

Global perspectives on global standards

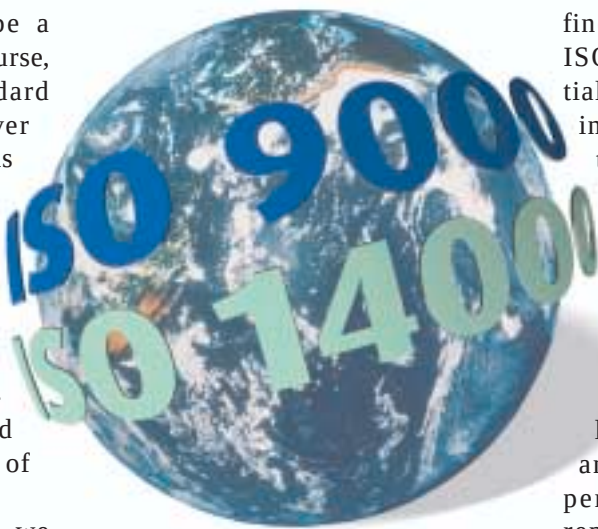
a 15-economy survey of ISO 9000 and ISO 14000

This article summarizes findings obtained from a survey of 5 398 ISO 9000 and ISO 14000 certified firms in 15 economies in North America, Europe and Asia. It compares motivations and benefits, and how these differ across countries and business sectors.

What does it mean to be a “global” standard? Of course, the requirements of the standard should be the same in whatever country it is applied – which is the case for ISO 9000 and ISO 14000. But most people, in referring to standards being global, would also expect them to be adopted for similar reasons and in similar ways across countries, hence leading to similar benefits. Are ISO 9000 and ISO 14000 global in that sense of the word?

To investigate that question, we conducted a survey among certified firms in 15 economies, asking them about their motivations for seeking certification, and about implementation issues and benefits experienced. The survey was administered during 1999-2001. This article summarizes the principal findings. The full survey is available from the authors.

In particular, we examine whether motivations and benefits differ across countries and/or across business sectors. If we would



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find that firms in France sought ISO 9000 certification for substantially different reasons than firms in Taiwan, regardless of their sector of activity, and experienced substantially different benefits, we might infer that ISO 9000 in France does not mean the same as ISO 9000 in Taiwan.

Conversely, if we would find that chemical firms across different countries report similar motivations for certification and comparable benefits, though perhaps different from those reported by firms in the electronics industry, we would have more faith in the view of ISO 9000 as being truly global. Below, we present a summary of the survey sample, followed by an analysis of motivations, implementation, and benefits, both by country and by sector.

Profile of survey sample

The survey was administered in 15 economies by a network of local partners who were responsible for translating the survey, obtaining



address lists of certified companies, administering the survey, and entering the responses.

A total of 5 398 firms responded to the survey. Responses for some countries were grouped together for the rest of the analysis presented here, as their sample size was too small to be treated separately: Australia and New Zealand were combined and attributed the abbreviation of ANZ; and Indonesia, Malaysia, the Philippines, Singapore, and Thailand were combined into South-East Asia (SEA).

Apart from these two groupings, to which we have assigned “unofficial” abbreviations of their names for the purposes of this article, the other economies are identified in the graph charts by the codes assigned in the International Standard for country codes, ISO 3166¹⁾.

The economies surveyed were: Australia (ANZ), Canada (CA), France (FR), Hong Kong (HK), Indonesia (SEA), Japan (JP), Republic of Korea (KR), Malaysia (SEA), New Zealand (ANZ), Philippines (SEA), Singapore (SEA), Sweden (SE), Taiwan (TW), Thailand (SEA), United States (US).

The breakdown of responses by economy is shown in **Table 1**.

The breakdown of responses by industry sector is displayed in **Figure 1**.

The food industry reports the highest scores for seeking 'quality improvements'

Motivations for seeking ISO 9000 or ISO 14000 certification

Let us turn to the motivations for seeking ISO 9000 and ISO 14000 certification. Respondents were asked to rate, on a five-point scale, how important each of a set of 11 possible motivations was in their decision to seek certification.

Table 1: Response rates by economy

Country	Number of forms mailed	Number of usable responses received	Response rate	ISO 9000	ISO 14000
Australia (ANZ)	2 607	550	21,10 %	540	92
Canada (CA)	561	198	35,29 %	185	110
France (FR)	2 000	445	22,25 %	440	29
Hong Kong (HK)	1 200	131	10,92 %	124	20
Indonesia (SEA)	200	9	4,50 %	7	3
Japan (JP)	5 000	2 261	45,22 %	114	72
Korea (KR)	1 361	120	8,82 %	2 221	575
Malaysia (SEA)	200	10	5,00 %	10	4
New Zealand (ANZ)	288	61	21,18 %	57	13
Philippines (SEA)	200	53	26,50 %	51	16
Singapore (SEA)	200	15	7,50 %	13	10
Sweden (SE)	268	135	50,37 %	135	51
Taiwan (TW)	2 142	456	21,29 %	446	223
Thailand (SEA)	200	15	7,50 %	15	4
US (US)	5 000	939	18,78 %	906	178
Total	21 427	5 398	25,19 %	5 264	1 400

1) For more information on ISO 3166, see the following location on the ISO Web site: <http://www.iso.org/iso/en/prods-services/iso3166ma/index.html>

