

# BEA API for Data Retrieval

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## *User Guide*

### **Introduction**

The Bureau of Economic Analysis (BEA) publishes economic statistics in a variety of formats. This document describes the BEA Data Retrieval Application Programming Interface (API) – including detailed instructions for retrieving data and meta-data published by BEA. The API is intended to provide programmatic access to published economic statistics using industry-standard methods and procedures. The intended audience of this document is programmers who are familiar with the concepts and techniques of retrieving data from Web Services.

The BEA API includes methods for retrieving a subset of BEA statistical data, and meta-data that describes it. As additional datasets are added, the meta-data retrieval methods can be used to discover the current data accessible through the API.

### **Access to the BEA API**

The API is available to registered users on the BEA public web site. Before using the API, users must obtain a unique 36-character UserID by registering at <https://www.bea.gov/api/signup/>. To register, API users must provide their name (or organization name), a valid email address, and agree to the published terms of service. After completing the registration form an email is sent containing the assigned UserID, and a link that completes the registration process. Assigned UserIDs are activated when the link has been clicked.

The URI<sup>1</sup> of the API is: <https://www.bea.gov/api/data>. All API access is through this URI; no other paths are used. Data is retrieved by sending an HTTP GET to the URI with appropriate (querystring) parameters supplied. The minimum parameters for every request include the UserID and the name of the method being invoked. For example:

<https://www.bea.gov/api/data?&UserID=Your-36Character-Key&method=GETDATASETLIST&>

would retrieve a list of the datasets currently offered by the BEA API (if the UserID was valid – it's not).

Statistical data offered by the API is organized into defined “Datasets”. An API data retrieval request always specifies one dataset by name. Each dataset has a number of defined parameters, and each parameter has a defined set of valid values. There are four API methods that return meta-data about the API – corresponding to datasets, parameters, and valid parameter values. There is one method that returns data.

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<sup>1</sup> Uniform Resource Identifier

## JavaScript Usage

While the API may be used from any language capable of issuing HTTP requests (Java, PHP, Perl, Python, C, etc. ), two features are supported that allow JavaScript to issue requests without violating same-origin security checks - CORS and JSONP.

If you're writing a browser-based web application for modern web browsers with support for CORS then you may simply use an XMLHttpRequest as usual, without any changes. All HTTP responses generated by the API will include the necessary CORS headers.

If you're writing a browser-based web application for legacy browsers without support for CORS then your request URL query string may include a *jsonp* argument. If present, this prefix will be wrapped around the response, allowing you to capture the result of the query.

For example:

[https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetData&datasetname=RegionalIncome&TableName=CA4&LineCode=30&GeoFIPS=COUNTY&Year=2013&ResultFormat=json&jsonp=MY\\_FUNCTION\\_NAME](https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetData&datasetname=RegionalIncome&TableName=CA4&LineCode=30&GeoFIPS=COUNTY&Year=2013&ResultFormat=json&jsonp=MY_FUNCTION_NAME)

## Data Return Format

The API returns data in one of two formats: JSON<sup>2</sup> or XML<sup>3</sup>. The optional *ResultFormat* parameter can be included on any request to specify the format of the results. If *ResultFormat* is not supplied on the request, or an invalid *ResultFormat* is specified, the default format returned is JSON.

The valid values for *ResultFormat* are “JSON” and “XML”. For example, the following request would return a list of the available datasets in XML format:

<https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GETDATASETLIST&ResultFormat=XML&>

This request would return a list of the available datasets in JSON format: <https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GETDATASETLIST&ResultFormat=JSON&>

The data returned from the API always has the following basic structure, with some additional structure depending on the data requested:

```
<BEAAPI>
  <Request>
    <RequestParam ParameterValue="GETDATASETLIST" ParameterName="METHOD" />
    <RequestParam ParameterValue="Your-36Character-Key" ParameterName="USERID" />
    <RequestParam ParameterValue="XML" ParameterName="RESULTFORMAT" />
  </Request>
  <Results>
    <Dataset DatasetDescription="Standard NIPA tables" DatasetName="NIPA" />
    <Dataset DatasetDescription="Standard NI underlying detail tables" DatasetName="NI UnderlyingDetail" />
    <Dataset DatasetDescription="Multinational Enterprises" DatasetName="MNE" />
    <Dataset DatasetDescription="Standard Fixed Assets tables" DatasetName="FixedAssets" />
    <Dataset DatasetDescription="International Transactions Accounts" DatasetName="ITA" />
    <Dataset DatasetDescription="International Investment Position" DatasetName="IIP" />
    <Dataset DatasetDescription="GDP by Industry" DatasetName="GDPbyIndustry" />
    <Dataset DatasetDescription="Regional Income data sets" DatasetName="Regional Income" />
    <Dataset DatasetDescription="Regional Product data sets" DatasetName="Regional Product" />
  </Results>
</BEAAPI>
```

<sup>2</sup> Java Script Object Notation

<sup>3</sup> Extensible Markup Language

In XML form, the root node is always **<BEAAPI>**, followed by the child node **<Request>**. The **<Request>** node contains **<RequestParam>** children that echo the parameters passed in the request. The root node, **<BEAAPI>**, then has another child node, **<Results>**, containing the results of the request. The Results content is different depending on the method and parameters passed. In this example, the result of the GetDatasetList method is shown to be a simple list of Dataset names and descriptions.

In JSON form, the example above returns data as follows (white-space and indentation added for clarity):

```
{
  "BEAAPI": {
    "Request": {
      "RequestParam": [
        {
          "ParameterName": "USERID",
          "ParameterVal ue": " Your-36Character-
            Key "
        },
        {
          "ParameterName": "RESULTFORMAT",
          "ParameterVal ue": "JSON"
        },
        {
          "ParameterName": "METHOD",
          "ParameterVal ue": "GETDATASETLIST"
        }
      ]
    },
    "Resul ts": {
      "Dataset": [
        {
          "DatasetName": "NIPA",
          "DatasetDescription": "Standard NIPA
            tables"
        },
        {
          "DatasetName": "NIUnderly ingDetail ",
          "DatasetDescription": "Standard NI underlying
            detail tables"
        },
        {
          "DatasetName": "MNE",
          "DatasetDescription": "Multinational
            Enterprises"
        },
        {
          "DatasetName": "FixedAssets",
          "DatasetDescription": "Standard Fixed
            Assets tables"
        },
        {
          "DatasetName": "ITA",
          "DatasetDescription": "International Transactions Accounts"
        },
        {
          "DatasetName": "IIP",
          "DatasetDescription": "International Investment Position"
        },
        {
          "DatasetName": "GDPbyIndustry",
          "DatasetDescription": "GDP by
            Industry"
        },
        {
          "DatasetName": "Regional Income",
          "DatasetDescription": "Regional Income data
            sets"
        },
        {
          "DatasetName": "Regional Product",
          "DatasetDescription": "Regional Product data
            sets"
        }
      ]
    }
  }
}
```

## Error Return Format

When invalid values are supplied for parameters in a request, or required parameters are missing, the results contain an error message – for example:

```
<BEAAPI>
<Request>
  <RequestParam ParameterName="USERID" ParameterValue="Your- 36Character-Key" />
  <RequestParam ParameterName="METHOD" ParameterValue="GETDATASETLIST" />
  <RequestParam ParameterName="ResultFormat" ParameterValue="XML" />
</Request>
<Results>
  <Error APIErrorCode="3" APIErrorDescription="The BEA API UserID provided in the request does not exist. " />
</Results>
</BEAAPI>
```

## Meta-Data API Methods

The API contains three methods for retrieving meta-data as follows:

*GetDataSetList* – retrieves a list of the datasets currently offered.

Required Parameters: UserID, Method

Optional Parameters: ResultFormat

Result: *Dataset* node with *DatasetName* and *DatasetDescription* attributes.

