



# HoustonBusiness

*A Perspective on the Houston Economy*

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## Goodbye SIC, Hello NAICS: A Fresh Slate for Houston Jobs Data

*The biggest problem with NAICS's fresh-slate approach is that it represents a major break with the past. Thus, it leaves a gap in many important data series.*

**S**tatistical data collection in the United States is carried out by many public agencies, including the Bureau of Labor Statistics (BLS), Bureau of Economic Analysis (BEA) and Census Bureau. Government entities use a variety of norms and standards to ensure consistency in data collection, including guidelines for the classification of businesses by industry.

In 1937, the Central Statistical Board established an Interdepartmental Committee on Classification to provide an exhaustive list of manufacturing and nonmanufacturing industries. By 1939, this list had evolved into the Standard Industrial Classification (SIC) system for the United States. Although SIC has been revised extensively over the past 60 years, when a user of U.S. economic data has referred to mining, manufacturing, construction, financial, service or more detailed industries, SIC has

provided rigorous and consistent meaning to the term.

In 1992, the U.S. Office of Management and Budget established the Economic Classification Policy Committee (ECPC)—chaired by BEA and joined by BLS and the Census Bureau—to conduct a “fresh slate” examination of SIC and to design an improved conceptual framework for industrial classification. A series of concerns and issues provoked this reexamination: lack of internal consistency in SIC; its overemphasis on manufacturing, underemphasis on services and inability to cope with high-technology and other emerging industries; and a North American Free Trade Agreement-imposed need for consistency in data collection among the participating countries.

The resulting scheme, developed jointly by Canada, Mexico and the United States with ECPC representing the latter, is the North American Industry Classification System (NAICS). NAICS is not a simple revision or rearrangement of SIC but a radical break in both classification scheme and concept.

The new NAICS is suddenly important to readers of *Houston*

**Table 1**  
**Houston Employment Under SIC (4Q 2000)**

Agriculture	12,451
Mining	62,422
Construction	139,913
Manufacturing	189,548
TCPU	146,789
Wholesale Trade	120,642
Retail Trade	311,550
FIRE	102,448
Services	556,296
Government	229,984
<b>Total employment</b>	<b>1,872,043</b>
<b>Total wages</b>	<b>\$20,911,259,055</b>
<b>Average quarterly wages</b>	<b>\$11,170</b>
<b>Average weekly wages</b>	<b>\$859</b>

NOTE: TCPU is Transportation, Communication and Public Utilities;  
FIRE is Finance, Insurance and Real Estate.

SOURCE: Bureau of Labor Statistics.

*Business* because the primary source of timely and comprehensive data on the Houston economy is the BLS's monthly Covered Employment and Wages (ES-202) program. In early 2003, the SIC data series for ES-202 will be replaced by the NAICS-based data series. Although mining, manufacturing and construction data will still be reported in Houston, they will reflect different concepts from those reported just last year under SIC. NAICS also will report major new sectors, such as information, accommodation and food services, and health care and social assistance.

### The NAICS System

Table 1 shows Houston employment for the fourth quarter of 2000 as defined under the 10 major SIC divisions. Total wages, average quarterly wages per worker and average weekly wages are summarized at the bottom. Under the most recent (1987) revision, SIC detailed 1,004 industries in these 10 major divisions, although only 53 categories were regularly reported for Houston.

Table 2 summarizes the same data under NAICS. NAICS provides 20 high-level sectors, as opposed to SIC's 10. In addition to those sectors shown in Table

2, Trade, Transportation and Utilities is further broken into Wholesale Trade, Retail Trade, Transportation and Warehousing, and Utilities. Financial Activities is divided into Finance and Insurance plus Real Estate, Rental and Leasing. Professional and Business Services includes Professional, Scientific and Technical Services; Management of Companies and Enterprises; and Administrative and Support Services. Education and Health Services is divided into the two sectors in the title, as is Leisure and Hospitality. At the most detailed level, these 20 broad NAICS sectors ultimately contain 1,170 industries.

NAICS was developed to achieve several broad purposes. One was to shift the emphasis of the classification scheme to the rapidly growing service sectors; about two-fifths of the NAICS industries are goods-producing, as opposed to three-fifths under SIC. Another was to include a number of emerging and high-tech industries; we now find wireless telecommunications, software publishing, Internet service providers and web search portals among the industries on the NAICS list.

