

Harnessing eco-control to boost environmental and financial performance

The growing importance of environmental issues in business has prompted companies to put effective environmental management systems in place. The use of eco-control tools can improve both the environmental performance and financial performance of organizations. A study of Canadian manufacturing firms illustrates this concept.

By Jean-François Henri, CMA and Marc Journeault, CMA



The most recent report by the Intergovernmental Panel on Climate Change (IPCC) asserts that climate change is attributable to human actions. It also describes the numerous repercussions of this phenomenon on the environment and underlines the importance and urgency of reducing environmental impacts. As one of the main ecological offenders, organizations have an undeniable role and responsibility to work toward a solution. Moreover, the increase in environmental legislation and pressure from internal and external stakeholders unequivocally confirms the importance of this issue for organizations. The challenge for organizations is to undertake concrete actions to reduce the ecological impact of their operations while maintaining their economic objectives — a crucial importance to

shareholders and investors.

Eco-control tools can play a pivotal role in this area by allowing organizations to attain their environmental objectives while ensuring the profitability of their operations.

What are eco-control tools?

Organizations implement and use management control systems (MCS) to monitor, control, measure and modify their strategic objectives. Performance, budget and incentive management systems are among the most widely used MCS. Eco-control refers to the consideration of environmental aspects in each of these tools. The objective is not to create new management tools but rather to integrate environmental aspects in existing tools and to isolate their effect on the organization. The integration of ecological aspects in performance measurement systems entails the development of environmental performance indicators (EPI). Diverse EPI allow organizations to monitor changes in internal environmental aspects and measure the attainment of environmental objectives. They may translate, in quantifiable measures (monetary or physical), the various environmental impacts of the activities of the organization. They may also measure the efficiency of internal processes and systems put in place to improve the organization's environmental performance.

Moreover, in an eco-control context, budgets can serve to identify and plan objectives for spending, income and environmental investments and to monitor the attainment of these objectives. Environmental spending may include the cost of waste processing or water purification, whereas environmental income may originate from the sale of waste materials used as an input by another company or from the reuse of recyclable materials. Environmental investments may

include purchases of emission reduction technologies or construction of infrastructures that reduce the risk of ecological damage.

Lastly, environmental incentives entail the integration of environmental criteria in companies' bonus systems to motivate employees to endeavour to attain specific environmental objectives.

Eco-control and environmental performance

It is difficult to define the concept of environmental performance. One of the definitions proposed rests on four dimensions: i) improvement of products and processes, ii) regulatory compliance and financial impacts, iii) relations with stakeholders and iv) environmental impacts and corporate image. The first two dimensions deal with internal processes in the organization whereas the last two involve external processes. Environmental performance is therefore defined as the simultaneous attainment of satisfactory performance along these four dimensions.

In general, eco-control tools can contribute to environmental performance by allowing organizations to procure reliable information required for strategic decision making concerning the environment. Considering that the organization has limited resources and faces a multitude of choices in day-to-day management, these tools also represent a way to orient the actions of all employees toward the attainment of environmental objectives set by top management. Specifically, they let the organization establish, co-ordinate and communicate strategic priorities related to the environment; signal critical issues to managers; improve the allocation of resources managed; measure its ecological actions and promote congruence between individuals and the organization.

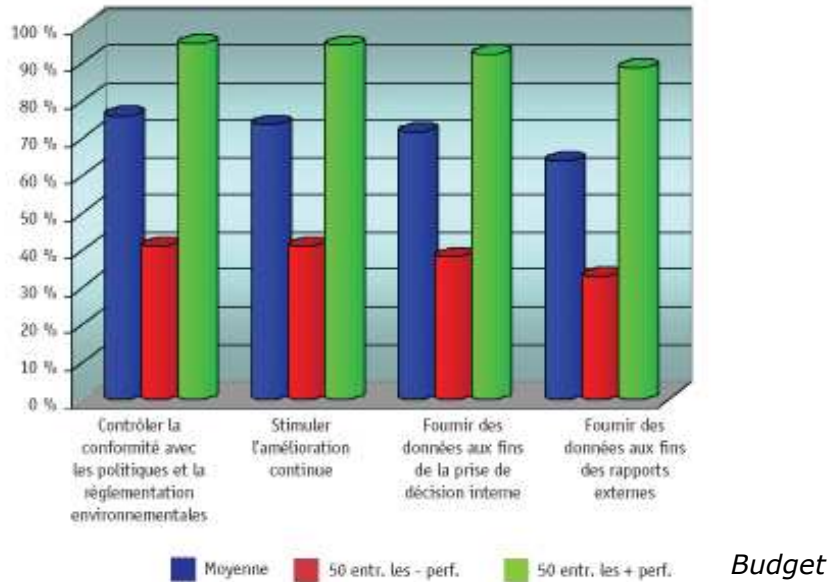
Environmental performance indicators (EPI)