Example Request:

<https://www.bea.gov/api/data?&UserID=Your-36Character-Key&method=GETDATASETLIST&ResultFormat=XML&>

Example Return:

```
<BEAAPI>
<Request>
  <RequestParam ParameterValue="GETDATASETLIST" ParameterName="METHOD" />
  <RequestParam ParameterValue="Your- 36Character-Key" ParameterName="USERID" />
  <RequestParam ParameterValue="XML" ParameterName="RESULTFORMAT" />
</Request>
<Results>
  <Dataset DatasetDescription="Standard NIPA tables" DatasetName="NIPA" />
  <Dataset DatasetDescription="Standard NI underlying detail tables" DatasetName="NI UnderlyingDetail" />
  <Dataset DatasetDescription="Multinational Enterprises" DatasetName="MNE" />
  <Dataset DatasetDescription="Standard Fixed Assets tables" DatasetName="FixedAssets" />
  <Dataset DatasetDescription="International Transactions Accounts" DatasetName="ITA" />
  <Dataset DatasetDescription="International Investment Position" DatasetName="IIP" />
  <Dataset DatasetDescription="GDP by Industry" DatasetName="GDPbyIndustry" />
  <Dataset DatasetDescription="Regional Income data sets" DatasetName="RegionalIncome" />
  <Dataset DatasetDescription="Regional Product data sets" DatasetName="RegionalProduct" />
</Results>
</BEAAPI>
```

*The RegionalData data set is obsolete and API calls using this data set will no longer function. Users should instead access the datasets RegionalIncome and RegionalProduct, which provide comprehensive detail in statistics, industries, geography, and years. See Appendices I and J for instructions on how to use these two data sets. In addition, BEA continues to add new datasets as appropriate, and while any new datasets will be announced on the BEA's website Developers page (<https://www.bea.gov/developers>), we also encourage users to periodically call the above GETDATASETLIST discover new datasets.*

*GetParameterList* – retrieves a list of the parameters (required and optional) for a particular dataset.

Required Parameters: UserID, Method, DatasetName

Optional Parameters: ResultFormat

Result: *Parameter* node with attributes:

- ParameterName – the name of the parameter as used in a data request
- ParameterDataType – String or Integer
- ParameterDescription – a description of the parameter
- ParameterIsRequired – 0 if the parameter can be omitted from a request, 1 if required
- ParameterDefaultValue – the default value used for the request if the parameter is not supplied
- MultipleAcceptedFlag – 0 if the parameter may only have a single value, 1 if multiple values are permitted. Note that multiple values for a parameter are submitted as a comma-separated string.
- AllValue – the special value for a parameter that means all valid values are used without supplying them individually.

Example Request 1:

<https://www.bea.gov/api/data?&UserID=Your-36Character-Key&method=getparameterlist&datasetname=RegionalIncome&ResultFormat=XML>

Example Return 1:

```
<BEAAPI>
<Request>
  <RequestParam ParameterName="USERID" ParameterValue="Your-36Character-Key" />
  <RequestParam ParameterName="METHOD" ParameterValue="GetParameterList" />
  <RequestParam ParameterName="DatasetName" ParameterValue="RegionalIncome" />
  <RequestParam ParameterName="ResultFormat" ParameterValue="XML" />
</Request>
<Results>
  <Parameter ParameterName="GeoFips" MultipleAcceptedFlag="1" ParameterIsRequiredFlag="1"
    ParameterDataType="string" ParameterDescription="Comma-delimited list of 5-character geographic codes;
    COUNTY for all counties, STATE for all states, MSA for all MSAs, MIC for all Micropolitan Areas, PORT for
    all state metro/nonmetro portions, DIV for all Metropolitan Divisions, CSA for all Combined Statistical
    Areas, state post office abbreviation for all counties in one state (e.g. NY)" />
  <Parameter ParameterName="TableName" MultipleAcceptedFlag="0" ParameterIsRequiredFlag="1" ParameterDataType="string"
    ParameterDescription="Income or employment table to retrieve" />
  <Parameter ParameterName="LineCode" MultipleAcceptedFlag="0" ParameterIsRequiredFlag="1" ParameterDataType="integer"
    ParameterDescription="Line code for a statistic or industry" />
  <Parameter ParameterName="Year" MultipleAcceptedFlag="1" ParameterIsRequiredFlag="0" ParameterDescription="Comma-delimited
    list of years; LAST5 for latest 5 years; LAST10 for latest 10 years; ALL for all years" ParameterDefaultValue="LAST5"
    ParameterDataType="string" />
</Results>
</BEAAPI>
```

In this example, the parameters for the “RegionalIncome” dataset are being requested. The results indicate that the dataset has four parameters: GeoFips, LineCode, TableName, and Year.

GeoFips is a string typed parameter indicating the geographic codes requested. GeoFIPS is required. Multiple values are accepted, in a comma-delimited list, and there are special values such as COUNTY for all counties.

TableName is a string typed parameter that specifies what table has the statistic requested. We can’t tell from this what the valid TableNames are, but we can see that it is required (and therefore has no default value), and that multiple values are not allowed (and therefore there is no special “all” value).

LineCode specifies the requested statistic in the table. This integer is the line code in the table specified in the TableName parameter. We don’t know what these line codes are, but we can send another request to find out.

Year is a string typed parameter containing the years requested. It is not required in a request, and if is not included, the default value used is “LAST5”. A comma-delimited list of years is accepted, as well as other special values like “LAST10” and “ALL”.

Example Request 2:

<https://www.bea.gov/api/data?&UserID=Your-36Character-Key&method=getparameterlist&datasetname=RegionalProduct&ResultFormat=XML>

Example Return 2:

```
<BEAAPI>
  <Request>
    <RequestParam ParameterValue="XML" ParameterName="RESULTFORMAT"/>
    <RequestParam ParameterValue="Your-36Character-Key" ParameterName="USERID"/>
    <RequestParam ParameterValue="REGIONALPRODUCT" ParameterName="DATASETNAME"/>
    <RequestParam ParameterValue="GETPARAMETERLIST" ParameterName="METHOD"/>
  </Request>
  <Results>
    <Parameter ParameterName="Component" MultipleAcceptedFlag="0" ParameterIsRequiredFlag="1" ParameterDescription="GDP component code" ParameterDataType="integer"/>
    <Parameter ParameterName="GeoFips" MultipleAcceptedFlag="1" ParameterIsRequiredFlag="1" ParameterDescription="Comma-delimited list of 5-character geographic codes; STATE for all states, MSA for all MSAs" ParameterDataType="string"/>
    <Parameter ParameterName="IndustryId" MultipleAcceptedFlag="0" ParameterIsRequiredFlag="1" ParameterDescription="Industry code to retrieve from component" ParameterDataType="integer"/>
    <Parameter ParameterName="Year" MultipleAcceptedFlag="1" ParameterIsRequiredFlag="0" ParameterDescription="Comma-delimited list of years; LAST5 for latest 5 years; LAST10 for latest 10 years; ALL for all years" ParameterDataType="string" ParameterDefaultValue="LAST5"/>
  </Results>
</BEAAPI>
```

In this example, the parameters for the “RegionalProduct” dataset are being requested. The results indicate that the dataset has four parameters: GeoFips, Component, IndustryId, and Year.

GeoFIPS is a string typed parameter described as the GeoFIPS code. GeoFIPS is required. Multiple values are accepted, and there are special parameters to specify a group of areas, like “STATE” for all states.

Component is an integer corresponding to a GDP component. We don’t have the list of Components in this request but we can tell it is required.

Industry is an integer used to specify which industry is being requested for a given Component. We can’t tell from this what the industryIds are, but we can see that it is required (and therefore has no default value), and that multiple values are not allowed (and therefore there is no special “all” value).

Year is string typed parameter described as “Year”. It is not required in a request, and if is not included, the default value used is “LAST5” for the last available five years. “ALL” and “LAST10” are also available. To choose specific years, submit a comma-delimited list of years, like “1990,2000,2010”.

*GetParameterValues* – retrieves a list of the valid values for a particular parameter.

Required Parameters: UserID, Method, DatasetName, ParameterName

Optional Parameters: ResultFormat

Result: *ParamValue* node with attributes that contain the actual permissible values (and usually a description of the value).