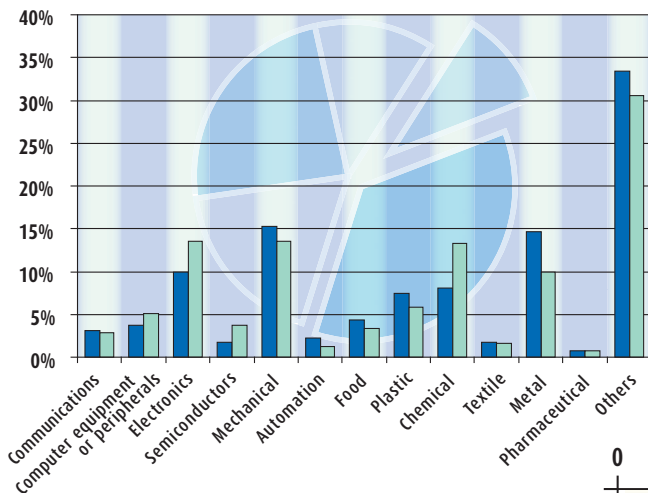
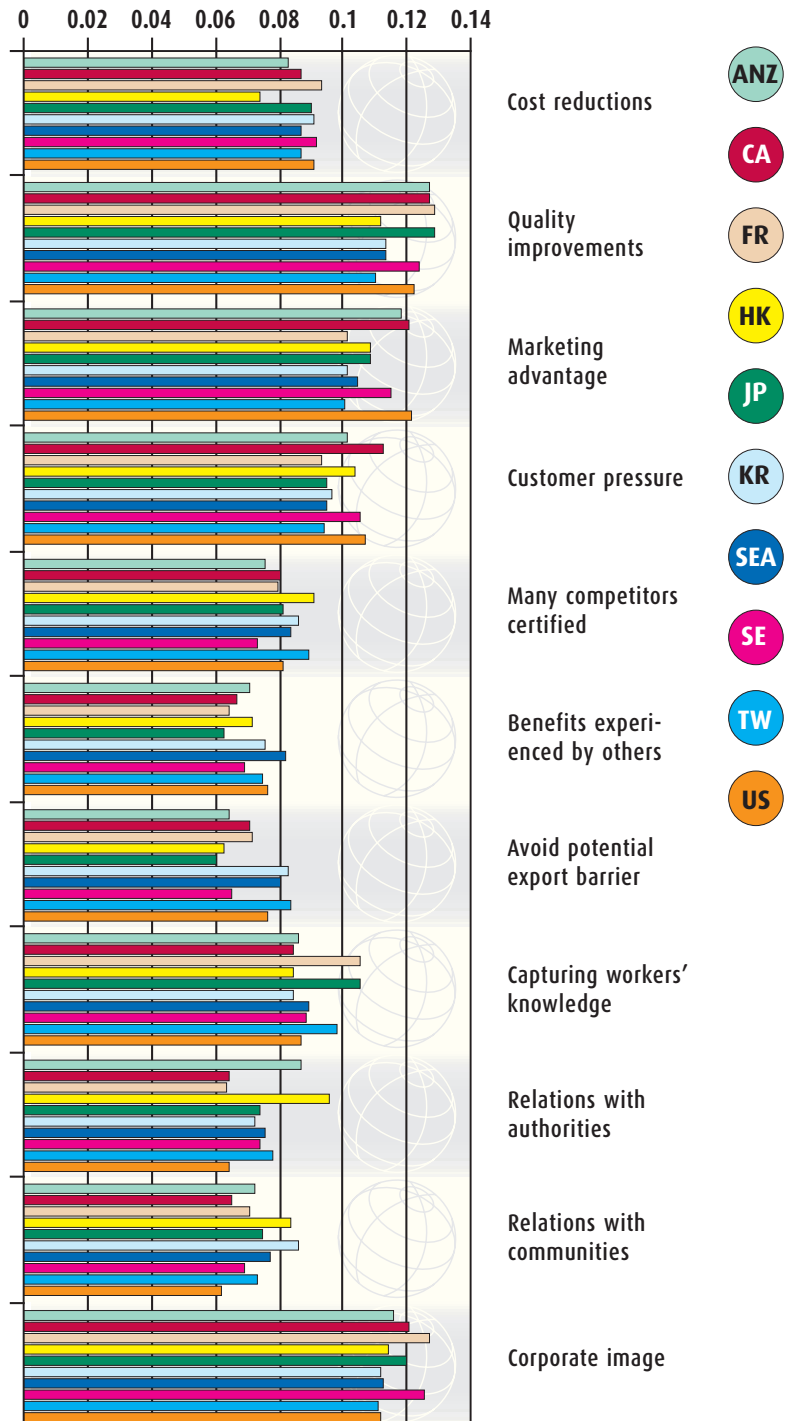


Figure 1: Breakdown by business sector

■ ISO 9000
■ ISO 14000

Figure 2: Motivations for seeking ISO 9000 certification – by economy



In some countries, respondents have a tendency to report high scores across the board, while others tend to be more modest. To correct for that, we compute “relative motivations”, by dividing each respondent’s score for each motivation by the sum of the scores for all motivations for that respondent. That way, for each respondent, all motivations must add up to 1.

Figures 2 and 3 show how the motivations for ISO 9000 vary across countries and sectors. Although the charts contain too much information to be easy to read, some trends are clear.

Overall, the main motivations for seeking ISO 9000 certification are “quality improvements” and “corporate image”, and to a slightly lesser extent, “marketing advantage” and “customer pressure”. This pattern returns both when looking across countries or across sectors.

The food industry reports the highest scores for seeking “quality improvements” and for “capturing workers’ knowledge”, suggesting that firms in this industry were the most motivated by process-related reasons.

