

CIRANO Note, prepared by Benoit Aubert and Suzanne Rivard, April 2008

The popular press often paints an alarmist portrait of computer services being offshored to emerging countries. India is depicted as a formidable competitor, frequently with the suggestion that, given enough time, all jobs could end up there. The number of information technology (IT) jobs in India is growing by 30 per cent annually. Politicians must deal with lobbyists demanding that steps be taken to protect jobs from offshoring.

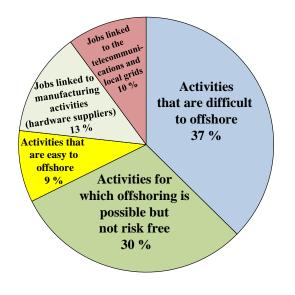
The IT industry represents approximately 150,000 direct jobs in Quebec, ranging from systems analysts to video game developers, and including jobs linked to hardware suppliers. Is this industry truly threatened?

Recent studies have shed some light on the principal risks associated with offshoring: unexpected transactions and management costs, hidden service costs, conflicts and litigation, costs associated with changing suppliers, loss of organizational competencies, increasing costs and declining quality, demoralized employees and, finally, damage to the corporate image.

Applying an analytical grid to all activities within the field of IT reveals which ones can most easily be offshored. They must be relatively independent of the firm's other activities. In fact, problems arise when tight coordination is required between local and offshore activities. Also, the latter must be measurable, in terms of quantity and quality. Finally, offshoring must be transparent to the client, who should not be aware of where the activities take place.

Figure 1 shows that over one-third of IT activities performed in Quebec would be difficult to offshore, while in the case of another 30 per cent this would be associated with some risk. Nine per cent of activities can be offshored without much trouble.

Figure 1: Share of jobs that can be offshored



This result, while not disastrous, is somewhat disturbing. *A priori*, many jobs would be difficult to offshore (37 per cent + 10 per cent linked to maintaining the telecommunications grid). Not many activities would be very easy to offshore (9 per cent of the total). While not insignificant, this is not the wholesale exodus that some are predicting. Furthermore, these are not the activities that add the most value. In fact, to the extent that it results in reduced costs, offshoring these activities could actually benefit the Quebec economy. A study by the McKinsey Global Institute has shown that offshoring is beneficial in that it makes North American firms more competitive. Each dollar spent in India by U.S. firms generates \$1.14 in benefits for the American economy. We can assume similar results would be obtained for Quebec.

Without a doubt, the group to watch is the one for which offshoring is "possible, but not risk free." This group consists of 44,500 jobs that are well paid (considerably more than those that are very easy to offshore). These job losses would be a double whammy to the Quebec economy, as they are both numerous and interesting. Notably, many of them are linked to the gaming industry. It is necessary to reflect on ways to keep these jobs in Québec. In this case, we need worry less about piecemeal offshoring of some of them than about a wholesale displacement of entire blocks of activity (for example, the development of a new game). Moving an entire group solves the problems of coordination and interdependence, thus reducing the risks associated with offshoring.

This would be the next logical step in an offshoring trend. Firms having offshored low-risk activities will have developed a certain degree of expertise in the field, a knowledge of emerging markets and suppliers, and an understanding of long-distance coordination methods. This accumulated experience will allow them to offshore "medium risk" activities.

Major upheavals to the structure of industry are not new. The industrial revolution displaced workers from agriculture to manufacturing. The second half of the 20th century saw a movement of jobs from the manufacturing to the services sector. Even while workers in the manufacturing sector suffered, on balance more jobs were created than lost and the global standard of living rose. Therefore, we must increase our competitiveness and strike out in this new direction. We should focus on sectors in which we can innovate and excel, willingly abandoning the others. We must maintain a quality education system to ensure that our resources have the qualifications and creativity. Our firms must invest in research and development to safeguard our capacity to innovate. These elements are essential for ensuring that IT jobs in Quebec are plentiful and concentrated in the most lucrative sectors.