Example Request 1:

<https://bea.gov/api/data?&UserID=Your-36Character->

[Key&method=GetParameterValues&datasetname=RegionalProduct&ParameterName=Component&](#)

Example Return 1:

```
<BEAAPI>
<Request>
  <RequestParam ParameterName="USERID" ParameterValue="Your-36Character-Key" />
  <RequestParam ParameterName="METHOD" ParameterValue="GetParameterValues" />
  <RequestParam ParameterName="DatasetName" ParameterValue="RegionalProduct" />
  <RequestParam ParameterName="ParameterName" ParameterValue="Component" />
  <RequestParam ParameterName="ResultFormat" ParameterValue="XML" />
</Request>
<Results>
  <ParamValue Desc="Compensation of employees [State Annual NAICS]" Key="COMP_SAN"/>
  <ParamValue Desc="Compensation of employees [State Annual SIC]" Key="COMP_SAS"/>
  <ParamValue Desc="Gross domestic product (GDP) by metropolitan area [Metro Annual NAICS]" Key="GDP_MAN"/>
  <ParamValue Desc="Gross domestic product (GDP) by state [State Annual NAICS]" Key="GDP_SAN"/>
  <ParamValue Desc="Gross domestic product (GDP) by state [State Annual SIC]" Key="GDP_SAS"/>
  <ParamValue Desc="Gross domestic product (GDP) by state [State Quarterly NAICS]" Key="GDP_SQN"/>
  <ParamValue Desc="Gross operating surplus [State Annual NAICS]" Key="GOS_SAN"/>
  <ParamValue Desc="Gross operating surplus [State Annual SIC]" Key="GOS_SAS"/>
  <ParamValue Desc="Total personal consumption expenditures (PCE) by state [State Personal Consumption Expenditures]" Key="PCE_SAN"/>
  <ParamValue Desc="Per capita personal consumption expenditures (PCE) by state [State Personal Consumption Expenditures]" Key="PCPCE_SAN"/>
  <ParamValue Desc="Per capita real GDP by metropolitan area [Metro Annual NAICS]" Key="PCRGDP_MAN"/>
  <ParamValue Desc="Per capita real GDP by state [State Annual NAICS]" Key="PCRGDP_SAN"/>
  <ParamValue Desc="Per capita real GDP by state [State Annual SIC]" Key="PCRGDP_SAS"/>
  <ParamValue Desc="Quantity indexes for real GDP by metropolitan area [Metro Annual NAICS]" Key="QI_MAN"/>
  <ParamValue Desc="Quantity indexes for real GDP by state [State Annual NAICS]" Key="QI_SAN"/>
  <ParamValue Desc="Quantity indexes for real GDP by state [State Annual SIC]" Key="QI_SAS"/>
  <ParamValue Desc="Quantity indexes for real GDP by state [State Quarterly NAICS]" Key="QI_SQN"/>
  <ParamValue Desc="Real GDP by metropolitan area [Metro Annual NAICS]" Key="RGDP_MAN"/>
  <ParamValue Desc="Real GDP by state [State Annual NAICS]" Key="RGDP_SAN"/>
  <ParamValue Desc="Real GDP by state [State Annual SIC]" Key="RGDP_SAS"/>
  <ParamValue Desc="Real GDP by state [State Quarterly NAICS]" Key="RGDP_SQN"/>
  <ParamValue Desc="Subsidies [State Annual NAICS]" Key="SUBS_SAN"/>
  <ParamValue Desc="Subsidies [State Annual SIC]" Key="SUBS_SAS"/>
  <ParamValue Desc="Taxes on production and imports [State Annual NAICS]" Key="TOPI_SAN"/>
  <ParamValue Desc="Taxes on production and imports [State Annual SIC]" Key="TOPI_SAS"/>
  <ParamValue Desc="Taxes on production and imports less subsidies [State Annual NAICS]" Key="TOPI_LS_SAN"/>
  <ParamValue Desc="Taxes on production and imports less subsidies [State Annual SIC]" Key="TOPI_LS_SAS"/>
</Results>
</BEAAPI>
```

Example Request 2:

<https://bea.gov/api/data?&UserID=Your-36Character-Key&method=GetParameterValues&datasetname=RegionalIncome&ParameterName=TableName&ResultFormat=XML>

Example Return 2:

```
<BEAAPI>
<Request>
  <RequestParam ParameterValue="Your-36Character-Key" ParameterName="USERID" />
  <RequestParam ParameterValue="XML" ParameterName="RESULTFORMAT" />
  <RequestParam ParameterValue="REGIONALINCOME" ParameterName="DATASETNAME" />
  <RequestParam ParameterValue="GETPARAMETERVALUES" ParameterName="METHOD" />
  <RequestParam ParameterValue="TABLENAME" ParameterName="PARAMETERNAME" />
</Request>
<Results>
  <ParamValue Desc="Personal Income Summary: Personal Income, Population, Per Capita Personal Income (Non-Industry) [A]" Key="CA1"/>
  <ParamValue Desc="Total Full-Time and Part-Time Employment by SIC Industry (SIC) [A]" Key="CA25"/>
  <ParamValue Desc="Total Full-Time and Part-Time Employment by NAICS Industry (NAICS) [A]" Key="CA25N"/>
  <ParamValue Desc="Economic Profile (Non-Industry) [A]" Key="CA30"/>
  <ParamValue Desc="Personal Current Transfer Receipts (Non-Industry) [A]" Key="CA35"/>
  <ParamValue Desc="Personal Income and Employment by Major Component (Non-Industry) [A]" Key="CA4"/>
  <ParamValue Desc="Farm Income and Expenses (Non-Industry) [A]" Key="CA45"/>
  <ParamValue Desc="Personal Income by Major Component and Earnings by SIC Industry (SIC) [A]" Key="CA5"/>
  <ParamValue Desc="Personal Income by Major Component and Earnings by NAICS Industry (NAICS) [A]" Key="CA5N"/>
  <ParamValue Desc="Compensation of Employees by SIC Industry (SIC) [A]" Key="CA6"/>
  <ParamValue Desc="Compensation of Employees by NAICS Industry (NAICS) [A]" Key="CA6N"/>
  <ParamValue Desc="Gross Flow of Earnings (Non-Industry) [A]" Key="CA91"/>
</Results>
```



```

<ParamValue Desc="Implicit Regional Price Deflator (Non-Industry) [A]" Key="IRPD1"/>
<ParamValue Desc="Real Personal Income (Non-Industry) [A]" Key="RPI1"/>
<ParamValue Desc="Regional Price Parities (Non-Industry) [A]" Key="RPPI"/>
<ParamValue Desc="Personal Income Summary: Personal Income, Population, Per Capita Personal Income (Non-Industry) [A]"
Key="SA1"/>
<ParamValue Desc="Total Full-Time and Part-Time Employment by SIC Industry (SIC) [A]" Key="SA25"/>
<ParamValue Desc="Total Full-Time and Part-Time Employment by NAICS Industry (NAICS) [A]" Key="SA25N"/>
<ParamValue Desc="Full-Time and Part-Time Wage and Salary Employment by SIC Industry (SIC) [A]" Key="SA27"/>
<ParamValue Desc="Full-Time and Part-Time Wage and Salary Employment by NAICS Industry (NAICS) [A]"
Key="SA27N"/><ParamValue Desc="Economic Profile (Non-Industry) [A]" Key="SA30"/>
<ParamValue Desc="Personal Current Transfer Receipts (Non-Industry) [A]" Key="SA35"/>
<ParamValue Desc="Personal Income and Employment by Major Component (Non-Industry) [A]" Key="SA4"/>
<ParamValue Desc="Property Income (Non-Industry) [A]" Key="SA40"/>
<ParamValue Desc="Farm Income and Expenses (Non-Industry) [A]" Key="SA45"/>
<ParamValue Desc="Personal Income by Major Component and Earnings by SIC Industry (SIC) [A]" Key="SA5"/>
<ParamValue Desc="Personal Current Taxes (Non-Industry) [A]" Key="SA50"/>
<ParamValue Desc="Disposable Personal Income Summary: Disposable Personal Income, Population, and Per Capita Disposable
Personal Income (Non-Industry) [A]" Key="SA51"/>
<ParamValue Desc="Personal Income by Major Component and Earnings by Industry (Historical) (SIC) [A]" Key="SA5H"/>
<ParamValue Desc="Personal Income by Major Component and Earnings by NAICS Industry (NAICS) [A]" Key="SA5N"/>
<ParamValue Desc="Compensation of Employees by SIC Industry (SIC) [A]" Key="SA6"/>
<ParamValue Desc="Compensation of Employees by NAICS Industry (NAICS) [A]" Key="SA6N"/>
<ParamValue Desc="Wages and Salaries by SIC Industry (SIC) [A]" Key="SA7"/><ParamValue Desc="Wages and Salaries by
Industry (Historical) (SIC) [A]" Key="SA7H"/>
<ParamValue Desc="Wages and Salaries by NAICS Industry (NAICS) [A]" Key="SA7N"/>
<ParamValue Desc="Personal Income (Non-Industry) [Q]" Key="SQ1"/>
<ParamValue Desc="Personal Current Transfer Receipts (Non-Industry) [Q]" Key="SQ35"/>
<ParamValue Desc="Personal Income by Major Component (Non-Industry) [Q]" Key="SQ4"/>
<ParamValue Desc="Personal Income by Major Component and Earnings by SIC Industry (SIC) [Q]" Key="SQ5"/>
<ParamValue Desc="Personal Income by Major Component and Earnings by Industry (Historical) (SIC) [Q]"
Key="SQ5H"/><ParamValue Desc="Personal Income by Major Component and Earnings by NAICS Industry (NAICS) [Q]"
Key="SQ5N"/><ParamValue Desc="Compensation of Employees by SIC Industry (SIC) [Q]" Key="SQ6"/>
<ParamValue Desc="Compensation of Employees by NAICS Industry (NAICS) [Q]" Key="SQ6N"/>
<ParamValue Desc="Wages and Salaries by SIC Industry (SIC) [Q]" Key="SQ7"/>
<ParamValue Desc="Wages and Salaries by Industry (Historical) (SIC) [Q]" Key="SQ7H"/>
<ParamValue Desc="Wages and Salaries by NAICS Industry (NAICS) [Q]" Key="SQ7N"/>
</Results>
</BEAAPI>