The textile industry reports the highest score for seeking “cost reductions”. Firms in the semiconductor industry reported the highest scores for “customer pressure” and “many competitors certified”, suggesting that the external pressure for ISO 9000 certification is most strongly felt in

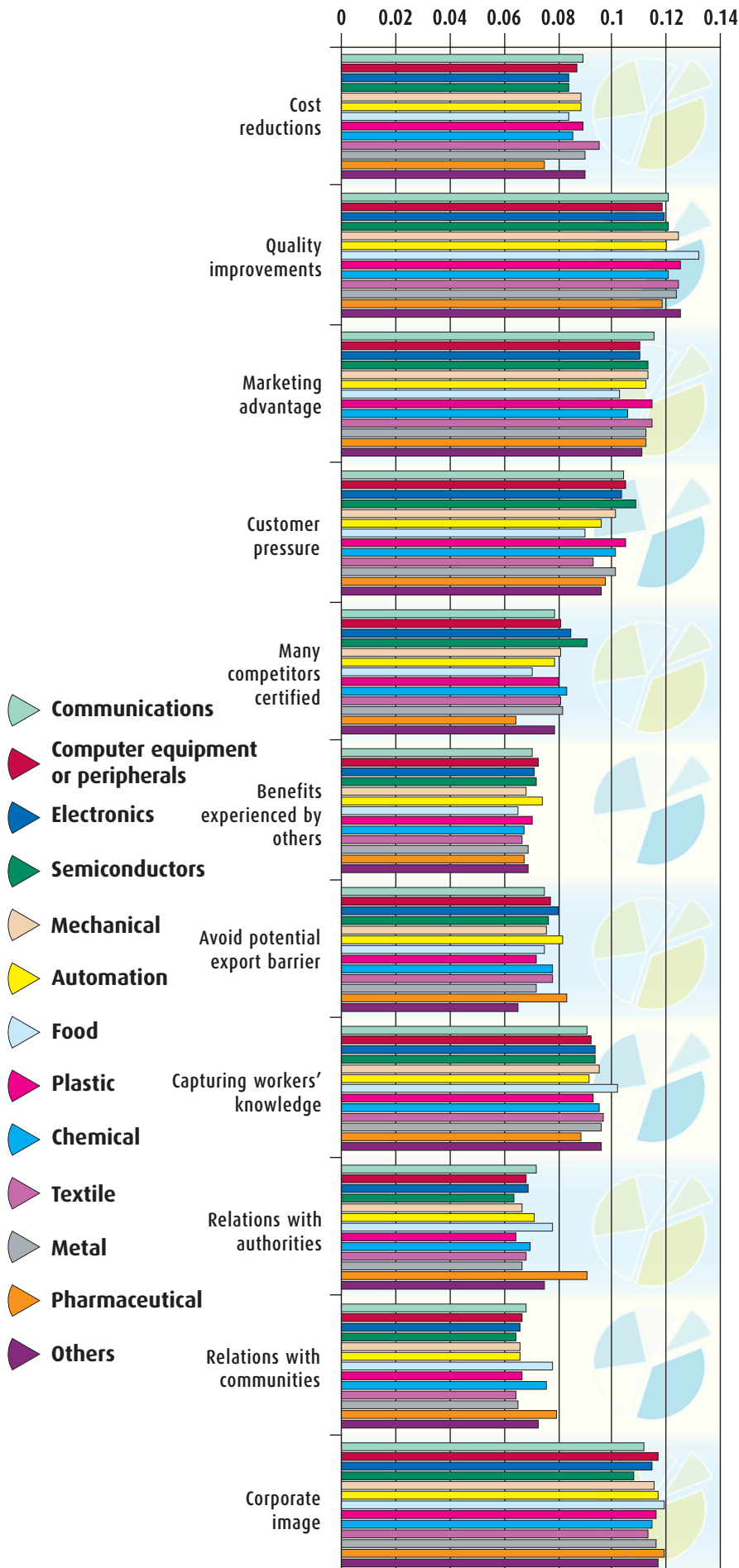


Figure 3: Motivations for seeking ISO 9000 certification – by business sector

that sector. Respondents in the food sector gave the lowest score for “many competitors certified”. However, one should be careful not to read too much into these differences between industries. Perhaps the most striking observation is how similar the relative motivations are across such fundamentally different activities.

Figures 4 and 5 show that the analysis for ISO 14000 is similar to that for ISO 9000.

The main motivations for seeking ISO 14000 certification are “environmental improvements” and “corporate image” and, to a lesser extent, “marketing advantage” and improved

The categories in which firms report receiving the highest benefits from ISO 9000 certification are ‘quality improvements’, ‘customer satisfaction’, ‘improved procedures’ and ‘corporate image’

“relations with communities”. “Customer pressure” scores lower for ISO 14000 than for ISO 9000.

