

## **Your Economy Time Series (YE Time Series) Database Description 1997 - 2021**

YE Time Series (Your-economy Time Series) is an establishment-level time-series database used by academic researchers, policy makers, economic development analysts, and for profits seeking to evaluate companies at their unique locations across the U.S. YE Time Series is assembled exclusively by BDRC and tracks all establishments (and their jobs and sales), including for-profit (both privately-owned and publicly-traded), non-profits, agriculture, and government establishments.

YE Time Series data is the resource behind the popular website [YourEconomy.org](http://YourEconomy.org), and is available for aggregate modeling, research, and direct licensing.

### **Dynamic “In-business” Establishments**

YE Time Series focuses on establishments that are “in-business”, meaning they are or intend to be conducting commercial activities. By contrast, businesses that are created for the purpose of housing financial, real estate, and tax reporting entities, or are suspected of never actually conducting commercial activities, are not included in YE Time Series.

### **Jobs in YE Time Series vs. FTE**

Jobs in the YE Time Series are defined as all persons currently working at an establishment including full-time, part-time, and temporary workers. This includes proprietorships and sole-proprietorships (self-employed), and no distinction is made between employee or non-employee designations. The government data ([Quarterly Census of Employment and Wages](#)) does not count proprietorships (partners) and sole-proprietorships as jobs, and only begins to count jobs when they hire a full-time employee (FTE).

### **YE Time Series Time-series Assembly**

Each quarter, Data Axle delivers over 300 data variables per record to BDRC for all establishments in their database (approximately 80 million records) including verified, suspect, pre-verified, and closed:

Verified - establishment verified “in-business” at location (>97% accuracy)

Pre-verified - new establishment has not met all verified rules  
Suspect - establishment removed from verified status for further review  
Closed - establishment verified out of business at location

From 1997 thru 2019, the YE Time Series was assembled from Data Axle Business Data verified annual historical files. **Starting in March of 2020** BDRC began receiving data on a quarterly basis (March, June, September, and December) which is now used to assemble the YE Time Series on an annual and quarterly basis starting the first quarter (March) of 2020. YE Time Series annual data is available from 1998.

All records are assembled using the Data Axle unique ABI (American Business Identifier or Infogroup\_ID) to link all historical and quarterly files together. Each year 168 time-series variables, including BDRC uniquely developed variables (eg. congressional districts, census tract FIPS), are assembled from the original Data Axle data variables.

All Verified data is used when assembling the YE Time Series databases, with the Pre-verified, Suspect, and Closed data used to examine and improve the Verified data.

### Annual Assembly

After the establishment records are assembled and added to the YE Time Series, some (1-2%) have gaps between years of data (eg. active in 2018, missing data in 2019 and 2020, active again in 2021). These gaps are repaired by rolling values into the missing year as needed to complete the record. **No averaging is used in this process.** The latest year (last year) of information indicating an establishment's name, address, and location is also assembled and included.

**YE Time Series remains transparent.** In rare circumstances, major data outliers (primarily in employment, industry, and parent relationship variables) are identified, verified, and repaired (imputed) algorithmically. This typically accounts for less than 3% of all YE Time Series data. Any data that is in question will be examined, verified with large internal establishment databases and external sources, and corrected as necessary. In the rare cases where this outlier process is not able to verify data at an acceptable level, the individual establishment record is temporarily deactivated for further review.

BDRC has developed a separate sales model that replaces all sales values taken from Data Axle verifying strong statistically significant relationships between Data Axle

modeled establishment and actual firm (corporate) sales, 6-digit NAICS, and verified jobs data. To keep in step with GDP (Gross Domestic Product), each new sales value is multiplied by an annual inflation value using Gross Output (sales and revenue) factors from the BEA (Bureau of Economic Analysis).

### **Quarterly Model Assembly**

On average, Data Axle contacts every company in the US at least once per year in order to up-date the establishment records for start-ups, establishment deaths, and going concerns. At a quarterly level this means that approximately one-fourth of records have been made current by Data Axle.