```



To summarize, the API includes three methods that retrieve meta-data about the statistics that are available: GetDatasetList, GetParameterList, and GetParameterValues. **There is also a *new* method called GetParameterValuesFiltered.**

*GetParameterValuesFiltered* – retrieves a list of the valid values for a particular parameter based on other provided parameters.

In our example above with the RegionalIncome data set, it is necessary to supply a TableName and LineCode. You will want to discover the LineCode values available for a given TableName. The GetParameterValuesFiltered method is designed to do this.

GetParameterValuesFiltered will return values for one target parameter based on the values of other named parameters.

Example request to retrieve the valid LineCode values for a given TableName:

<https://bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetParameterValuesFiltered&datasetname=RegionalIncome&TargetParameter=LineCode&TableName=SA1&ResultFormat=XML>

Example return:

```
<BEAAPI>
<Request>
  <RequestParam ParameterValue="Your-36Character-Key" ParameterName="USERID"/>
  <RequestParam ParameterValue="XML" ParameterName="RESULTFORMAT"/>
  <RequestParam ParameterValue="LINECODE" ParameterName="TARGETPARAMETER"/>
  <RequestParam ParameterValue="SA1" ParameterName="TABLENAME"/>
  <RequestParam ParameterValue="REGIONALINCOME" ParameterName="DATASETNAME"/>
  <RequestParam ParameterValue="GETPARAMETERVALUESFILTERED" ParameterName="METHOD"/>
</Request>
<Results>
  <ParamValue Desc="[SA1] Personal income (thousands of dollars)" Key="1"/>
  <ParamValue Desc="[SA1] Population (persons)" Key="2"/>
  <ParamValue Desc="[SA1] Per capita personal income (dollars)" Key="3"/>
</Results>
</BEAAPI>
```

All results from GetParameterValuesFiltered contain “Desc” and “Key”. Key is the value you will want to pass in as a parameter to the data request for the target parameter you specified. In our example, a desired Key will be passed into LineCode.

Although there is only one TargetParameter, multiple other parameters may be passed in. For example you may want to know what years are available for a given TableName and GeoFips--

Example request:

<https://bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetParameterValuesFiltered&datasetname=RegionalIncome&TargetParameter=Year&TableName=CA5N&GeoFips=01001&ResultFormat=XML>

Example return:

```
<BEAAPI>
<Request>
  <RequestParam ParameterValue="YEAR" ParameterName="TARGETPARAMETER"/>
  <RequestParam ParameterValue="CA5N" ParameterName="TABLENAME"/>
  <RequestParam ParameterValue="XML" ParameterName="RESULTFORMAT"/>
  <RequestParam ParameterValue="REGIONALINCOME" ParameterName="DATASETNAME"/>
  <RequestParam ParameterValue="01001" ParameterName="GEOFIPS"/>
  <RequestParam ParameterValue="GETPARAMETERVALUESFILTERED" ParameterName="METHOD"/>
  <RequestParam ParameterValue="Your-36CharacterKey" ParameterName="USERID"/>
</Request>
```

```

</Request>
<Results>
  <ParamValue Desc="2001" Key="2001"/>
  <ParamValue Desc="2002" Key="2002"/>
  <ParamValue Desc="2003" Key="2003"/>
  <ParamValue Desc="2004" Key="2004"/>
  <ParamValue Desc="2005" Key="2005"/>
  <ParamValue Desc="2006" Key="2006"/>
  <ParamValue Desc="2007" Key="2007"/>
  <ParamValue Desc="2008" Key="2008"/>
  <ParamValue Desc="2009" Key="2009"/>
  <ParamValue Desc="2010" Key="2010"/>
  <ParamValue Desc="2011" Key="2011"/>
  <ParamValue Desc="2012" Key="2012"/>
  <ParamValue Desc="2013" Key="2013"/>
  <ParamValue Desc="2014" Key="2014"/>
</Results>
</BEAAPI>

```

There are many more examples of using GetParameterValuesFiltered in the Regional appendices I and J.

**Please note that the GetParameterValuesFiltered method does not yet work with all BEA data sets. If you try GetParametersValuesFiltered on a data set that does not yet support it, an error will be returned--**

```

<BEAAPI>
<Request>
  <RequestParam ParameterValue="GETPARAMETERVALUESFILTERED" ParameterName="METHOD"/>
  <RequestParam ParameterValue="Your-36CharacterKey" ParameterName="USERID"/>
  <RequestParam ParameterValue="1" ParameterName="TABLEID"/>
  <RequestParam ParameterValue="NIPA" ParameterName="DATASETNAME"/>
  <RequestParam ParameterValue="XML" ParameterName="RESULTFORMAT"/>
  <RequestParam ParameterValue="Q" ParameterName="FREQUENCY"/>
  <RequestParam ParameterValue="YEAR" ParameterName="TARGETPARAMETER"/>
</Request>
<Results>
  <Error APIErrorDescription="The GetParameterValuesFiltered method has not been implemented on this dataset (coming soon). "
APIErrorCode="34"/>
</Results>
</BEAAPI>

```

## Data Retrieval API Method

The API has one method for retrieving data – *GetData*.

Every data retrieval request requires the UserID, Method, and DatasetName parameters. Each dataset has a defined set of parameters – some required and others optional. Each dataset returns different results that are documented in appendices to this document.