Specifically, four main uses of EPI are observed in organizations to enhance environmental performance. First, EPI can be used to monitor the level of compliance with laws and regulations. By setting the maximum levels of waste and emissions required by the law as an objective, EPI can be used as a vigilance system to monitor, control and correct any deviation from the targets. Second, EPI can be an important source of information that facilitates strategic decision making concerning the environment. By supplying accurate reliable data on processes and environmental impacts, EPI enable managers to acquire a clear vision of these issues and to take them into account in their strategic decisions. Third, EPI can be used to favour continuous improvement by directing the organization's attention to environmental issues. EPI continuously send signals to managers regarding environmental issues and stimulates discussion, dialogue and debates on this topic. This dynamic process contributes to the emergence of initiatives and innovations that modify the processes in place and mitigate the environmental impact of operations. This process also clarifies the causes of these issues and contributes to organizational learning. This learning, in turn, allows the organization to formulate new policies or internal standards that specify how future actions can be carried out in a more environmentally-friendly manner. Fourth, EPI can be used to supply the data required for external reporting purposes. This reporting is a means of responding to various pressures from stakeholders (investors, clients, creditors, shareholders, etc.) by presenting financial and non-financial information on the environmental impact of company operations. Reporting informs and promotes awareness among the stakeholders of the environmental actions taken by the company. As environmental performance is a subjective issue conditioned by the expectations of each of the parties, reporting represents a key practice to legitimize the environmental actions of the organization.

To support these assertions, a survey was administered to 303 Canadian manufacturers in order to assess their level of use of eco-control systems and their level of environmental performance. Table 1 illustrates the results related to the use of EPI in these companies. First, it presents an average index of usage of the EPI described above for all respondents. Second, the table compares the usage index of EPI for the top 50 performing firms in environmental matters versus the 50 worst performing firms.

The results shown in this table reveal that manufacturing firms use EPI fairly intensively, with an index of about 70 per cent. The EPI are used primarily to monitor the level of compliance with legislation and regulations (75 per cent), favour continuous improvement (73 per cent) and facilitate decision making (71 per cent). This table also suggests that the level of use of EPI by the top performing firms in environmental matters is higher than that of the worst performing firms. The average difference is 50 per cent.

Tableau 1 : Indice d'utilisation des IPE



The integration of environmental aspects in the budget can help organizations improve their environmental performance. First, the budget can be used as an operational and strategic planning tool to allocate the resources required to attain the environmental objectives of the organization. It also serves to communicate financial objectives related to the environment to all employees. In addition, this eco-control tool can be used to monitor objectives, to direct and motivate employees toward attainment of these objectives and measure the results obtained. The organization has the ability to use the budget as a vehicle to ensure congruence between the employees' actions and the organization's objectives. Lastly, similar to EPI, the budget can be used as an information base to favour organizational learning related to the environment. For example, it can compile data on expenses related to the environment, allowing the organization to assess the sources of these expenses and subsequently implement concrete actions to decrease spending.

Table 2 illustrates an index of the degree of integration of environmental aspects in budgets of manufacturing firms. The results show that these companies integrate environmental aspects in their budget to a moderate degree, with an average global index of 61 per cent. Spending is the main environmental aspect included in the budget of these companies. This table also shows that the top performing firms with respect to the environment incorporate ecological aspects in their budget (82 per cent) to a greater extent than do the worst performers (35 per cent).

