Economic Research Department

Mexico

BBVA

Sectorial Observatory

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The Sectors Most Affected by the Recession

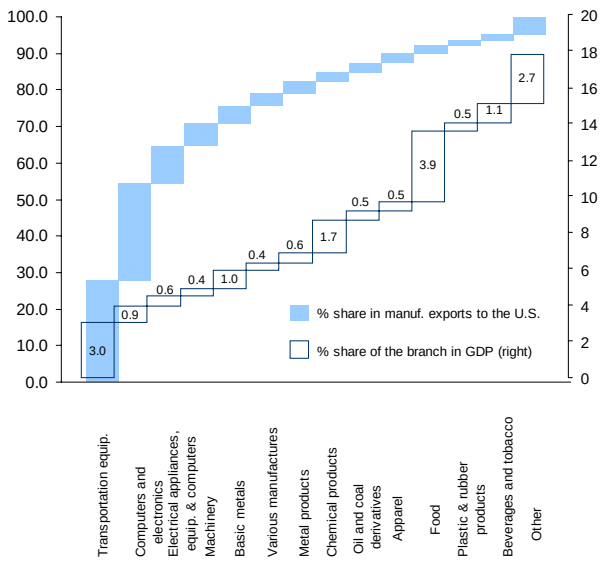
It is clear that in the recessive environment that will prevail during a good part of 2009 and perhaps 2010, the manufacturing sector will be facing the greatest challenges. However, in this sector also there will also be important differences, with some activities in a relatively more favorable condition than others. What will those differences be? This article examines the degree of exposure of the main manufacturing branches to the current cycle—particularly the U.S. recession—from different standpoints, including foreign trade, sensitivity to income and even marketing margins. Based on this analysis, it will be possible to arrange risks in order of importance and identify activities with greater or lesser exposure.

1. Exposure via foreign trade

As a first approximation on the issue of manufacturing exposure to the current cycle, a review is in order of the composition of Mexican exports to the United States. Figures at the end of 2008 show that, of the 21 sub-branches of activity in which the manufacturing industry[1] is divided, only those of the automotive industry (which include the manufacture of vehicles and auto parts) and of computers and electronic products account for more than 50% of the total. By adding the following three sub-branches, electrical appliances and equipment, machinery and basic metals, we reach 75% of manufacturing exports to the United States. The figures simply confirm the marked concentration of productive activity of the country, or at least the activity that has a high degree of integration with the U.S. economy. In addition to the labor-intensive factor, the common denominator of these activities is the production of durable goods. Also and almost by definition, given that in general these are luxury goods (or at least they are not basic commodities), they are easily dispensable in times of a contraction of income. And, in fact, this occurs: in recessive episodes they show a greater contraction than the rest of activities in the economy. Also, when we are in the high part of the cycle, they are the ones that show the greatest growth.

In terms of the contribution to GDP, the story is a little different, since the activities with a significant weight in exports, correspond, in great part, to in-bond manufacturing ("maquila") processes with low added value. For manufacturing activities with a greater weight in exports, only those of the automotive industry have a relatively high added value (3%), and, in a distant second place, the steel industry (1%). If they are taken jointly, the activities that represent 80% of exports contribute only 7% to GDP. In contrast, the food and beverages industry, with a 5% contribution to GDP,

How Are Exports to the U.S. Distributed?
(% share, 2008)



1 According to the Industrial Classification System for North America (ICSNA) which the INEGI recently adopted.

has a relatively low weight in exports of 3.6%. The fundamental characteristic of this last activity is its marked reliance on the domestic market, something that undoubtedly helps to cushion external shocks.

When including the exposure of the manufacturing sub-branches in an indicator, weighing its importance both in trade and in GDP, the result is that the activity with the most exposure is that of computers and electronic devices. The figure shows that, relative to its size, its share in exports is the highest among all other manufacturing activities. At the bottom of the classification is food, given its relatively low share in exports.