### *GetData*

Required Parameters: UserID, Method, DatasetName, *additional required parameters* (depending on the dataset)

Optional Parameters: ResultFormat, *additional optional parameters* (depending on the dataset)

Result: *Dimensions* nodes with attributes:

- Ordinal – ordinal number indicating a standardized order of returned dimensions – note that attributes in returned data are not guaranteed to be in any particular order. Programmatic usage of attributes should refer to them by name.
- Name – The Name of each data dimension returned
- DataType – *string* or *numeric* – whether the data dimension is purely numeric or should be treated as string data

- IsValue – most datasets have one dimension that represents the statistic of interest, and the other dimensions are descriptive of the statistic. IsValue = 1 for the data dimension that is the statistic of interest, otherwise 0. The statistic of interest is usually numeric so that it can be summarized or aggregated based on the descriptive dimension values.

Each Dataset contains different dimensions. There are a few pre-defined dimensions that are common to most Datasets, including:

- CL\_UNIT – a descriptor of the units reported for the data value (e. g. USD for U. S. dollars, and PC for percent)
- UNIT\_MULT – a descriptor of the multiplier that applies to the data value. This value is the base-10 exponent that should be applied to the data value (e. g. amounts reported in millions would have a UNIT\_MULT of 6; amounts reported in billions would have a UNIT\_MULT of 9).

The specific meaning of each dimension is described in the Appendix for each dataset.

The result then includes *Data* nodes containing the actual results specified in the parameters. Each *Data* node contains one attribute for each data dimension (specified in the Dimensions nodes).

Finally, the result may include *Note* nodes. Notes (as in footnotes) further describe or qualify any of the other nodes in the result (or the result node itself). A result node qualified by a *Note* has an attribute named *NoteRef*. If a result node includes the *NoteRef* attribute, the value for it will always be present among the Notes nodes.

Example Request 1:

<https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetData&datasetname=RegionalIncome&TableName=CA1&LineCode=3&GeoFIPS=DE&Year=2014&ResultFormat=XML&>

In this example, the GetData method is used to return a result from the dataset named RegionalIncome. The TableId and LineCode parameters are used to request statistic for “Per Capita personal income (county annual income)”. The GeoFIPS parameter value is “DE” – meaning the data for all counties in Delaware are requested. A single year’s data is requested – 2015.

Note that the GeoFIPS parameter could have been “COUNTY” for all counties, or a list of individual state or county GeoFIPS codes. Also, multiple years could have been requested by providing them in a comma-separated list, or the special year parameters “LAST5” or “LAST10” could be used.

Example Return 1:

```
<BEAAPI>
<Request>
  <RequestParam ParameterValue="Your-36Character-Key" ParameterName="USERID"/>
  <RequestParam ParameterValue="REGIONALINCOME" ParameterName="DATASETNAME"/>
  <RequestParam ParameterValue="GETDATA" ParameterName="METHOD"/>
  <RequestParam ParameterValue="DE" ParameterName="GEOFIPS"/>
  <RequestParam ParameterValue="CA1" ParameterName="TABLENAME"/>
  <RequestParam ParameterValue="3" ParameterName="LINECODE"/>
  <RequestParam ParameterValue="2014" ParameterName="YEAR"/>
  <RequestParam ParameterValue="XML" ParameterName="RESULTFORMAT"/>
</Request>
<Results NoteRef="2" UTCProductionTime="2017-03-03T14:37:59.443" PublicTable="CA1 Personal Income Summary: Personal Income, Population, Per Capita Personal Income" UnitOfMeasure="dollars" Statistic="Per capita personal income">
  <Dimensions IsValue="0" DataType="string" Name="Code"/>
  <Dimensions IsValue="0" DataType="string" Name="GeoFips"/>
```

```

<Dimensions IsValue="0" DataType="string" Name="GeoName" />
<Dimensions IsValue="0" DataType="string" Name="TimePeriod" />
<Dimensions IsValue="1" DataType="numeric" Name="DataValue" />
<Dimensions IsValue="0" DataType="string" Name="CL_UNIT" />
<Dimensions IsValue="0" DataType="numeric" Name="UNIT_MULT" />
<Data DataValue="45284" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2014" GeoName="Delaware" GeoFips="10000" Code="CA1-3"/>
<Data DataValue="36845" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2014" GeoName="Kent, DE" GeoFips="10001" Code="CA1-3"/>
<Data DataValue="48503" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2014" GeoName="New Castle, DE" GeoFips="10003" Code="CA1-3"/>
<Data DataValue="43710" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2014" GeoName="Sussex, DE" GeoFips="10005" Code="CA1-3"/>
<Notes NoteRef="2" NoteText="Per capita personal income was computed using Census Bureau midyear population estimates. Estimates for 2010-2015 reflect county population estimates available as of March 2016." />
<Notes NoteRef="Note--" NoteText="All dollar estimates are in current dollars (not adjusted for inflation)." />
<Notes NoteRef="" NoteText="Last updated: November 17, 2016-- new estimates for 2015; revised estimates for 1998-2014." />
</Results>
</BEAAPI>

```

In this example the *Result* node contains a *NoteRef* attribute having the value “2”, and there is a *Notes* node having the *NoteRef* value of “2”. This should be interpreted as meaning that the *NoteText* attribute for that *Notes* node applies to the whole result.

Example Request 2:

<https://www.bea.gov/api/data?&UserID=Your-36Character-Key&method=GetData&datasetname=RegionalIncome&TableName=SA1&GeoFIPS=STATE&LineCode=3&Year=2013&ResultFormat=XML&>

In this example, the *GetData* method is used to return the dataset named *RegionalIncome*. The *TableName* and *LineCode* parameters are used to request statistic for “Per capita personal income (dollars)” – as shown in the result of the first *GetParameterValuesFiltered* example above. The *GeoFIPS* parameter value is “STATE” – meaning the data for all states is requested. Finally, a single year’s data is requested – 2013.

Note that the *GeoFIPS* parameter could have been a list of 5-digit geographic codes. Also, multiple years could have been requested by providing them in a comma-separated list.

Example Return 2:

```

<BEAAPI>
<Request>
  <RequestParam ParameterValue="2013" ParameterName="YEAR" />
  <RequestParam ParameterValue="3" ParameterName="LINECODE" />
  <RequestParam ParameterValue="REGIONALINCOME" ParameterName="DATASETNAME" />
  <RequestParam ParameterValue="STATE" ParameterName="GEOFIPS" />
  <RequestParam ParameterValue="Your-36Character-Key" ParameterName="USERID" />
  <RequestParam ParameterValue="GETDATA" ParameterName="METHOD" />
  <RequestParam ParameterValue="SA1" ParameterName="TABLENAME" />
  <RequestParam ParameterValue="XML" ParameterName="RESULTFORMAT" />
</Request>
<Results NoteRef="2" UTCProductionTime="2015-04-24T14:22:56.983" PublicTable="SA1 Personal Income Summary: Personal Income, Population, Per Capita Personal Income" UnitOfMeasure="dollars" Statistic="Per capita personal income">
  <Dimensions IsValue="0" DataType="string" Name="Code" Ordinal="1" />
  <Dimensions IsValue="0" DataType="string" Name="GeoFips" Ordinal="2" />
  <Dimensions IsValue="0" DataType="string" Name="GeoName" Ordinal="3" />
  <Dimensions IsValue="0" DataType="string" Name="TimePeriod" Ordinal="4" />
  <Dimensions IsValue="1" DataType="numeric" Name="DataValue" Ordinal="5" />
  <Data DataValue="44,765" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="United States" GeoFips="00000" Code="SA1-3"/>
  <Data DataValue="36,481" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Alabama" GeoFips="01000" Code="SA1-3"/>
  <Data NoteRef="" DataValue="50,150" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Alaska" GeoFips="02000" Code="SA1-3"/>
  <Data DataValue="36,983" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Arizona" GeoFips="04000" Code="SA1-3"/>
  <Data DataValue="36,698" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Arkansas" GeoFips="05000" Code="SA1-3"/>
  <Data DataValue="48,434" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="California" GeoFips="06000" Code="SA1-3"/>
  <Data DataValue="46,897" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Colorado" GeoFips="08000" Code="SA1-3"/>
  <Data DataValue="60,658" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Connecticut" GeoFips="09000" Code="SA1-3"/>
  <Data DataValue="44,815" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Delaware" GeoFips="10000" Code="SA1-3"/>

