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this month in Center research:

Emerging Global Print Markets: Mexico

This month's eReview is based on the soon-to-be released *Emerging Global Print Markets: A Five-Country Comparative Study* (PICRM-2006-06), by RIT Professors Stan Widrick and Frank Cost. This monograph focuses on the current state and near-term growth trends of the printing industries in five countries with emerging market economies: Brazil, China, India, Mexico and Russia. For the month of October, the printing and publishing industry of Mexico will be discussed.

Introduction

Mexico is among the world's most open economies, but it is dependent on trade with the U.S. Exports to the U.S. represent almost one-quarter of the country's GDP. Top U.S. exports to Mexico include electronic equipment, motor vehicle parts, and chemicals. Top Mexican exports to the U.S. include petroleum, cars, and electronic equipment. There is considerable intracompany trade.

Mexico's trade regime is among the most open in the world. The country has free trade agreements in place with the U.S., Canada, the EU, and many other countries. Since the 1994 devaluation of the peso, the Mexican government has worked to improve the country's macroeconomic basics. Inflation and public deficits are now under control.

Felipe Calderon took office in December 2006 and is off to a surprisingly positive start. However, his administration has some problems as a result of his weak electoral mandate (less than 1% separating the top two candidates) and a minority position in Congress. This is likely to result in only modest gains in the competitiveness of Mexico due to an inability to pass legislation without strong opposition. Certainly, the economic performance of Mexico will be closely correlated with the U.S. economic cycle because of the geo-economic ties forged by the NAFTA agreement. These ties impact Mexico's levels of FDI and international trade.

Foreigners and foreign corporations may invest up to 100% of operating capital in a Mexican corporation, unless the Mexican corporation has an exclusion clause or is involved in a certain economic activity reserved for state ownership. These reserved activities are similar to those in many other countries, and include oil and petrochemical production, electrical and nuclear energy, seaport and airport operations, as well as industries associated with national defense. These activities are specifically regulated by the legislature, indicating maximum percentages of participation of foreign capital. Of particular interest to printers is

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the fact that newspapers publication for national circulation can have only 49% non-Mexican ownership.

Economic Overview

Mexico has a free market economy that recently reached a value of one trillion dollars. The country contains a mixture of modern and established industrial firms as well as agriculture interests, which are increasingly dominated by the private sector. Over the last twenty years, Mexico has expanded its infrastructure in seaports, railroads, telecommunications, electricity generation, natural gas distribution, and airports. Per capita income is one-fourth that of the U.S., with an income distribution that remains highly unequal. With its advantage in cost of labor, trade with the U.S. and Canada has tripled since the implementation of NAFTA (North American Free Trade Agreement) in 1994. Former President Vincente Fox's administration was aware of the need to upgrade infrastructure, modernize the tax system and labor laws, and allow private investment in the energy sector, but was unable to win the full support of the opposition-led Congress.

The inauguration of Felipe Calderón as Mexico's new president on December 1, 2006, was preceded by heavy discontent among both the citizens and legislators of Mexico. Calderón takes over a stable and growing economy, but a political system ripe with conflict. He has been silent on the issue of competition policy and the power of large private enterprises.

Mexico has one-third the population of the U.S., standing at 106 million people in 2005. Its economy is driven by service and industrial production. Mexico leverages national competencies in the production of food and beverages, tobacco, chemicals, iron and steel, petroleum, mining, textiles, clothing, motor vehicles, consumer durables, and tourism. Mexico is also a net exporter of oil, although they are trying to wean themselves from a dependence on oil exports.

Table 1 provides data on the overall economic health of Mexico since 2000. The Mexican economy has shown reasonably steady growth between 2000 and 2005, reaching the trillion dollar mark at PPP in 2004.

The balance of trade for Mexico has remained steady between 2000 and 2004. In 2004, exports reached \$203.4 billion, while imports were \$216.1 billion, creating a trade deficit of \$12.7 billion. Over the last few years, Mexico has run a steady deficit between \$11 and \$13 billion. The major exports of Mexico include manufactured goods, oil and oil products, silver, fruits, vegetables, coffee, and cotton.