Firms in the industrial automation sector expect to achieve the highest “marketing advantage”, and experience the most “customer pressure” to seek certification. The communications and semiconductor sectors give the highest scores to “many competitors certified”. Respondents in the pharmaceutical industry were considerably more motivated by improving “relations with authorities” for both ISO 9000 and ISO 14000; they were also the least motivated by achieving “cost reductions”. The same note applies here as

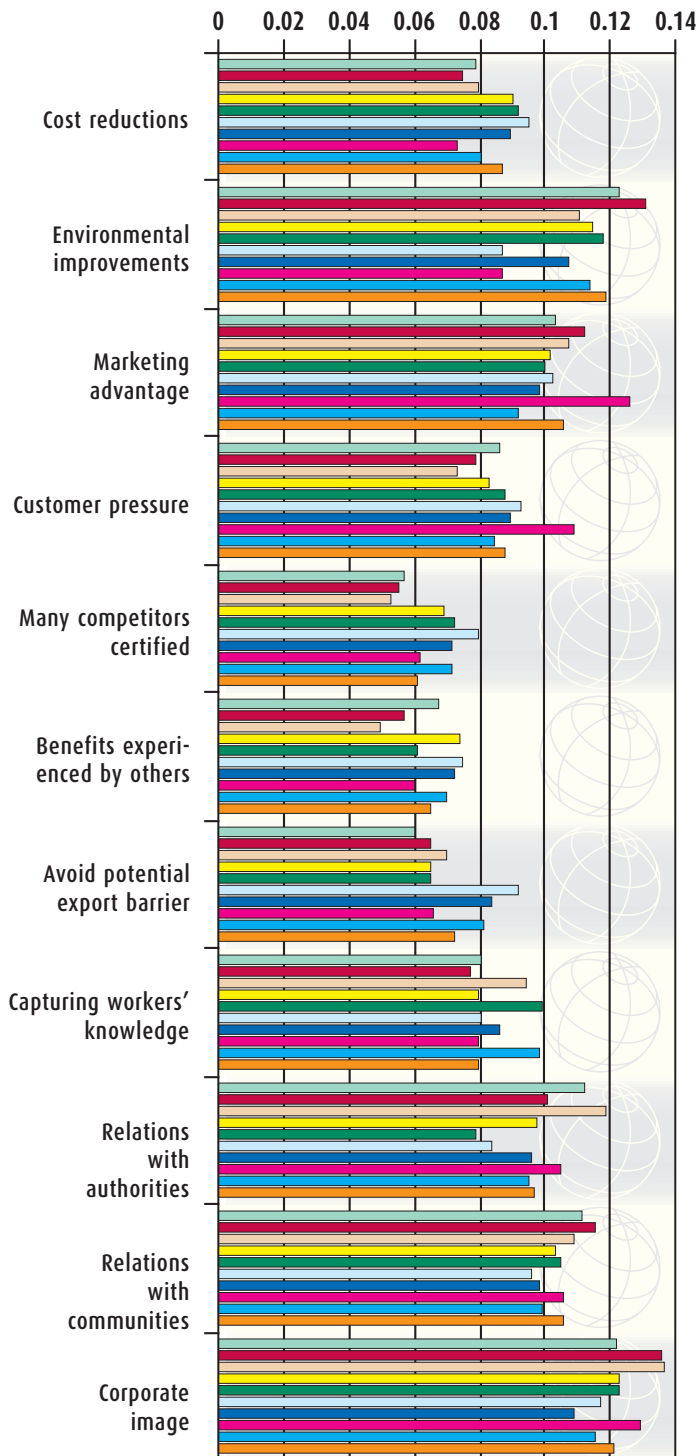


Figure 4: Motivations for seeking ISO 14000 certification - by economy

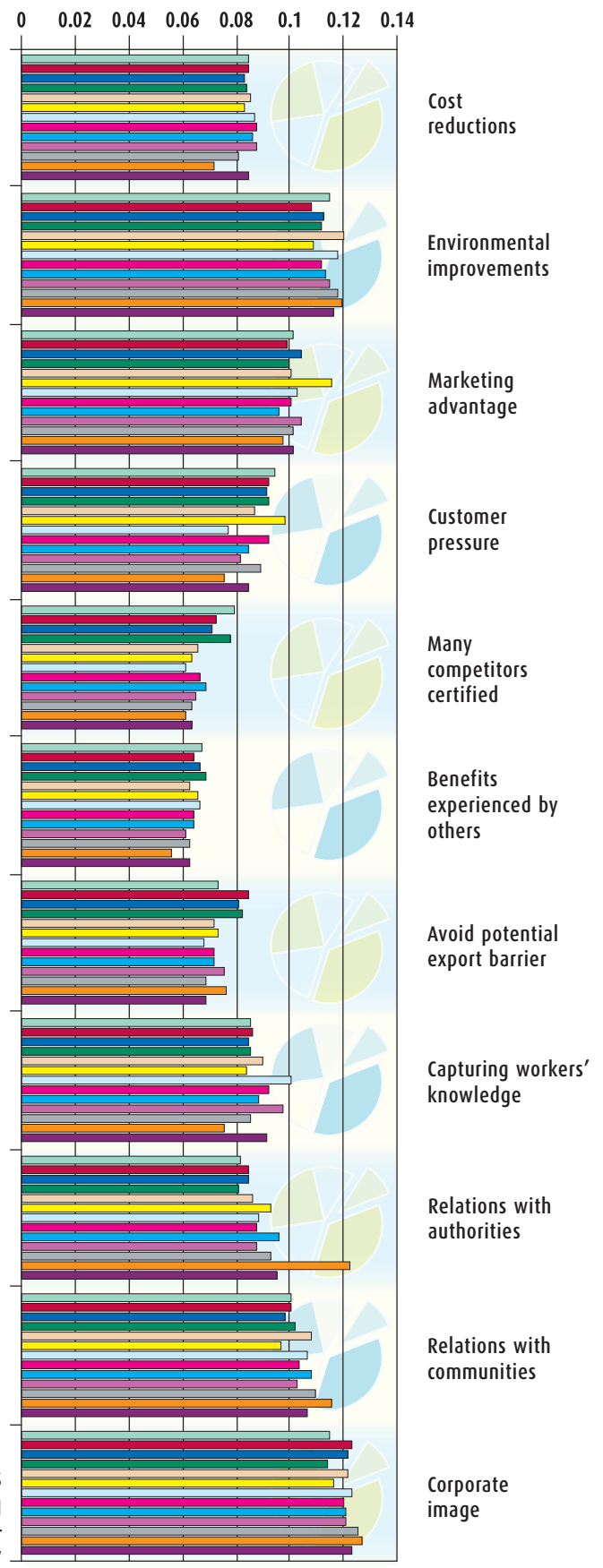


Figure 5: Motivations for seeking ISO 14000 certification - by business activity

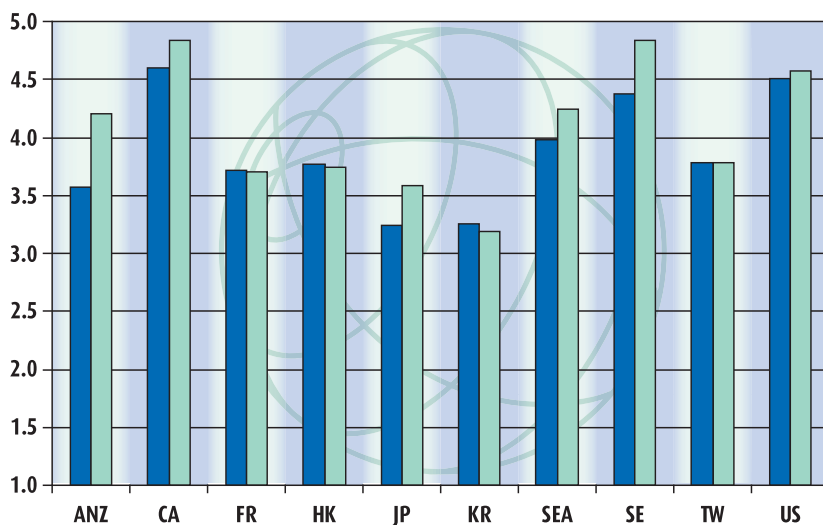


Figure 6: Proportion of employees trained – by economy

for ISO 9000: the similarities in relative motivations between sectors are perhaps the most striking observation from **Figure 5**.

Proportion of employees trained

We asked the respondents what percentage of their employees received training – again on a five-point scale ranging from one, indicating 0-20% of employees, to five, indicating 81-100%. **Figures 6** and **7** show the average responses to this question, by country and by sector.

The proportion of employees trained was generally similar for ISO

9000 and ISO 14000; overall, in most countries, the proportion trained for ISO 14000 was slightly higher. This may reflect the fact that ISO 14000 more often covers an entire site or company, while ISO 9000 certifications could have more limited scope.