Tableau 2 : Indice d'intégration des aspects environnementaux aux budgets et aux mesures



Environmental incentives

Integration of environmental aspects in bonus programs can also help organizations improve their environmental performance. Bonus systems based on attaining environmental objectives represent a powerful tool to motivate employees to undertake the actions required to attain these targets. They therefore represent a way to orient employees' actions in the direction desired by the organization. A bonus system linked to the environment lets company management clearly convey to employees the importance of these issues for the organization. In turn, the employees wishing to optimize their compensation will prioritize actions related to the environmental objectives rewarded by the bonus system and will willingly exert more effort to achieve these objectives. Environmental incentives promote concerted action by all employees and contribute to environmental performance.

This proposition is affirmed by the results in Table 2. Among the manufacturers surveyed, the top 50 performers with respect to the environment incorporate more environmental aspects in their employee bonus program (68 per cent) than do the 50 worst performing firms (22 per cent). Nonetheless, this practice remains fairly uncommon among the companies included in this sample, as shown by the low index of 47 per cent.

To summarize, the results of this study demonstrate that, by supplying useful information for decision making, by directing and motivating managers and employees to attain environmental objectives and by favouring continuous improvement, eco-control tools can contribute to the environmental performance of companies.

Eco-control and financial performance

Virtue is a universal ideal, but not at any price. Even if executives endorse active engagement in environmental initiatives, they recognize that mobilization of businesses in this area is currently insufficient. One of the major obstacles to the implementation of environmental actions within organizations is the belief, still firmly entrenched among executives, that considering environmental aspects is costly and represents a substantial expense for the organization. Increasingly, however, experts are insisting that it is possible to couple environmental management and organizational profitability. How can this be achieved?

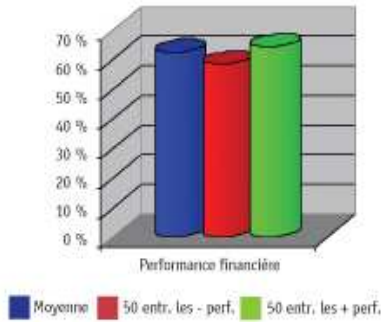
First, the proponents of the "win-win" argument emphasize that improving environmental performance can help reduce environment-related costs. This reduction may originate from a decrease in the quantity of waste sent to landfills and in energy consumption or from increased use of recycled materials in manufacturing. As part of this process, preventive actions must be put in place to reduce the environmental impact at source, as opposed to an "end-of-pipe" approach that is simply a stopgap solution. Moreover, better environmental performance can translate by an increase in sales to "green" consumers. By contributing to the brand image and the company's reputation, stronger environmental performance can generate an important strategic advantage vis-a-vis the market.

By contributing to the environmental performance of companies, eco-control tools can also enhance financial performance. First, they can help organizations identify opportunities to reduce environmental impacts at source and determine the associated financial gains. Second, these tools can be used to supply information for reporting, namely by publicizing the environmental

performance of the company to its various stakeholders.

Table 3 underlines this contribution of eco-control tools to financial performance via environmental performance. The 50 top performing firms in environmental aspects (linked above to a higher use of eco-control tools) have a higher financial performance index (64 per cent) than do the 50 worst performing firms (58 per cent). This variance between the two groups of firms might seem modest, but it is non-negligible when one considers the multitude of elements that influence organizational performance.

Tableau 3 : Indice de performance financière



Harnessing these tools

Eco-control tools represent a simple and accessible solution that will let executives take escalating environmental challenges into account in their organization. Because this environmental consideration is part of the organization’s existing MCS, it does not require the development of new systems and is therefore less onerous. The results of this study of manufacturers show that eco-control tools can contribute to the environmental and financial performance of organizations. However, the findings also indicate that awareness of the strategic advantages of the use of eco-control tools needs to be raised considerably, to generalize their implementation in companies as a whole.

Jean-François Henri, PhD, CMA, is a professor in the school of accounting at Université Laval and holder of the chair in cost and performance management. Marc Journeault, CMA, is an associate professor in the school of accounting at Université Laval. He is pursuing PhD studies in environmental accounting at the Université Catholique de Louvain in Belgium.

[Top](#)