Table 1: Macro-economic overview (Euromonitor) click to view image full size

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The Creview

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About the Center

Dedicated to the study of major business environment influences in the printing industry precipitated by new technologies and societal changes, the Printing Industry Center at RIT addresses the concerns of

| Macro-economic measure | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|-------|-------|-------|-------|---------|---------|
| Total GDP (billions of U.S. dollars) | 580.8 | 621.9 | 648.6 | 638.7 | 683.5 | 678.4 |
| Real GDP growth (%) | 6.6 | 0.0 | 0.8 | 1.4 | 4.2 | 3.0 |
| GDP at PPP (billions of international dollars) | 874.0 | 893.5 | 916.6 | 948.4 | 1,015.8 | 1,072.6 |
| Annual rates of inflation (% growth) | 9.50 | 6.36 | 5.03 | 4.55 | 4.69 | 4.30 |
| Purchasing Power Parity (Mx per international dollar) | 6.20 | 6.41 | 6.74 | 7.17 | 7.49 | 7.68 |
| FDI inflows (billions of U.S. dollars) | 16.8 | 27.6 | 15.1 | 11.4 | 16.6 | *** |
| Exports of goods and services (billions of U.S. dollars) | 180.2 | 171.1 | 173.8 | 177.9 | 203.4 | - |
| Imports of goods and services (billions of U.S. dollars) | 191.4 | 185.2 | 185.9 | 188.3 | 216.1 | - |
| Annual lending rates (% interest rate) | 16.90 | 12.80 | 8.20 | 6.90 | 7.20 | - 10 |
| Tax rates on individuals (% ranges) | 40 | - 10 | 40 | 35 | 33 | 100 |
| Tax rates on businesses (% ranges) | 35 | - | 35 | 34 | 33 | - |
| Exchange rates against U.S. dollar (Mx per U.S. dollar) | 9.46 | 9.34 | 9.66 | 10.79 | 11.29 | 10.9 |

As of 2005, the average annual income stands at \$4,542. The average gross annual income has been losing ground against inflation. This loss of purchasing power against inflation was one important factor in the 2006 Mexican elections. Mexico's income levels in U.S. dollars have been flat over the last six years, as is seen when comparing the percentage of families with incomes above \$15,000. In 2000, 37.0% of the population made more than \$15,000, while in 2005 this percentage was 36.8%. As can be seen from Table 2, the gross national income per capita, measured in U.S. dollars at purchasing power parity, increased from \$5,580 to \$7,310. In addition, consumer expenditure per capita has increased over the study period by over \$30 billion. Like the other macro-economic factors explored for Mexico, the market intensity determinants have increased modestly relative to the other countries in the study.

Table 2: Market intensity (Euromonitor)

click to view image full size

| Market intensity measure | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|-------|-------|-------|-------|-------|
| GNI per capita estimates using PPP (U.S. dollars) | 5,580 | 6,010 | 6,370 | 6,930 | 7,310 |
| Consumer expenditure (billions of U.S. dollars) | 437.A | 448.0 | 412.4 | 422.2 | 467.1 |
| Private consumption as a percentage of GDP (%) | 70.34 | 69.07 | 64.57 | 61.76 | 60.78 |

North American Free Trade Agreement (NAFTA)

The North American Free Trade Agreement (NAFTA) went into effect on January 1, 1994. The principal purpose of NAFTA is to reduce or gradually eliminate import duties between Mexico, Canada, and the U.S. The mission of NAFTA is to simplify processes and to develop faster procedures for solving controversies and disputes.

The principal goals of NAFTA are to:

- Gradually eliminate quantitative and qualitative barriers,
- Avoid the practice of dumping,
- Increase investment opportunities,
- · Protect intellectual rights, and
- Promote trilateral cooperation.

NAFTA has had an enormous impact on the volume and nature of trade activities for Mexico's economy in the thirteen years since its inception. Table 3 outlines the import activity of Mexico in the five years since 2001 to illustrate the market's openness to

the printing industry through educational outreach and research initiatives.

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trade. In particular, trade relationships with the U.S. have been generally favorable, and the import volume of U.S. goods to Mexico from 2001 to 2005 increased from \$101.2 to \$120.05 billion. In addition, per capita imports of U.S. goods and services increased by \$116.65, reflecting the importance of trade as a contributor to GDP. Over the 2001 to 2005 time period, the percentage increase for this indicator was a relatively modest 2%.