More striking is the variation across countries: firms in Canada, Sweden, and the US report training the highest proportion of employees, with those in Japan and Korea reporting the lowest proportions. As always, one needs to be careful in interpreting such findings as an indication that implementation has been more or less thorough in certain countries, as there is always a possibility of country-level differences in survey response behaviour. For instance, respondents in Japan may simply be more likely to provide a cautious estimate of the proportion of employees trained, while those in Canada might apply a looser definition of “training”. However, these differences are striking enough to warrant further investigation.

There is more consistency in the proportion of employees trained across sectors than there is across countries. Again, most firms report slightly higher degrees of training for ISO 14000 than for ISO 9000.

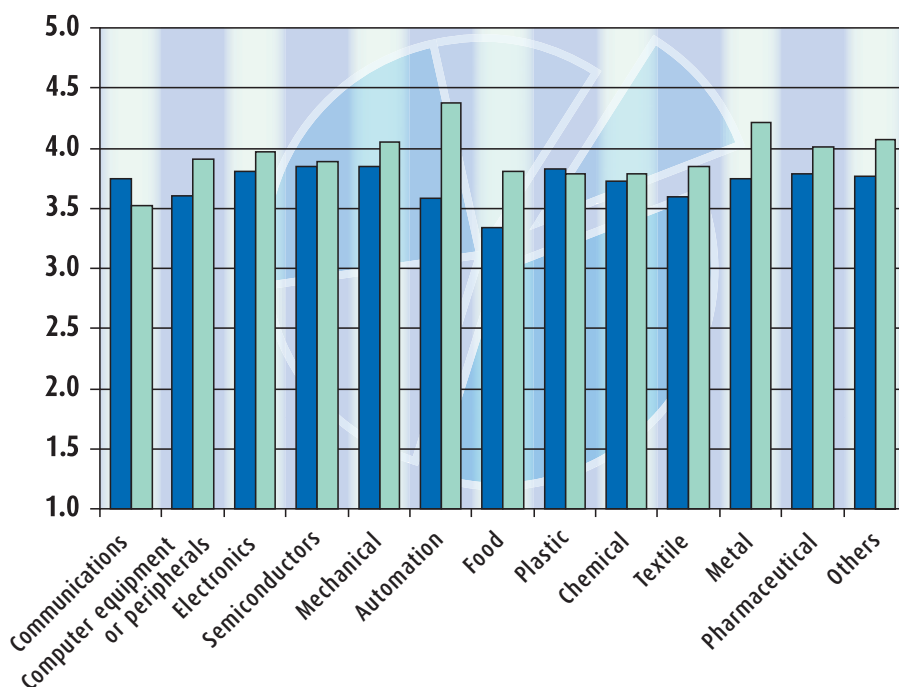
Benefits of ISO 9000 and ISO 14000 certification

We asked the respondents how much benefit they had received from certification for 13 categories, on a five-point scale, ranging from one for “no benefits” to five for “very substantial benefits”. The results for ISO 9000 are shown in **Figures 8** and **9**, by country and by sector; **Figures 10** and **11** (page 38) show the analogous results for ISO 14000.