Additionally, every effort was made to provide international compatibility through NAICS. By developing NAICS jointly, U.S., Mexican and Canadian statistical agencies met the NAFTA requirement

of providing classification compatibility throughout North America down to detailed levels. The structure is also generally compatible with the United Nations International Standard Industrial Classification of All Economic Activities.

Finally, NAICS is entirely production-oriented, with the establishments grouped in each industry classification on the basis of sharing a common technology and production process. Clearly, many of the SIC categories were production-based (metal stamping, foundries, textiles). But others were better seen as market-based (products forming a unique market and often being close substitutes for each other). Children's or women's clothing, for example, may not share a common production process but were grouped on a market basis. Soft drinks and snack foods were similarly grouped.

NAICS eliminates all demand-oriented categories, moving to a consistent scheme of defining all classifications based on common production processes and classifying all establishments strictly by what they do.

**Table 2**  
**Houston Employment Under NAICS (4Q 2000)**

Natural Resources and Mining	59,574
Construction	140,674
Manufacturing	187,841
Trade, Transportation and Utilities	421,780
Information	43,742
Financial Activities	112,854
Professional and Business Services	299,193
Education and Health Services	168,018
Leisure and Hospitality	148,567
Other Services	57,907
Nonclassifiable	950
Public Administration	229,984
<b>Total employment</b>	<b>1,871,084</b>
<b>Total wages</b>	<b>\$20,902,154,597</b>
<b>Average quarterly wages</b>	<b>\$11,171</b>
<b>Average weekly wages</b>	<b>\$859</b>

SOURCE: Bureau of Labor Statistics.

## NAICS Problems

The biggest problem with NAICS's fresh-slate approach is that it represents a major break with the past. Thus, it leaves a gap in many important data series for those interested in trends, forecasting or seasonal adjustment. Of the 1,170 NAICS industries, only 422 (36 percent) have direct SIC counterparts, 390 (33 percent) are significantly revised and the remaining 358 (31 percent) are new classifications. Also, many of the reclassifications cross major industry groups, meaning that comparisons of even large categories such as mining, manufacturing and finance cannot be made pre- and post-SIC.

Further, the NAICS approach of classifying every establishment based on its production process is a substantial change in procedure. Consider, for example, the Covered Employment and Wages Program that provides monthly employment data for the United States (including Houston). NAICS required reassessment of the industry classification of 8 million establishments over a four-year period, with each establishment classified to the industry that reflects its primary productive activity. Thus, the industry categories for many establishments have changed.

Table 3 illustrates this change using an example provided by the Census Bureau. A hypothetical manufacturing company is made up of seven distinct establishments, each performing a certain business function. There are two factories, one manufacturing mufflers and the other tailpipes; a warehouse; a research and development lab; a sales cen-

**Table 3**  
**Establishment Classification Under SIC and NAICS**

Facility	Purpose	SIC Classification	NAICS Classification
A	Mufflers	Auto Parts Manufacture	Auto Parts Manufacture
B	Tailpipes	Auto Parts Manufacture	Auto Parts Manufacture
C	Warehouse	Auto Parts Manufacture	Transportation and Warehousing
D	R&D	Auto Parts Manufacture	Professional and Technical Services
E	Sales	Wholesale Trade	Wholesale Trade
F	Headquarters	Auto Parts Manufacture	Headquarters
G	Payroll	Auto Parts Manufacture	Professional and Technical Services

NOTE: Example is from Clarification Memorandum No. 3, "Classifying SIC Auxiliary Establishments in NAICS," at [www.census.gov/epcd/www/naimemo3.htm](http://www.census.gov/epcd/www/naimemo3.htm).

ter; a headquarters; and a payroll function.

Under SIC, all of the separate administrative establishments associated with this company would be classified under Auto Parts Manufacture except for the sales unit, which goes to Wholesale Trade. Under SIC, the establishments provided support for a manufacturing activity; the classification was on the basis of the company activity, and the jobs were assigned to the auto industry.

Under NAICS, however, each establishment is judged on its own merit, and only the muffler and tailpipe factories are in manufacturing. The payroll function, for example, is treated no differently from any independent payroll processing service; it is classified in NAICS 541214, Payroll Services, part of Professional and Technical Services.