Table 3: Market receptivity (Euromonitor)

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| Measure | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|----------|--------|--------|----------|----------|
| Imports from the U.S. (billions of U.S. dollars) | 101.3 | 97.47 | 97.41 | 110.83 | 120.05 |
| Per capita imports from the U.S. (U.S. dollars) | 1,019.11 | 966.96 | 952.20 | 1,067.73 | 1,135.76 |
| Trade as a percentage of GDP (%) | 28 | 27 | 28 | 30 | 30 |

Commercial Infrastructure

While landline telephony has become gradually less important to the telecommunication development of much of the rest of the world, Mexico has shown a steady increase in use of this technology, growing from 13.89 to 18.23 mainlines per 100 inhabitants from 2000 to 2005. While cellular technology adoption rates have been somewhat slower than in other developing nations, cellular subscription rates have more than doubled, moving from 21.94 per 100 people in 2001 to 44.34 per 100 people in 2005.

The growth in television sets per 1,000 people has been relatively slow in comparison over the study period, but it has been growing in contrast to many of the other countries examined for this study. This trend could be partially explained by the proliferation of Spanish language creative content from U.S. media outlets and increasing courtship of the Latin American market in the U.S. and elsewhere.

The use of personal computers has increased from 6.9 million in 2001 to 14.4 million in 2005. By 2005, 87.3% of Mexican households with a PC were online. The number of Internet users continues to explode, and as of 2005 included almost 25 million people, which represents 23.6% of the population. The number of PCs per 100 people nearly doubled from 6.96 to 13.08, while the number of Internet hosts per million people showed an increase of 5,258 hosts to a total of 14,517 hosts per million in 2005.

The Mexican Printing Industry

The Mexican printing industry has experienced some of the same forces as in industrialized markets. These include consolidation of the industry, increasing competition, and erosion of profit margins. As of May 2006, the printing industry in Mexico is concentrated in Mexico City, Estado de Mexico, Jalisco, and Nuevo Leon, which captures more than 50% of the total market (U.S. Commercial Service).

The graphic arts industry in Mexico supports 140,000 direct employees through more than 17,000 firms. These numbers include all segments of the graphic arts industry, including newspaper, magazines, books, packaging, and

advertising/commercial printing.

Table 4: Market structure

click to view image full size

| Size | Number of Employees | Number of Firms |
|--------|---------------------|-----------------|
| Micro | 1-20 | 14,075 |
| Small | 21-100 | 2,674 |
| Medium | 101-200 | 257 |
| Large | More than 201 | 138 |
| | Total | 17,144 |

It is estimated that 70% of these companies have equipment that is at least 15 years old. Even firms with modern equipment lack the training needed to exploit possible opportunities. The lack of trained personnel is pushing some universities to create new degree programs in Engineering in Graphic Arts.

Market Size & Growth

Table 5 provides a five-year picture of some of the most important trends in Mexico. The population of Mexico in 2005 stands at about 106 million, and is growing at a rate of about 1.5% per year. This is the highest growth rate of the countries in this study, with the exception of India which has the same rate of population growth.

Slightly more than 75% of the population lived in urban areas in 2005. There are 24.6 million households, and the average household size is about 4.3 persons per household. This is important because many books, magazines, and newspapers are shared by the members of a household. Similarly, the consumption of energy resources indicates the size of the overall Mexican market, and there has been a modest increase in usage rates over the study period. Total primary energy consumption increased by 5.6% between 2001 and 2004. GDP reached \$768 billion n 2005, with a particularly large jump between 2004 and 2005.

Table 5. Market size (Euromonitor)

click to view image full size

| Measure | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|-------|-------|-------|-------|-------|
| Population (millions) | 99.4 | 100.8 | 102.3 | 103.8 | 105.7 |
| Population growth rate (%) | 1.53 | 1.41 | 1.49 | 1.47 | 1.83 |
| Urban population (millions) | 74.7 | 76 | 77.3 | 78.7 | 80 |
| Electricity consumption (billion kwh) | 180.0 | 185.5 | 186.6 | - | - |
| Total primary energy consumption (quadrillion btu) | 6.26 | 6.33 | 6.51 | 6.61 | - |
| Total GDP (billions of U.S. dollars) | 621.9 | 648.6 | 638.7 | 683.5 | 768.4 |

The growth rate of primary energy use and GDP aids in the identification of a country's ability to manage the influx of commercial activity as it places increasing demands on the national infrastructure. The rates for both indicators, shown in Table 6, indicate moderate growth rates that could support normal business growth over the study period. This moderate growth is partly explained by the close relationship of the Mexican economy to the U.S. economy.