```

```

    <Data DataValue="75,329" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="District of Columbia" GeoFips="11000"
Code="SA1-3"/>
    <Data DataValue="41,497" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Florida" GeoFips="12000" Code="SA1-
3"/>
    <Data DataValue="37,845" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Georgia" GeoFips="13000" Code="SA1-3"/>
    <Data NoteRef="*" DataValue="45,204" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Hawaii" GeoFips="15000"
Code="SA1-3"/>
    <Data DataValue="36,146" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Idaho" GeoFips="16000" Code="SA1-3"/>
    <Data DataValue="46,980" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Illinois" GeoFips="17000" Code="SA1-
3"/>
    <Data DataValue="38,622" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Indiana" GeoFips="18000" Code="SA1-
3"/>
    <Data DataValue="44,763" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Iowa" GeoFips="19000" Code="SA1-3"/>
    <Data DataValue="44,417" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Kansas" GeoFips="20000" Code="SA1-
3"/>
    <Data DataValue="36,214" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Kentucky" GeoFips="21000" Code="SA1-
3"/>
    <Data DataValue="41,204" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Louisiana" GeoFips="22000" Code="SA1-
3"/>
    <Data DataValue="40,924" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Maine" GeoFips="23000" Code="SA1-3"/>
    <Data DataValue="53,826" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Maryland" GeoFips="24000" Code="SA1-
3"/>
    <Data DataValue="57,248" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Massachusetts" GeoFips="25000"
Code="SA1-3"/>
    <Data DataValue="39,055" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Michigan" GeoFips="26000" Code="SA1-
3"/>
    <Data DataValue="47,500" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Minnesota" GeoFips="27000" Code="SA1-
3"/>
    <Data DataValue="33,913" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Mississippi" GeoFips="28000" Code="SA1-
3"/>
    <Data DataValue="40,663" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Missouri" GeoFips="29000" Code="SA1-
3"/>
    <Data DataValue="39,366" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Montana" GeoFips="30000" Code="SA1-
3"/>
    <Data DataValue="47,157" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Nebraska" GeoFips="31000" Code="SA1-
3"/>
    <Data DataValue="39,235" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Nevada" GeoFips="32000" Code="SA1-
3"/>
    <Data DataValue="51,013" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="New Hampshire" GeoFips="33000"
Code="SA1-3"/>
    <Data DataValue="55,386" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="New Jersey" GeoFips="34000" Code="SA1-
3"/>
    <Data DataValue="35,965" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="New Mexico" GeoFips="35000" Code="SA1-
3"/>
    <Data DataValue="54,462" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="New York" GeoFips="36000" Code="SA1-
3"/>
    <Data DataValue="38,683" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="North Carolina" GeoFips="37000"
Code="SA1-3"/>
    <Data DataValue="53,182" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="North Dakota" GeoFips="38000"
Code="SA1-3"/>
    <Data DataValue="41,049" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Ohio" GeoFips="39000" Code="SA1-3"/>
    <Data DataValue="41,861" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Oklahoma" GeoFips="40000" Code="SA1-
3"/>
    <Data DataValue="39,848" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Oregon" GeoFips="41000" Code="SA1-
3"/>
    <Data DataValue="46,202" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Pennsylvania" GeoFips="42000"
Code="SA1-3"/>
    <Data DataValue="46,989" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Rhode Island" GeoFips="44000"
Code="SA1-3"/>
    <Data DataValue="35,831" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="South Carolina" GeoFips="45000"
Code="SA1-3"/>
    <Data DataValue="46,039" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="South Dakota" GeoFips="46000"
Code="SA1-3"/>
    <Data DataValue="39,558" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Tennessee" GeoFips="47000" Code="SA1-
3"/>
    <Data DataValue="43,862" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Texas" GeoFips="48000" Code="SA1-3"/>
    <Data DataValue="36,640" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Utah" GeoFips="49000" Code="SA1-3"/>
    <Data DataValue="45,483" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Vermont" GeoFips="50000" Code="SA1-
3"/>
    <Data DataValue="48,838" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Virginia" GeoFips="51000" Code="SA1-
3"/>
    <Data DataValue="47,717" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Washington" GeoFips="53000" Code="SA1-
3"/>
    <Data DataValue="35,533" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="West Virginia" GeoFips="54000"
Code="SA1-3"/>
    <Data DataValue="43,244" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Wisconsin" GeoFips="55000" Code="SA1-
3"/>
    <Data DataValue="52,826" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Wyoming" GeoFips="56000" Code="SA1-
3"/>
    <Data DataValue="54,797" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="New England" GeoFips="91000" Code="SA1-
3"/>
    <Data DataValue="52,485" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Midwest" GeoFips="92000" Code="SA1-
3"/>
    <Data DataValue="42,192" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Great Lakes" GeoFips="93000" Code="SA1-
3"/>
    <Data DataValue="44,796" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Plains" GeoFips="94000" Code="SA1-
3"/>
    <Data DataValue="39,760" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Southeast" GeoFips="95000" Code="SA1-
3"/>
    <Data DataValue="42,074" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Southwest" GeoFips="96000" Code="SA1-
3"/>
    <Data DataValue="42,391" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Rocky Mountain" GeoFips="97000"
Code="SA1-3"/>
    <Data DataValue="47,185" UNIT_MULT="0" CL_UNIT="dollars" TimePeriod="2013" GeoName="Far West" GeoFips="98000" Code="SA1-
3"/>
    <Notes NoteRef="2" NoteText="Per capita personal income is total personal income divided by total midyear population."/>
    <Notes NoteRef="*" NoteText="Estimates prior to 1950 are not available for Alaska and Hawaii."/>
    <Notes NoteRef="Note--" NoteText="All dollar estimates are in current dollars (not adjusted for inflation)."/>

```

```
<Notes NoteRef=" " NoteText="Last updated: March 25, 2015-- new estimates for 2014." />
</Results>
</BEAAPI>
```

In this example the *Result* node contains a *NoteRef* attribute having the value “2”, and there is a *Notes* node having the *NoteRef* value of “2”. This should be interpreted as meaning that the *NoteText* attribute for that *Notes* node applies to the whole result.

There are two *Data* nodes having a *NoteRef* attribute with the value “\*”, and there is one *Notes* nodes having the matching *NoteRef* attribute (“\*”). This should be interpreted to mean that the *Notes* node having *NoteRef* = “\*” apply as a group to the corresponding *Data* nodes.

## DataSet Documentation

BEA expects to publish several API Datasets containing a variety of economic statistics. The Datasets that are currently available are each documented separately as appendices here.

## Appendix A – RegionalData (DEPRECATED)

*The RegionalData data set is obsolete and API calls using this data set will no longer function. Users should instead access the datasets RegionalIncome and RegionalProduct, which provide comprehensive detail in statistics, industries, geography, and years. See Appendices I and J for instructions on how to use these two data sets.*



## Appendix B – NIPA (National Income and Product Accounts)

The NIPA dataset contains data from the standard set of NIPA tables as published in the *Survey of Current Business*. Availability of updated NIPA data follows the BEA News Release schedule as posted on the BEA web site. The NIPA dataset may be unavailable for a few minutes preceding the monthly GDP release while data is being updated (as it is for all other methods of acquiring newly released data). Four parameters are used to retrieve data from the NIPA dataset, as follows:

Name	Type	Description	Is Required	Multiple Values Accepted	“All” value
TableID	Integer	The standard NIPA table identifier	Yes	No	N/A
Frequency	String	A - Annual, Q-Quarterly, M-Monthly	Yes	Yes	N/A
Year	integer	List of year(s) of data to retrieve	Yes	Yes	X ALL
ShowMillions	String	A flag indicating that million-dollar data should be returned	No	No	N/A

### TableID Parameter

The TableID parameter is an integer that refers to a specific NIPA table. As shown above, the parameter is required, and only one NIPA table can be requested in each GetData submission. The list of valid TableIDs may change depending on the monthly news release cycles, and other economic considerations. For example, after the monthly GDP release and before the following Personal Income release, a few of the Personal Income tables are temporarily unavailable. Therefore, the most accurate list of TableIDs (or any parameter) at any given time can be obtained by using the **GetParameterValues** method, as described in the *Meta-Data API Methods* section of the main API documentation.

