaller quantities and push suppliers to be more responsive
Traditionally, single sourced major spend, now dual sourcing
Training and education on risk management and auditing. Changes to supplier appraisal process
Very short lead times, that leads to alliances with vendors
We're moving towards partnerships in supply chain, thus supplier dependency is higher, increasing risk
We had to close the exposure
We have completely changed how we approach procurement
We minimise supply or service risk while meeting OEM franchise requirements and customer expectations
WEE/ROHS directive effecting electronics procurement methods, l/times, costs and inter-company changes
Within government a move to strategic planning and implementation of procurement - driven by Best Value