2. Income elasticity

A second approximation to the exposure of manufactures to the current cycle has to do with the sensitivity of production to changes in income. One way to measure this is through the ratio between the production rate of the activity, compared with the growth rate of the economy as a whole, or what is known as income elasticity. Based on industrial production and GDP figures in the United States[2] for the 1990-2008 period, the analysis of the 21 manufacturing sub-branches shows a differentiated pattern between durable-type goods and non-durables: as was to be expected, production in the case of durable goods, these respond in a more than proportional manner to changes in income, that is, they are relatively elastic. In contrast, for non-durable goods, the response is less than proportional, that is, they are relatively inelastic.

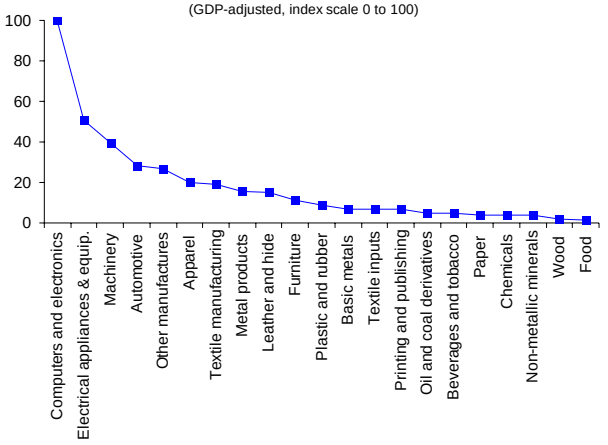
Considered jointly, durable goods have an income elasticity of 1.3 during the period in reference, while for non-durable goods, the elasticity is 0.3. Thus, with the elasticity criterion, durable goods are more vulnerable in a recessive stage to changes in income conditions, and similar to foreign trade, they have a higher risk level. By weighing trade and income elasticity in just one indicator, the result is that the activities with greater exposure or risk are the four that make up the division of machinery and equipment: computers and electronic devices, electrical equipment and appliances, machinery and the automotive industry. In the case of non-durable goods, those with higher risk are apparel, leather and footwear. It Is interesting that the joint share of these activities in national GDP is barely higher than 5% (around 25% of the manufacturing production value).

For the rest of the manufacturing activities, where the risk is comparatively lower, the greater relative importance corresponds to non-durable goods (8.7% of GDP). This sub-group includes activities such as food, beverages and tobacco, paper, publishing and printing, as well as chemical products, predominantly focused on the domestic market.

3. Marketing margins

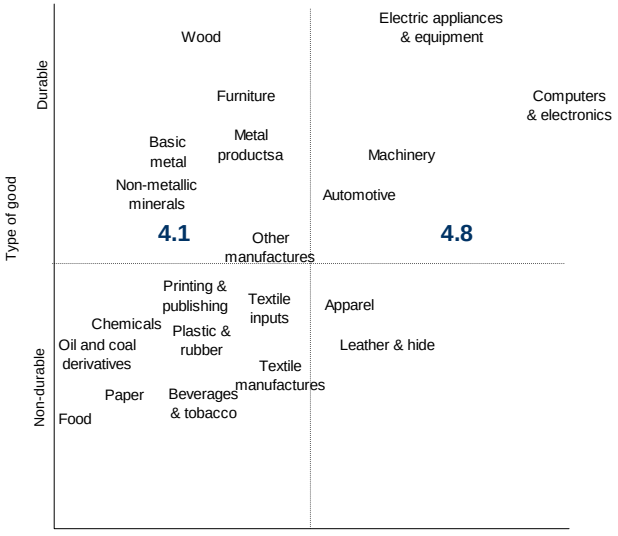
When analyzing the spread between consumer and producer prices for the different manufacturing activities, the result is an additional indicator of exposure to risk. In activities where the spread is wider, producers have a greater capacity to charge cost increases to the consumer. On the other hand, when the spread is low or even negative, producers must reduce their marketing margins or absorb part of the production costs when these rise. Typically, this occurs in goods with a high exposure to foreign trade.[3]

Exposure to Foreign Trade
(GDP-adjusted, index scale 0 to 100)



Source: BBVA Bancomer with INEGI and U.S. Department of Commerce data

What are the Manufacturing Activities with the Greatest Risk?
(Weighted by elasticity and export to the U.S.)