As of the date in the footer of this appendix, the full list of valid NIPA TableIDs is as follows:

```
<ParamValue Description="Table 1.1.1. Percent Change From Preceding Period in Real Gross Domestic Product (A) (Q)" TableID="1"/>
<ParamValue Description="Table 1.1.2. Contributions to Percent Change in Real Gross Domestic Product (A) (Q)" TableID="2"/>
<ParamValue Description="Table 1.1.3. Real Gross Domestic Product, Quantity Indexes (A) (Q)" TableID="3"/>
<ParamValue Description="Table 1.1.4. Price Indexes for Gross Domestic Product (A) (Q)" TableID="4"/>
<ParamValue Description="Table 1.1.5. Gross Domestic Product (A) (Q)" TableID="5"/>
<ParamValue Description="Table 1.1.6. Real Gross Domestic Product, Chained Dollars (A) (Q)" TableID="6"/>
<ParamValue Description="Table 1.1.6A. Real Gross Domestic Product, Chained (1937) Dollars (A)" TableID="7"/>
<ParamValue Description="Table 1.1.6B. Real Gross Domestic Product, Chained (1952) Dollars (A) (Q)" TableID="8"/>
<ParamValue Description="Table 1.1.6C. Real Gross Domestic Product, Chained (1972) Dollars (A) (Q)" TableID="9"/>
<ParamValue Description="Table 1.1.6D. Real Gross Domestic Product, Chained (1992) Dollars (A) (Q)" TableID="10"/>
<ParamValue Description="Table 1.1.7. Percent Change From Preceding Period in Prices for Gross Domestic Product (A) (Q)" TableID="11"/>
<ParamValue Description="Table 1.1.8. Contributions to Percent Change in the Gross Domestic Product Price Index (A) (Q)" TableID="12"/>
<ParamValue Description="Table 1.1.9. Implicit Price Deflators for Gross Domestic Product (A) (Q)" TableID="13"/>
<ParamValue Description="Table 1.1.10. Percentage Shares of Gross Domestic Product (A) (Q)" TableID="14"/>
<ParamValue Description="Table 1.1.11. Real Gross Domestic Product: Percent Change From Quarter One Year Ago (Q)" TableID="310"/>
<ParamValue Description="Table 1.2.1. Percent Change From Preceding Period in Real Gross Domestic Product by Major Type of Product (A) (Q)" TableID="15"/>
<ParamValue Description="Table 1.2.2. Contributions to Percent Change in Real Gross Domestic Product by Major Type of Product (A) (Q)" TableID="16"/>
<ParamValue Description="Table 1.2.3. Real Gross Domestic Product by Major Type of Product, Quantity Indexes (A) (Q)" TableID="17"/>
<ParamValue Description="Table 1.2.4. Price Indexes for Gross Domestic Product by Major Type of Product (A) (Q)" TableID="18"/>
<ParamValue Description="Table 1.2.5. Gross Domestic Product by Major Type of Product (A) (Q)" TableID="19"/>
<ParamValue Description="Table 1.2.6. Real Gross Domestic Product by Major Type of Product, Chained Dollars (A) (Q)" TableID="20"/>
<ParamValue Description="Table 1.3.1. Percent Change From Preceding Period in Real Gross Value Added by Sector (A) (Q)" TableID="21"/>
<ParamValue Description="Table 1.3.3. Real Gross Value Added by Sector, Quantity Indexes (A) (Q)" TableID="22"/>
<ParamValue Description="Table 1.3.4. Price Indexes for Gross Value Added by Sector (A) (Q)" TableID="23"/>
<ParamValue Description="Table 1.3.5. Gross Value Added by Sector (A) (Q)" TableID="24"/>
<ParamValue Description="Table 1.3.6. Real Gross Value Added by Sector, Chained Dollars (A) (Q)" TableID="25"/>
```

<ParamValue Description="Table 1.4.1. Percent Change From Preceding Period in Real Gross Domestic Product, Real Gross Domestic Purchases, and Real Final Sales to Domestic Purchasers (A) (Q)" TableID="26"/>

<ParamValue Description="Table 1.4.3. Real Gross Domestic Product, Real Gross Domestic Purchases, and Real Final Sales to Domestic Purchasers, Quantity Indexes (A) (Q)" TableID="27"/>

<ParamValue Description="Table 1.4.4. Price Indexes for Gross Domestic Product, Gross Domestic Purchases, and Final Sales to Domestic Purchasers (A) (Q)" TableID="28"/>

<ParamValue Description="Table 1.4.5. Relation of Gross Domestic Product, Gross Domestic Purchases, and Final Sales to Domestic Purchasers (A) (Q)" TableID="29"/>

<ParamValue Description="Table 1.4.6. Relation of Real Gross Domestic Product, Real Gross Domestic Purchases, and Real Final Sales to Domestic Purchasers, Chained Dollars (A) (Q)" TableID="30"/>

<ParamValue Description="Table 1.5.1. Percent Change From Preceding Period in Real Gross Domestic Product, Expanded Detail (A) (Q)" TableID="31"/>

<ParamValue Description="Table 1.5.2. Contributions to Percent Change in Real Gross Domestic Product, Expanded Detail (A) (Q)" TableID="32"/>

<ParamValue Description="Table 1.5.3. Real Gross Domestic Product, Expanded Detail, Quantity Indexes (A) (Q)" TableID="33"/>

<ParamValue Description="Table 1.5.4. Price Indexes for Gross Domestic Product, Expanded Detail (A) (Q)" TableID="34"/>

<ParamValue Description="Table 1.5.5. Gross Domestic Product, Expanded Detail (A) (Q)" TableID="35"/>

<ParamValue Description="Table 1.5.6. Real Gross Domestic Product, Expanded Detail, Chained Dollars (A) (Q)" TableID="36"/>

<ParamValue Description="Table 1.6.4. Price Indexes for Gross Domestic Purchases (A) (Q)" TableID="37"/>

<ParamValue Description="Table 1.6.7. Percent Change From Preceding Period in Prices for Gross Domestic Purchases (A) (Q)" TableID="38"/>

<ParamValue Description="Table 1.6.8. Contributions to Percent Change in the Gross Domestic Purchases Price Index (A) (Q)" TableID="39"/>