BDRC imputes values of the files not updated by Data Axle in each quarter (approximately three-fourths of records). Imputation estimates the status (expansion, contraction, or death) and job levels of the non-updated records by distilling information from the updated records and applying this back to the non-updated records. The relevant variables used in the model include industry, employment size, and geographic location (based on FIPS). The model employs a combination of multiple imputation and linear regression techniques.

As soon as records are updated by Data Axle, BDRC exchanges any old imputation information with this new 'actual' information so that each record is as current and correct as possible.

**Records that are removed (deactivated) from the the YE Time Series data include:**

- All ATM machines, video kiosks, and other automated kiosks;
- Financial and real estate vehicles (funds, bonds)
- Establishments setup strictly for tax purposes indicating no employment or where commercial intent is not verifiable.

### **Data Axle Actual Reported Versus Modeled Values**

**Jobs** - approximately 49% of the Data Axle businesses have their location employment size verified through telephone interview. When an employment number cannot be verified through the telephone interview process, a model is built to estimate the employment size. About 51% of businesses have their location employment size modeled by Data Axle. The model uses a multi-step approach, with over 7 million

telephone verified employment figures as the cornerstone, to create the most accurate estimated employment information possible.

### YE Time Series 2021 Annual Field Variable List

YE Time Series Field Name	YE Time Series Only	Description
<b>Last Year Variables (describes the latest or last year in the database)</b>		
ABI		ALSO KNOWN AS IUSA NUMBER, ABI NUMBER, INFOGROUP NUMBER OR LOCATION NUMBER, THIS PROVIDES A UNIQUE IDENTIFIER FOR EACH BUSINESS IN THE INFOGROUP BUSINESS DATABASE
Company		NAME OF BUSINESS - WILL HAVE BLANKS
City		HISTORICAL ADDRESS CITY
State		HISTORICAL ADDRESS STATE
Zipcode		HISTORICAL ADDRESS ZIP CODE
Gender		GENDER OF THE CONTACT OR EXECUTIVE. F=FEMALE, M=MALE, U=UNDETERMINED - WILL HAVE BLANKS
Age	Yes	TOTAL NUMBER OF YEARS ALIVE IN THE DATABASE
YearStart		YEAR THE BUSINESS BEGAN OPERATING - WILL HAVE BLANKS
FirstYear	Yes	FIRST YEAR ESTABLISHMENT ENTERS DATABASE
LastYear	Yes	LAST YEAR ESTABLISHMENT IS IN DATABASE
Latitude		PARCEL LEVEL ASSIGNED VIA POINT GEO CODING. HALF OF A PAIR OF COORDINATES (THE OTHER BEING LONGITUDE) PROVIDED IN A DECIMAL DEGREE FORMAT, WITH A NEGATIVE SIGN FOR LONGITUDE. NOT AVAILABLE IN PUERTO RICO & VIRGIN ISLAND
Longitude		SEE LATITUDE DESCRIPTION
EIN		EMPLOYMENT IDENTIFICATION NUMBER - WILL HAVE BLANKS