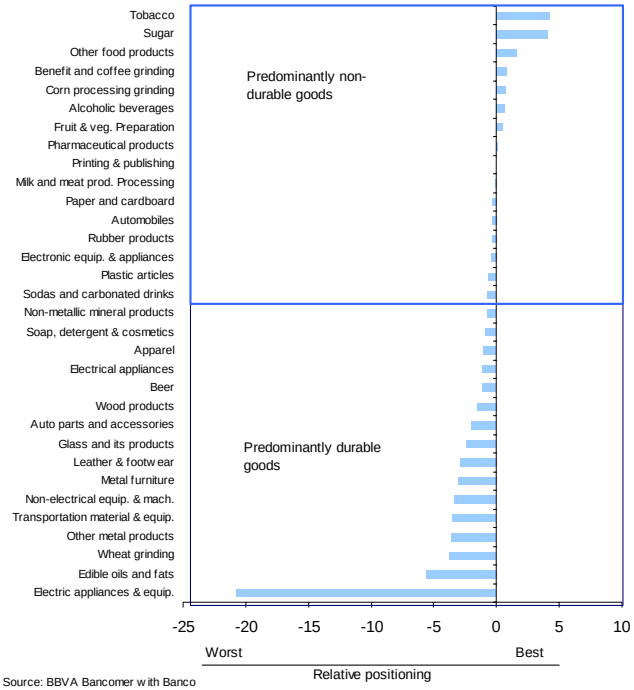
2 The United States economy was used as a reference due to the availability of information (for Mexico, the production figures under the ICSNA classification are available as of 2003) and due to the current context of a slowdown in external demand (with the United States receiving 85% of Mexico's manufacturing exports).

3 Imports help mitigate the imbalances in domestic prices, provided that there are no imbalances also in the exchange rate.

Based on the price indices prepared by Banco de Mexico for the manufacturing sector, we obtain 32 activities for which it is possible to make an analysis that will allow setting an approximation of the marketing margins.[4] Two results are significant. On one hand, we observe that, throughout the current decade, the marketing margins have been reduced in most activities, or that producer prices have grown at a greater speed than consumer prices. To a great extent, this could reflect the effect of a higher level of competition, first with the NAFTA and later with China's entry in the World Trade Organization.[5]

The second result, consistent with the analysis of foreign trade and price elasticity, is that, in general terms, the margins are better for non-durable goods, and especially food. Being a basic commodity, obviously marketing agents are in a more comfortable position in periods of generalized contraction of demand. In contrast, at the bottom of the list, among the most vulnerable activities are electrical appliances and equipment, on which the lowering of the cost of technology, seen in recent years, together with a greater supply of products, has probably had some bearing. It is also true that analysis based on the marketing margins has its limitations,[6] which are reflected, for example, in that there are also some food-related activities that are among those of greater margin reduction. Generally, however, the results are still valid: the most vulnerable activities predominantly correspond to non-durable goods and vice versa.

Marketing Margins In Manufactures: What Activities are the Most Vulnerable?
(Spread between producer and consumer prices)



Source: BBVA Bancomer w ith Banco de Mexico data.

Conclusions

Notwithstanding how difficult 2009 will be for the economy and, especially for the manufacturing sector, there will be notable differences in the performance of the various sectors. In manufacturing, the most vulnerable activities will be the machinery and equipment division: electrical appliances and electronic equipment, automotive products and machinery. This is how the analyses are reflected in terms of exposure to exports, sensitivity to income and even to companies' marketing margins. Although they are not surprising, the results of the analysis help us arrange, in order of importance, the magnitude of the impact of the global recession on the different productive activities.

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4 One way of structuring an approximation or proxy of the marketing margins is to consider the ratio between the producer and consumerr prices of the same productive branch.

5 Until the mid-nineties, all the indices showed positive spreads, or the capacity of producers to transfer the final cost increases to the consumer.

6 Because of intermediaries, the impact of supply shocks, regulations, etc., competition conditions are very different, even in the same product category. In food, the case of sugar is a good example, since specific legislation isolates this product from volatility in the international prices and of the adjustment capacity to domestic supply shocks via imports.