The example shows that differences between SIC and NAICS reflect more than establishing a new classification scheme and moving establishments from one category to another. Under NAICS, the initial establishment classification becomes completely production-based, and establishments are widely reclassified. Although classification structure is compatible, this production-based scheme is unique to NAICS, making it different from SIC, from the United Nations' classification and from other international schemes.

## Implications for Houston

It is a fresh slate for Houston data, too. Users of employment, wage and other data at the state and local level are the most disadvantaged because of the break in the data series NAICS imposes. Total employment and employment for some large sectors will be provided for the nation back to 1939; start dates for finer detail vary widely. For states and local areas, only total employment data will be available back to 1939; nothing more detailed than total employment will be available for before January 1990.

The inconvenience of NAICS at the local level will be less than anticipated. For the Houston area, monthly employment reports will now provide data on more than 60 NAICS categories—up from the 53 reported under SIC. We will see new job categories, such as heavy construction, computer manufacturing, telecommunications, computer systems design, and nursing and residential care facilities. BLS will provide historical detail back to January 1990 on all 60-plus industries using bridge tables containing estimates based on ratios between SIC and NAICS industries.

—Robert W. Gilmer  
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**H**ouston Beige Book respondents provided a mixed review of the local economy, indicating little overall change in fundamentals. There was no significant job growth, but the local unemployment rate has stayed at a seasonally adjusted 5.7 percent for three months. The local purchasing managers index moved back over 50 in January, indicating mild expansion, and the single-family housing market remains very strong. Weakness continued in auto and retail sales.

#### **Retail and Auto Sales**

Retail sales were reported to be very soft across all segments of the market, from discount and department stores to furniture and grocery stores. Since the holidays, retailers have been falling further and further behind plan. Auto dealers are finding that last year's rebates and discounts stole sales from this year, with January sales in Harris County running 8 percent below last January's.

#### **Oil Markets**

Excitement in recent weeks has been provided by the fireworks in oil and natural gas prices, which moved over \$35 per barrel for crude oil and \$6 per thousand cubic feet for natural gas. Potential war in Iraq, class war in Venezuela and freezing weather in the Northeast and Midwest gave momentum to energy prices. There was a sharp pull-down in inventories of both crude and oil products, and stocks fell to near-critical levels for refinery system operations. With crude supplies unavailable to rebuild

inventories, high gasoline prices are likely to persist through summer.

The loss of Venezuelan crude supplies hit Gulf Coast refiners hard. Refinery utilization rates fell from the mid-90 percent level in mid-January to mid-80 percent by early February and have improved slowly since. Refined product prices have shot upward but have generally lagged the price of crude, putting modest downward pressure on refiners' profit margins.

#### **Petrochemicals**

High oil and natural gas prices are bad news downstream, and petrochemical producers have been forced to push through price increases to cover rapidly rising feedstock prices. Prices are up for polyethylene, polystyrene, butadiene, chlorine and polyvinyl chloride. Although demand has recovered over the past year, profit margins generally remain weak, and rising prices have been strictly an effort to maintain modest profit margins.

#### **Drilling Activity**

The domestic rig count improved to over 900 working rigs in February, but the new projects were generally conservative—onshore, vertical, low-cost wells. Service companies declined to declare a discernible upward trend in activity

based on recent weekly increases. Any U.S. gains were offset by weakness overseas—turmoil in Venezuela, elections in Nigeria, seasonal weakness in the North Sea. A sharp decline in natural gas inventories bodes well for future drilling, but producers' stock prices still do not reflect the sharp rise in oil and natural gas prices.

#### **Real Estate**

Low interest rates continue to drive strong sales of single-family housing in Houston. Existing homes hit the highest level of January sales ever, matched by both the highest median January home price and builder inventory. Apartment occupancy continued to fall in class A, as strong home sales and no job growth took their toll. Apartment rents, which were rising for most of last year, flattened in the fourth quarter, especially in class A.

Office rents continued to decline through the fourth quarter, just as they did all year. In pursuit of office tenants, property owners are offering free rent and free parking as well as moving and improvement allowances. The weakest markets are in the central business district, Westchase, Greenway Plaza and Galleria areas.



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