 Table 6. Market growth indicators (Euromonitor)

click to view image full size

| Measure | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|------|------|------|------|------|
| Annual growth rate of primary energy use (%) Real GDP growth rate (%) | | 1.18 | | 1,44 | - |
| Real GDP growth rate (%) | 0.0 | 0.8 | 1.4 | 4.2 | 3.0 |

Industry Trends

Fluctuating Newspaper and Magazine Consumption

As seen in Table 7, newspaper titles in Mexico have followed the general international general trend, falling from 356 newspaper titles in 2001 to 248 titles in 2005. The number of people employed in magazine and newspaper production has also fallen slightly between 2000 and 2004 from 22,181 to 21,548 employees. In contrast, the value of magazine and newspaper production has increased from \$1,028 million in 2000 to \$1,221 million in 2004.

The number of people employed in book and book-related production fell slightly between 2000 and 2004 from 4,999 to 4,897 employees. The production value of books has remained stable at \$406 million in both 2000 and 2004.

The number of people employed in other printing and binding production has fallen slightly between 2000 and 2004 from 14,933 to 12,382 employees. The value of the production of other printing and binding has decreased from \$610 million in 2000 to \$586 million in 2004.

In total, the total number of people employed in magazine, newspaper, books, other printing and binding production has fallen between 2000 and 2004 from 41,198 to 38,827 employees. In contrast, the value of total production has increased from \$2,044 million in 2000 to \$2,213 million in 2004.

Measuring consumer expenditure on newspapers, magazines, books, and stationery reveal expenditures of \$3,952 million in 2000, with an increase to \$4,569 million in 2005.

Table 7. Newspaper and magazine consumption (Euromonitor)

click to view image full size

| Measure | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|--------|--------|--------|--------|--------|-------|
| Population (millions) | 97.9 | 99.4 | 100.8 | 102.3 | 103.8 | 105.7 |
| Annual daily newspaper circulation (million copies) | - | - | 8.734 | - | - | - |
| Newspaper titles | 1,00 | 356 | 310 | 300 | 276 | 248 |
| Book titles published | 7,095 | 7,179 | 7,306 | 7,424 | 7,539 | 7,586 |
| Magazine & newspaper, production value (millions of U.S. dollars) | 1,028 | 1,082 | 1,107 | 1,134 | 1,221 | *** |
| Books and similar, production value (millions of U.S. dollars) | 406 | 430 | 413 | 400 | 406 | - |
| Printing & binding, production value (millions of U.S. dollars) | 610 | 597 | 578 | 580 | 586 | - |
| Total market value of production (millions of U.S. dollars) | 2,044 | 2,109 | 2,098 | 2,114 | 2,213 | - |
| Magazine & newspaper, people employed | 22,181 | 22,607 | 22,402 | 21,774 | 21,548 | |
| Books and similar, people employed | 4,999 | 4,995 | 4,862 | 4,844 | 4,997 | |
| Printing & binding, people employed | 14,933 | 14,423 | 13,530 | 13,090 | 12,382 | - |
| Total printing, people employed | 41,198 | 42,025 | 40,794 | 39,708 | 38,827 | - |
| Consumer expenditure on newspapers, magazines, books and stationery (billions of U.S. dollars) | 3.952 | 4.280 | 4.324 | 4.010 | 4.093 | 4.569 |

Increasing Paper Production

Another way to gain a perspective on the Mexican printing industry is to look at paper production (see Table 8). The annual production of paper and paperboard in 2000 amounted to 3.87 million metric tonnes, which increased to 4.54 million tonnes in 2005. (One metric tonne is equivalent to 1,000 kilograms, which

is about 2,200 pounds.) A similar pattern was observed with the production of printing and writing paper, where production increased from 0.575 millions tonnes in 2000 to 0.614 millions tonnes in 2005. Newsprint production also increased from 246 thousand tonnes in 2000 to 258 thousand tonnes in 2005.

 Table 8. Paper production (Euromonitor)

click to view image full size

| Measure | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|-------|-------|-------|-------|-------|-------|
| Production of newsprint (thousands of tonnes) | 246 | 239 | 186 | 193 | 252 | 257 |
| YOY change (%) | - | -2.8 | -22.2 | 3.8 | 30.6 | 2.0 |
| Production of paper and paperboard (thousands of tonnes) | 3,865 | 4,056 | 3,987 | 4,149 | 4,391 | 4,535 |
| YOY change (%) | | 4.9 | -1.7 | 4.1 | 5.8 | 3.3 |
| Production of printing and writing paper (thousands of tonnes) | 575 | 639 | 507 | 589 | 601 | 614 |
| YOY change (%) | | 11.1 | -20.7 | 16.2 | 2.0 | 2.2 |

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