Overall, the categories in which firms report receiving the highest benefits from ISO 9000 certification are “quality improvements”, “customer satisfaction”, “improved procedures” and “corporate image”.

■ ISO 9000
■ ISO 14000

Figure 7: Proportion of employees trained – by business sector



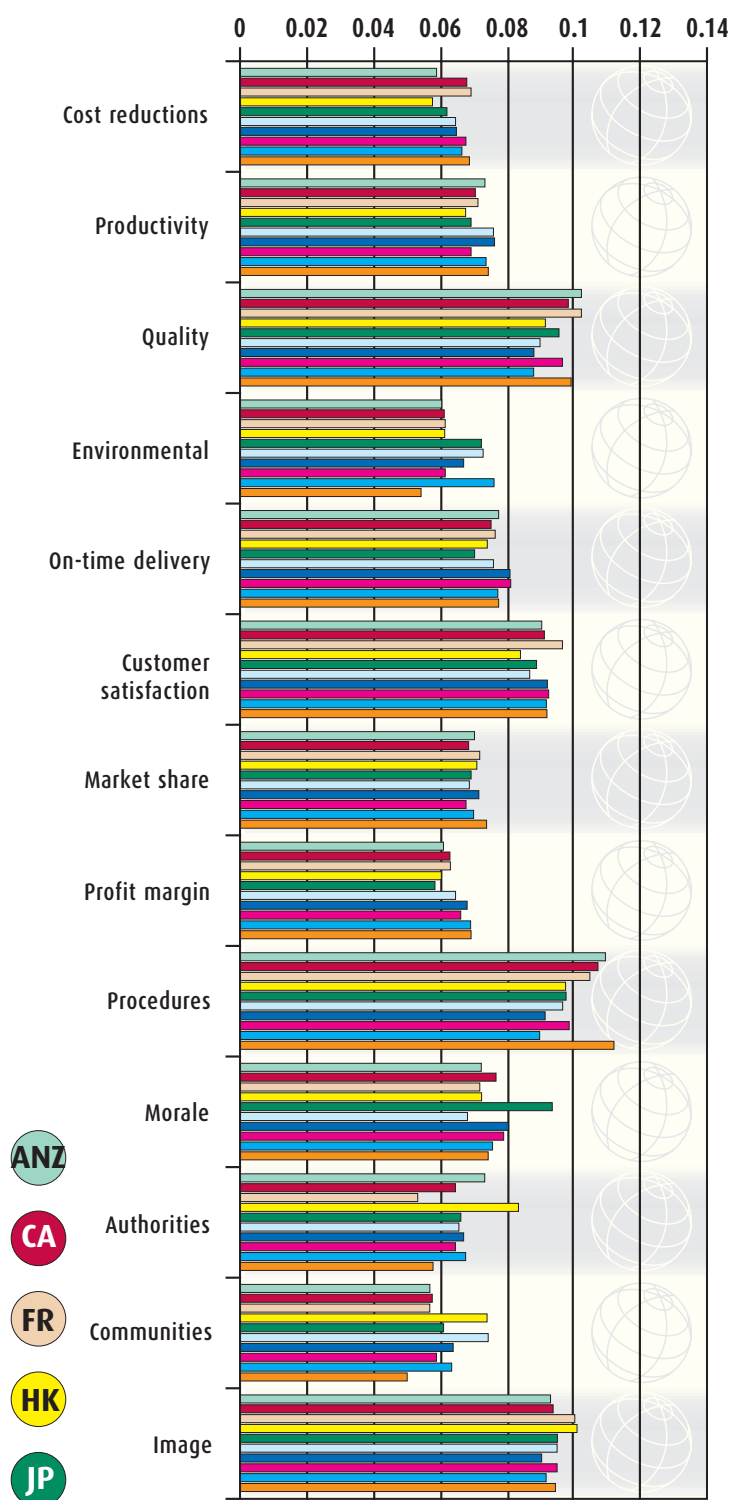


Figure 8: Benefits from ISO 9000 certification - by economy

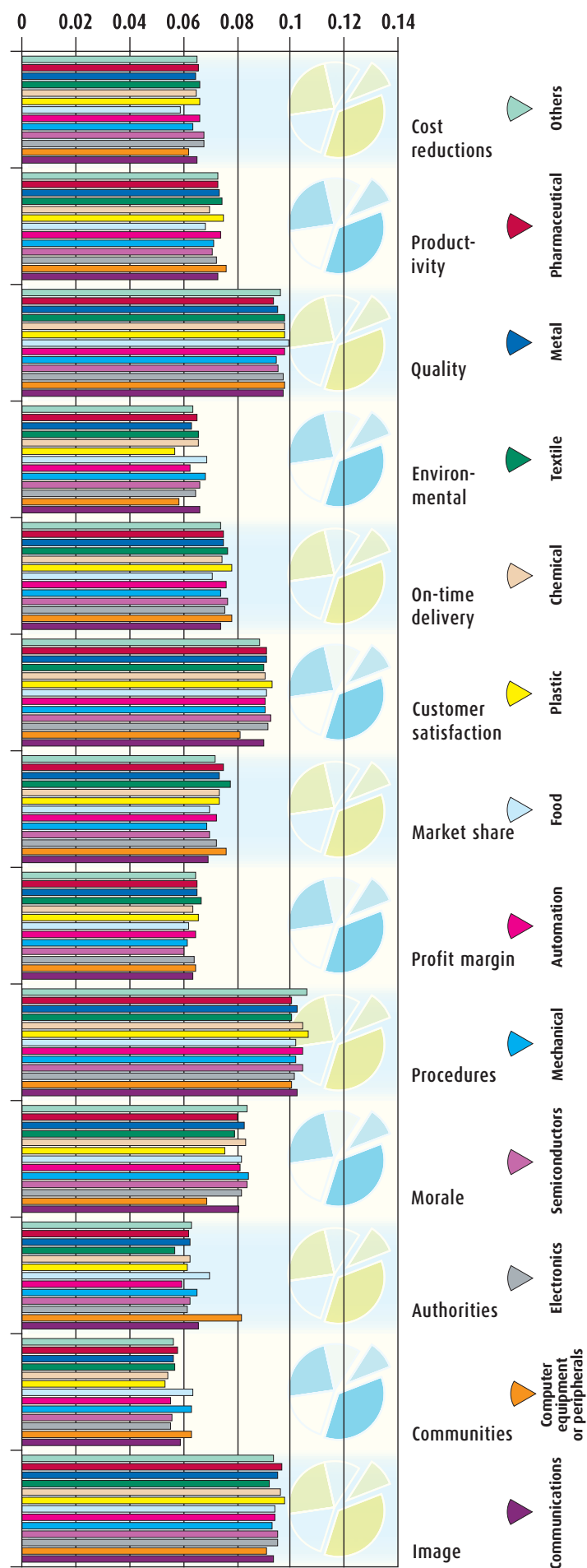


Figure 9: Benefits from ISO 9000 certification - by business sector

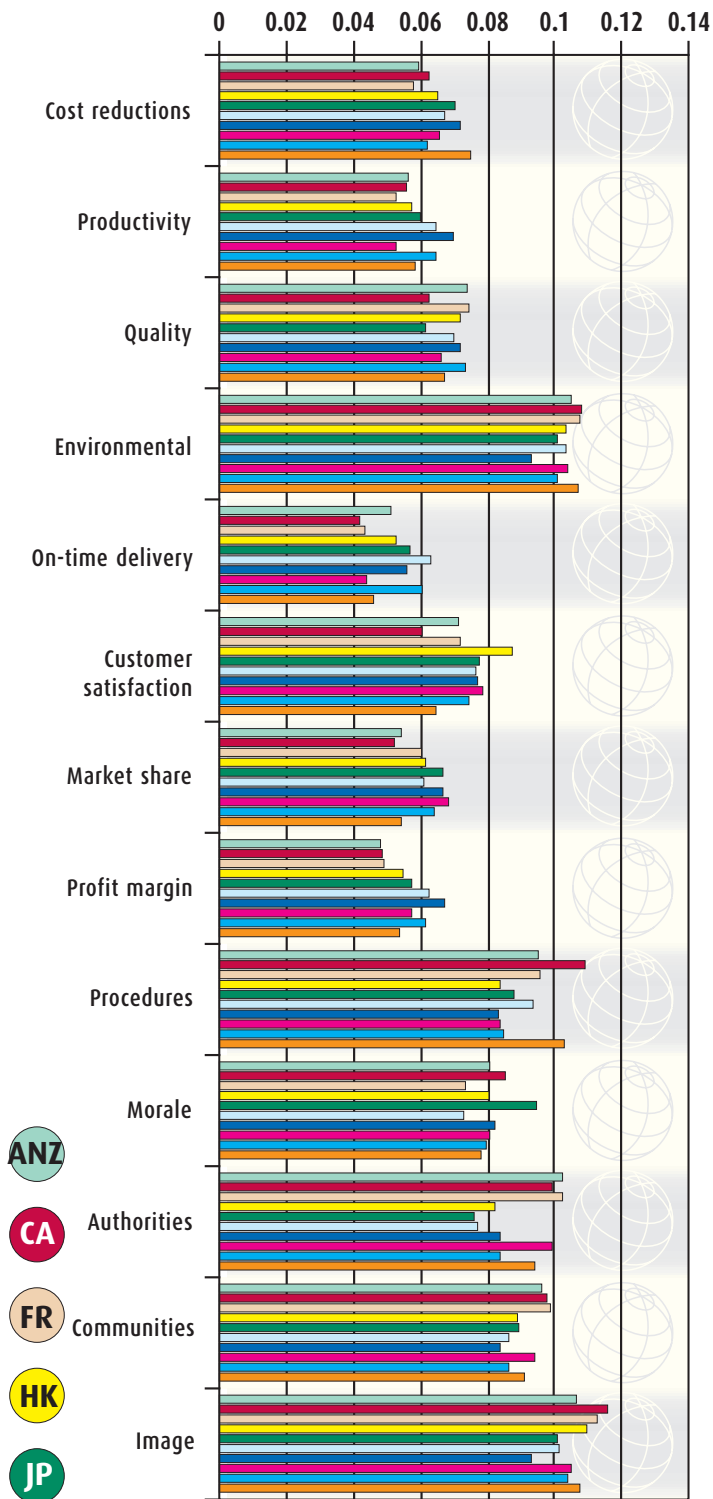


Figure 10: Benefits from ISO 14000 certification - by economy

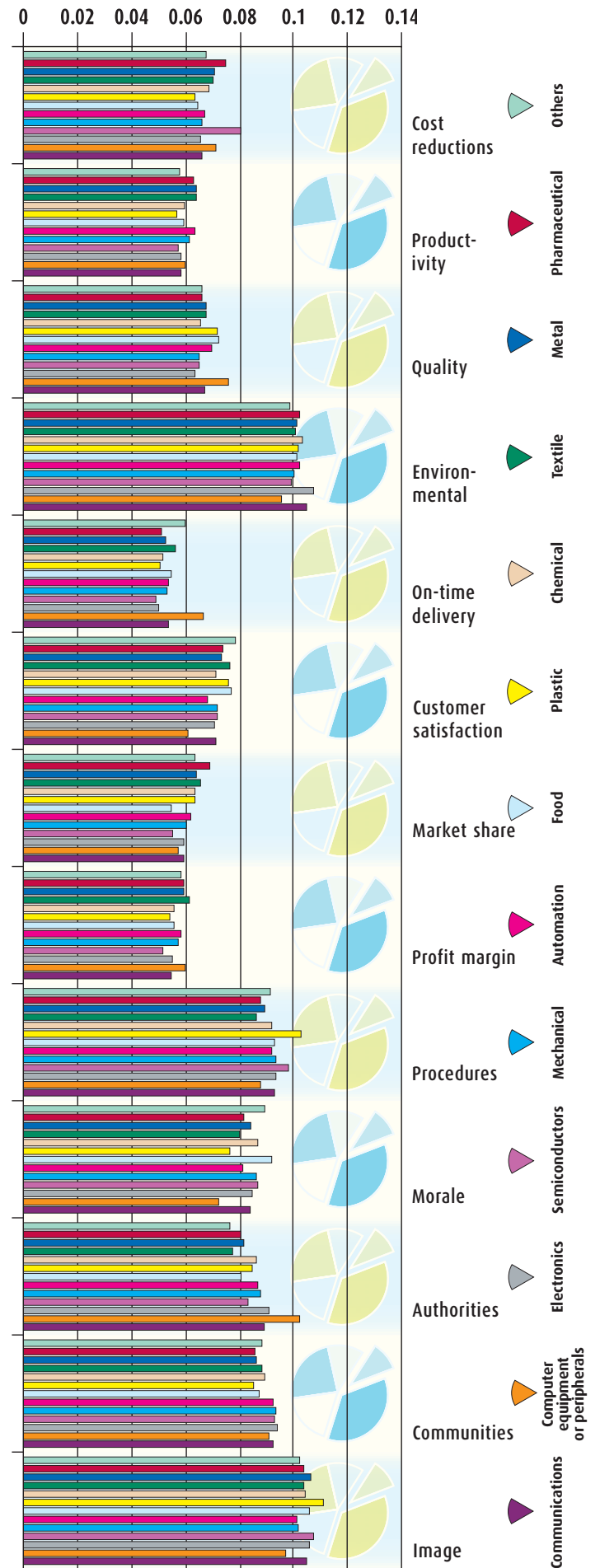


Figure 11: Benefits from ISO 14000 certification - by business sector



The pattern is fairly consistent across countries, with some exceptions. Firms in the US report relatively high benefits from “improved procedures”, followed by firms in Australia, Canada, and France. Japanese firms report considerably higher benefits in “employee morale” than firms in other countries. Respondents in Hong Kong report higher benefits from “improved relations with authorities”.

The pattern is also quite constant across sectors, except that pharmaceutical firms report considerably higher benefits from improved relations with authorities. This reflects the fact that the pharmaceutical industry is subject to far more stringent quality regulations by government agencies than firms in other business sectors.

Canada and the US report the highest benefits from improved procedures.

