

Printing: The coming years promise to be turbulent

The printing industry is everywhere in Quebec. It has taken a beating in the last few years due to both situational and structural phenomena. Despite the headwinds, the industry is determined to stay afloat and is looking for ways to adapt to markets and redefine its place in the large communication chain. In this context, it will become more flexible in terms of print products and services offered, as well as production volumes. To achieve this, it will have to invest and adopt new technologies. The next few years will be particularly demanding, but they will change the printing world.

PRINTING: FAMILIAR YET NOT WELL KNOWN

The printing industry consists primarily of two major groups: industrial printing and commercial printing. Industrial printing handles high-volume work such as daily newspapers, magazines and advertising documents. The commercial side is primarily but not solely engaged in printing advertising documents, weekly publications, and small run magazines and books.

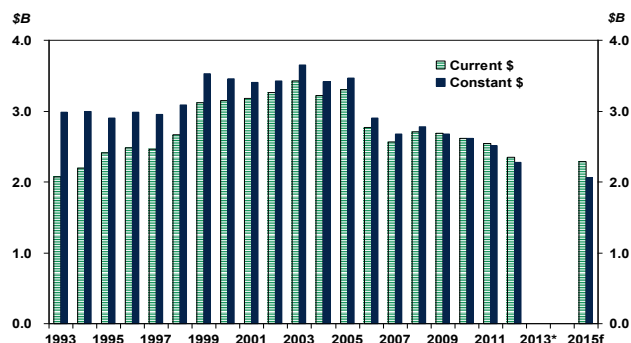
It is one link in a chain that includes processed paper product manufacturing, publishers of newspapers, periodicals, books and directories, specialized design services, and business support services. This means that its health is partly conditional on the industries it is tied to.

Like manufacturing as a whole, the printing industry has taken a beating over the last 15 to 20 years. For a while now, some have been ringing the industry's death knell, even though it still has a lot to do, as we will see later. More recently, in terms of economic factors, the 2008–2009 recession, the Canadian dollar's quick rise and strength from 2002 to 2014, and the weak U.S., Canadian and Quebec economies following the financial crisis have worked against it.

The Internet's growing presence in every area of activity also pulled the rug out from under the industry. The proliferation of information media, including electronic tablets and smartphones, has decreased demand for print information. The plunge by newspapers' advertising revenue dragged print volumes down. A desire to reduce paper use in businesses, at events (conventions, work and other kinds of meetings, etc.), and in retailing (catalogues replaced by fliers and Internet alerts via email and on social networks) added to the decline. The onslaught came from every direction; attacks were both situational and structural.

Some economic indicators provide a sense of the problems faced by Quebec's printing industry. First, the industry's real GDP fell. The value of manufacturing sales also dropped after peaking at \$3.4 billion (current dollars) in 2003 (graph 1). They stood at \$2.4 billion in 2012¹. They could be between \$2.1 billion and \$2.3 billion for 2015. The

Graph 1 – Quebec: The value of manufacturing sales is slowly declining in the printing industry



* 2013 and 2014 data not released by Statistics Canada
Sources: Statistics Canada and Desjardins, Economic Studies

¹ The data for 2013 and 2014 are not available. At the time of writing, only the data from January to October 2015 were available.

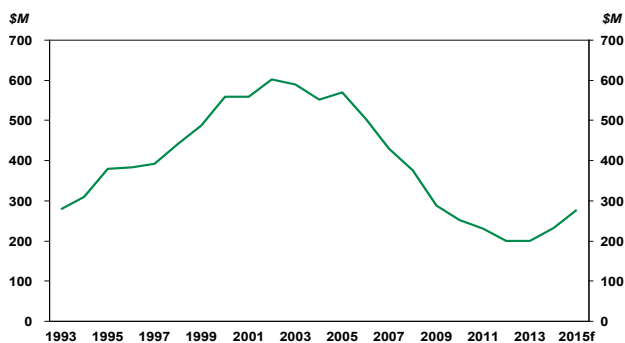
François Dupuis
Vice-President and Chief Economist

Joëlle Noreau
Senior Economist

418-835-2450 or 1 866 835-8444, ext. 2450
E-mail: desjardins.economics@desjardins.com

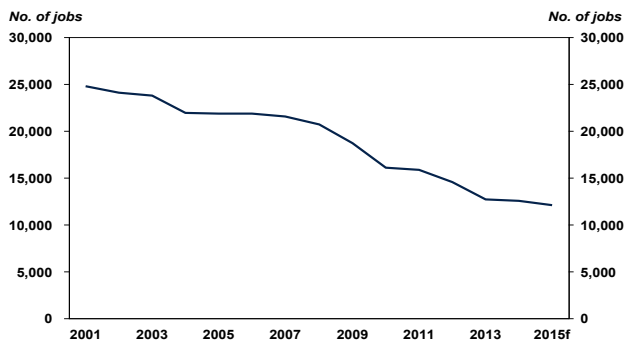
data on exports (graph 2), for their part, show an increase since 2014. Over 60% of the industry's international exports went to the United States. Thanks to the sagging loonie, Quebec printers may have become more attractive to their U.S. customers. Lastly, as graph 3 shows, the trend for wage-earning employment is down. Note that the decline in the number of employees is waning. Moreover, workforce aging means workers have to be replaced, and there is a real demand for recruits. There are many trades: press assistants, reprographic clerks, press operators, digital printing technicians, estimators, graphic artists, representatives, project leads, customer service coordinators, and others.