Credit Numeric Score		THE CODES WERE DEVELOPED FROM THE DEMOGRAPHIC INFORMATION IN THE INFOGROUP DATABASE INCLUDING EMPLOYEES AND YEARS IN BUSINESS AS WELL AS HISTORICAL PERFORMANCE DATA AND OTHER INFORMATION. INFOGROUP DEVELOPED PREDICTIVE STATISTICAL MODELS BASED ON MULTIVARIATE REGRESSION ANALYSIS TO DETERMINE CREDITWORTHINESS OF BUSINESSES. EACH CREDIT SCORE IS ASSIGNED A NUMBER BASED UPON THE ALPHA SCORE - WILL HAVE BLANKS
Foreign Parent Flag		1 INDICATES FOREIGN AFFILIATION - WILL HAVE BLANKS
CTBlock		A COMBINATION OF CENSUS BLOCKS WITHIN A CENSUS TRACT (VALUES 1-9 OR BLANK)
SICDescription		THE DESCRIPTION FOR THE SIC CODE FOR THE LAST YEAR
NAICSDescription		THE DESCRIPTION FOR THE NAICS CODE FOR THE LAST YEAR
StockSymbol		A SERIES OF LETTERS ASSIGNED TO A SECURITY FOR TRADING PURPOSES. WILL HAVE BLANKS
StockExcahnge	Yes	THE ABBREVIATION FOR THE NAME OF THE STOCK EXCHANGE - WILL HAVE BLANKS
<b>Time Series Variables (exist every year in the database 1997-2020) Field Name+4-digit year</b>		
HQABI		THE PARENT NUMBER IDENTIFIES THE CORPORATE PARENT OF THE BUSINESS AND ALSO SERVES AS THE ABI NUMBER FOR THE HEADQUARTERS SITE OF THE PARENT. THIS FIELD PROVIDES 'CORPORATE OWNERSHIP' LINKAGE INFORMATION. THIS INFORMATION IS NOT COLLECTED OR MAINTAINED FOR THE TYPES OF ORGANIZATION FOR WICH OWNERSHIP IS AMBIGUOUS. CHURCHES AND SCHOOLS, IN PARTICULAR, ARE NOT LINKED FOR THIS REASON
ZipCode		HISTORICAL ADDRESS ZIP CODE EACH YEAR

SIC		A LINE OF BUSINESS THAT COMPANY ENGAGES IN: 6 DIGITS
NAICS		THE DESCRIPTION FOR THE PRIMARY 6 DIGIT NAICS CODE. 2017 DEFINITION WITH 2 DIGIT ADDITIONAL EXTENSION TO MAP WITH SIC
Seg	Yes	MARKET SEGMENTS GROUPING 6-DIGIT NAICS: ET = EXTERNAL TRADE, LT = LOCAL TRADE, NTH = NON TRADE/ HEALTHCARE
Type	Yes	3 ESTABLISHMENT TYPES TOTALING 100%: R = RESIDENT (EITHER STANDALONE OR HQ IN THE REGION EXAMINED) NR = NONRESIDENT (HQ NOT IN THE REGION EXAMINED) NC = NONCOMMERCIAL (GOVERNMENT, NONPROFIT, DETERMINED BY NAICS)
Emp		NUMBER OF EMPLOYEES AT THAT LOCATION
EstCat	Yes	INDICATES IF RECORD IS HQ, SUBSIDIARY, BRANCH, OR STANDALONE: 1=HQ 2=BRANCH 3=SUBSIDIARY 9=INDEPENDENT OR INDIVIDUAL (ONE JOB WHERE INDIVIDUAL NAME=COMPANY NAME)
Sales	Yes	BDRC MODLED SALES VOLUME AT THAT LOCATION (IN THOUSANDS)
CBSA		CORE BASES STATISTICAL AREA (EXPANDED MSA CODE) EACH YEAR
FIPS		FIRST 2 BYTES = STATE CODE, LAST 3 BYTES = COUNTY CODE (LOCATION)
HQFIPS	Yes	PARENT NUMBER (ESTABLISHMENT) FIPS EACH YEAR
CDIST	Yes	CONGRESSIONAL DISTRICT IDENTIFICATION FOR EVERY ESTABLISHMENT EACH YEAR IN THE TIME-SERIES FROM THE 115TH CONGRESS
CTFIPS	Yes	STARTING IN 2019: AN 11-DIGIT STATISTICAL SUBDIVISION OF A COUNTY FORMAT: FIPS+CENSUSTRACT

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EthnicGroup		<b>Code Description</b> A SOUTH ASIAN B AFRICAN AMERICAN C CENTRAL & SOUTHWEST ASIAN E EASTERN EUROPEAN F FAR EASTERN H HISPANIC I MIDDLE EASTERN J JEWISH M MEDITERRANEAN N NATIVE AMERICAN P PACIFIC ISLANDER S SCANDINAVIAN W WESTERN EUROPEAN X OTHER Z UNCODED (NO GROUP) WILL HAVE BLANKS