The same pattern arises when broken down by sector. Textile firms report the largest cost reductions from ISO 14000 certification. Pharmaceutical respondents report the highest benefits from improved relations with authorities, and the lowest benefits with respect to employee morale and corporate image.

The key benefits obtained from ISO 14000 certification are improved environmental performance and improved corporate image, followed by improved procedures, relations with authorities, and relations with communities

Conclusion

By and large, the patterns we find are consistent across countries, for most of the factors we study. Though there are, inevitably, variations across countries, these differences are relatively small and certainly not large enough to indicate substantially different “versions” of management systems built on ISO 9000 or ISO 14000.

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Overall, the key benefits obtained from ISO 14000 certification are improved environmental performance and improved corporate image, followed by improved procedures, relations with authorities, and relations with communities. Firms in

The one notable exception is the proportion of employees trained. Here, we find substantial variation across countries, which calls for further examination. If this reflects differences in interpretation of the survey question across countries, there is



of course no problem. However, if it reflects true differences in breadth and depth of implementation of ISO 9000 and ISO 14000, that might cast some doubt on the assertion that the standards are truly implemented in a standardized manner worldwide.

It is instructive to compare the motivations for seeking certification with the benefits achieved. Recall that the main motivations for seeking ISO 9000 certification were quality improvements, marketing advantage and corporate image. These expectations are, by and large, met: the main benefits experienced are quality improvements, improved customer satisfaction, and improved image. The same is true for ISO 14000.

However, two points are worth noting. Firstly, the improved customer satisfaction does not appear to lead to equally large benefits in terms of market share or profit margin. This may reflect the fact that ISO 9000 certification is often considered a require-

ment. Having the certification does not actually increase market share or profits, but not having it will lead to a decrease in market share or profitability.

Secondly, perhaps the most important ISO 9000 benefit of all is improved procedures. The survey did

not explicitly ask about improved procedures as a motivation for seeking certification, but anecdotal evidence from interviews with certified firms suggest that, in many cases, these benefits were not anticipated, but proved very helpful.

This is, in fact, characteristic of any structured process

improvement effort: one does not know in advance how the efforts will pay off, but following a structured and disciplined approach almost inevitably does lead to valuable process improvements. ■

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