Graph 2 – Quebec: The printing sector's imports have been rising since 2014



Sources: Statistics Canada on the Industry Canada site, data on e-commerce and Desjardins, Economic Studies

Graph 3 – Quebec: Wage-earning employment is declining in the printing industry



Sources: Statistics Canada, Survey of Employment, Payrolls and Hours and Desjardins, Economic Studies

OTHER ERAS, OTHER METHODS

Production processes change quickly. New tools have been developed, and the knowledge required to work in the industry has increased substantially. The post-secondary education of future workers has evolved over the last few years to keep pace with technological developments. Among other things, it allows workers to alternate between work and study.

The printing industry is reinventing itself. Although innovative processes promise a real revolution, they are not completing eclipsing the current methods. These methods still have some advantages: low-cost mass production, reproduction quality, a huge choice of processes (offset printing, screen printing, inkjet, flexography, gravure, etc.), a big selection of inks with various features, printing on a vast array of media (paper, cardboard, film, plastic, glass, etc.). Due to the heavy competition, however, it is the businesses that can combine quality and speed that stand out and manage to do well.

The developments augur well. Digital printing came onto the market just over 20 years ago. However, the current developments and the ones in the works will make the industry leap ahead. In the era of “printable electronics,” methods are not all that will change. Work organization, sales and promotion will also change. Now, we are not just printing words and images, but also functionalities. RFID (Radio Frequency Identification)² tags are a concrete fact. Many daring projects are in the incubator. Connections are being built between the digital world and the printing industry. The next section covers this in a little more detail. First, let's look at the challenges the industry is facing; going digital is just one of the aspects.

LOOKING TO THE FUTURE TO CREATE A SPACE

Businesses in the printing industry have to look to the future if they want to survive. Among the challenges identified by the business people themselves are the introduction of new communications media, the recruiting of competent labour, and competition, to list just the most immediate challenges.

² RFID tags: “These tags, also called smart labels, chip labels, tags and transponders, are designed to receive a radio signal and return a different radio signal containing information.” For more information, see “Quels enjeux autour de l'électronique imprimée?” Jocelyne Rouis, Éliane Rousset at <http://cerig.pagora.grenoble-inp.fr/Note/2006/impression-composants-electroniques.htm>

Although they are nothing new, environmental considerations are also on the agenda. The digital world and economic issues have already pressured the industry into going green. Energy efficiency is a real concern, and has been for many years. Production methods have also been overhauled in terms of the materials used (certified paper and inks, for example), and work methods. Here, efforts have been made to improve ventilation, recovery of the products used, systems for processing chemical discharge and waste management, among other things.

Industry observers (business people, employers and various analysts) also think that other challenges are emerging. These include new materials, the improvement of print quality, and cost reduction. Digital is creeping in, to the detriment of more conventional approaches. The trend is being driven by growing customization and increasingly precise targeting, which requires personalization of print materials.

Also, printers are having to expand their horizons and add more and more services that are related to their primary activity. From management based on a print product, the industry is shifting to a much bigger service offering. Some companies now provide advertising, communication and marketing services, in addition to producing print materials.

RACING INTO THE 21ST CENTURY

The introduction of new media has shaken the print world but, simultaneously, innovative technologies could provide some unique business opportunities. Platforms are being merged. One current example is the printing of NFC (Near Field Communication) chips (which are replacing bar codes) and QR codes (which look like small mottled stamps).

Printing can play an important role, whether it is in facilitating product traceability or given the proliferation of security needs. More and more work is going into developing new materials with all kinds of functionalities (such as sensing humidity, temperature or pathogens). These materials can be used on documents or even packaging. This field is developing rapidly and has an increasingly important role, either for protecting the packaged item, aesthetics as part of a marketing strategy, or for the information it must contain.

Although there is still a long way to go from prototypes to large-scale industrialization, the potential applications are inspirational. Interests are converging, as chemistry, electronics and the printing world come together. Current developments are trying to capitalize on the electrical links between components with printing with conductive inks. The array of flexible media (such as paper, textiles or even plastic) is opening the door. According to IDTechEx, a global research and consulting firm, print electronics will undergo exponential growth from now until 2030. The global market is estimated to be US\$55 billion in 2020, and over US\$300 billion in 2030.

Meanwhile, Quebec's printing industry will have to change. Restructuring is nowhere near finished. As this transition takes place, the sector must also deal with the vagaries of the sectors it is linked to. Here, 2016 got off to an abrupt start with the newspaper industry. Only the Saturday *La Presse* newspaper will henceforth have a print edition, impacting industrial printing. What does the future hold for Quebec's other dailies? What about the local and regional weeklies? Will there be enough advertising revenue to support print editions? The issue must be monitored closely as there is still no answer to these questions.

However, the printing industry goes beyond newspaper printing. With the developments that prompt rapid adaptation of new technologies, we will have to be open to the many opportunities. Staying informed on the markets and innovations will remain a priority. These changes will require huge investments. Ties with major customers, as well as researchers in various areas, must be strengthened. For the printing industry, the years to come promise to be turbulent but very interesting.

Joëlle Noreau
Senior Economist