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<ParamValue Description="Table 6.22C. Corporate Capital Consumption Allowances by Industry (A)" TableID="262"/>
<ParamValue Description="Table 6.22D. Corporate Capital Consumption Allowances by Industry (A)" TableID="263"/>
<ParamValue Description="Table 7.1. Selected Per Capita Product and Income Series in Current and Chained Dollars (A) (Q)" TableID="264"/>
<ParamValue Description="Table 7.2.1A. Percent Change From Preceding Period in Real Auto Output (A) (Q)" TableID="265"/>
<ParamValue Description="Table 7.2.1B. Percent Change From Preceding Period in Real Motor Vehicle Output (A) (Q)" TableID="266"/>
<ParamValue Description="Table 7.2.3A. Real Auto Output, Quantity Indexes (A) (Q)" TableID="267"/>
<ParamValue Description="Table 7.2.3B. Real Motor Vehicle Output, Quantity Indexes (A) (Q)" TableID="268"/>
<ParamValue Description="Table 7.2.4A. Price Indexes for Auto Output (A) (Q)" TableID="269"/>
<ParamValue Description="Table 7.2.4B. Price Indexes for Motor Vehicle Output (A) (Q)" TableID="270"/>
<ParamValue Description="Table 7.2.5A. Auto Output (A) (Q)" TableID="271"/>
<ParamValue Description="Table 7.2.5B. Motor Vehicle Output (A) (Q)" TableID="272"/>
<ParamValue Description="Table 7.2.6B. Real Motor Vehicle Output, Chained Dollars (A) (Q)" TableID="273"/>
<ParamValue Description="Table 7.3.3. Real Farm Sector Output, Real Gross Value Added, and Real Net Value Added, Quantity Indexes (A)" TableID="274"/>
<ParamValue Description="Table 7.3.4. Real Housing Sector Output, Real Gross Value Added, and Net Value Added (A)" TableID="275"/>
<ParamValue Description="Table 7.3.5. Farm Sector Output, Gross Value Added, and Net Value Added (A)" TableID="276"/>
<ParamValue Description="Table 7.3.6. Real Farm Sector Output, Real Gross Value Added, and Real Net Value Added, Chained Dollars (A)" TableID="277"/>
<ParamValue Description="Table 7.4.3. Real Housing Sector Output, Real Gross Value Added, and Real Net Value Added, Quantity Indexes (A)" TableID="278"/>
<ParamValue Description="Table 7.4.4. Price Indexes for Housing Sector Output, Gross Value Added, and Net Value Added (A)" TableID="279"/>
<ParamValue Description="Table 7.4.5. Housing Sector Output, Gross Value Added, and Net Value Added (A)" TableID="280"/>
<ParamValue Description="Table 7.4.6. Real Housing Sector Output, Real Gross Value Added, and Real Net Value Added, Chained Dollars (A)" TableID="281"/>
<ParamValue Description="Table 7.5. Consumption of Fixed Capital by Legal Form of Organization and Type of Income (A) (Q)" TableID="282"/>
<ParamValue Description="Table 7.6. Capital Consumption Adjustment by Legal Form of Organization and Type of Adjustment (A)" TableID="283"/>
<ParamValue Description="Table 7.7. Business Current Transfer Payments by Type (A)" TableID="284"/>
<ParamValue Description="Table 7.8. Supplements to Wages and Salaries by Type (A)" TableID="285"/>
<ParamValue Description="Table 7.9. Rental Income of Persons by Legal Form of Organization and by Type of Income (A)" TableID="286"/>
<ParamValue Description="Table 7.10. Dividends Paid and Received by Sector (A)" TableID="287"/>
<ParamValue Description="Table 7.11. Interest Paid and Received by Sector and Legal Form of Organization (A)" TableID="288"/>
<ParamValue Description="Table 7.12. Imputations in the National Income and Product Accounts (A)" TableID="289"/>
<ParamValue Description="Table 7.13. Relation of Consumption of Fixed Capital in the National Income and Product Accounts to Depreciation and Amortization as Published by the Internal Revenue Service (A)" TableID="290"/>
<ParamValue Description="Table 7.14. Relation of Nonfarm Proprietors' Income in the National Income and Product Accounts to Corresponding Measures as Published by the Internal Revenue Service (A)" TableID="291"/>
<ParamValue Description="Table 7.15. Relation of Net Farm Income in the National Income and Product Accounts to Net Farm Income as Published by the U.S. Department of Agriculture (A)" TableID="292"/>
<ParamValue Description="Table 7.16. Relation of Corporate Profits, Taxes, and Dividends in the National Income and Product Accounts to Corresponding Measures as Published by the Internal Revenue Service (A)" TableID="293"/>
<ParamValue Description="Table 7.17. Relation of Monetary Interest Paid and Received in the National Income and Product Accounts to Corresponding Measures as Published by the Internal Revenue Service (A)" TableID="294"/>
<ParamValue Description="Table 7.18. Relation of Wages and Salaries in the National Income and Product Accounts to Wages and Salaries as Published by the Bureau of Labor Statistics (A)" TableID="295"/>
<ParamValue Description="Table 7.19. Comparison of Income and Outlays of Nonprofit Institutions Serving Households with Revenue and Expenses as Published by the Internal Revenue Service (A)" TableID="297"/>
<ParamValue Description="Table 7.20. Transactions of Defined Benefit and Defined Contribution Pension Plans (A)" TableID="296"/>
<ParamValue Description="Table 7.21. Transactions of Defined Benefit Pension Plans (A)" TableID="392"/>
<ParamValue Description="Table 7.22. Transactions of Private Defined Benefit Pension Plans (A)" TableID="393"/>
<ParamValue Description="Table 7.23. Transactions of Federal Government Defined Benefit Pension Plans (A)" TableID="394"/>
<ParamValue Description="Table 7.24. Transactions of State and Local Government Defined Benefit Pension Plans (A)" TableID="395"/>
<ParamValue Description="Table 7.25. Transactions of Defined Contribution Pension Plans (A)" TableID="397"/>

```

Note that the description of each table also indicates the frequencies that are available for each table – A=Annual, Q=Quarterly, M=Monthly

Requesting an invalid TableID returns this error:

```

<Error APIErrorCode="201" APIErrorDescription="Error retrieving NIPA data. ">
  <ErrorDetail Description="Invalid table IDs were requested. " />
</Error>

```

Omitting the TableID parameter returns this error:

```

<Error APIErrorCode="40" APIErrorDescription="The dataset requested requires parameters that were missing from the request. ">
  <AdditionalDetail>
    <MissingParameter ParameterName="TableID" ParameterDescription="The standard NIPA table identifier" />
  </AdditionalDetail>
</Error>

```

## Frequency Parameter

The Frequency parameter is a string that refers to the time series for the requested NIPA table. As shown above, the parameter is required, and multiple frequencies can be requested in each GetData submission. Multiple frequencies are requested by specifying them as a comma-delimited string, e. g. “A,Q,M”. When data is requested for frequencies that don’t exist for a particular NIPA table, only data that exists is returned.

The full list of valid frequencies is as follows:

```
<ParamValue FrequencyID="A" Description="Annual" />
<ParamValue FrequencyID="Q" Description="Quarterly" />
<ParamValue FrequencyID="M" Description="Monthly" />
```

If an invalid frequency is supplied in the GetData request (e. g. “Z”), this error is returned:

```
<Error APIErrorCode="201" APIErrorDescription="Error retrieving NIPA data. ">
  <ErrorDetail Description="Invalid frequencies were included in the request: Z" />
</Error>
```

If only frequencies that don’t exist for a particular table are requested, this error is returned:

```
<Error APIErrorCode="201" APIErrorDescription="Error retrieving NIPA data. ">
  <ErrorDetail Description="The requested parameters did not return data. " />
</Error>
```

Omitting the Frequency parameter returns this error:

```
<Error APIErrorCode="40" APIErrorDescription="The dataset requested requires parameters that were missing from the request. ">
  <AdditionalDetail>
    <MissingParameter ParameterName="Frequency" ParameterDescription="A - Annual, Q-Quarterly, M-Monthly" />
  </AdditionalDetail>
</Error>
```

### *Year Parameter*

The Year parameter is an integer that specifies the year(s) of data for the requested NIPA table. As shown above, the parameter is required, and multiple years can be requested in each GetData submission. Multiple years are requested by specifying them as a comma-delimited string, e. g. “2000,2001,2002”. When data is requested for years that don’t exist for a particular NIPA table, only data that exists is returned. For example, if years in the future are requested – like “2013,2014,2015”, the most recent available data is returned starting with 2013. If the request supplies the special value X or ALL for the Year parameter, all available years of data are returned. Note that using the X or ALL value for all years can return large amounts of data, and should be avoided when the actual required years are known.

If only years that don’t exist for a particular table are requested, this error is returned:

```
<Error APIErrorCode="201" APIErrorDescription="Error retrieving NIPA data. ">
  <ErrorDetail Description="The requested parameters did not return data. " />
</Error>
```

Omitting the Year parameter returns this error:

```
<Error APIErrorCode="40" APIErrorDescription="The dataset requested requires parameters that were missing from the request. ">
  <AdditionalDetail>
    <MissingParameter ParameterName="Year" ParameterDescription="List of year(s) of data to retrieve (X for All)" />
  </AdditionalDetail>
</Error>
```

Using the GetParameterValues meta-data retrieval method for the Year parameter returns a list of the valid year ranges for each NIPA table. Each NIPA table may have a different range of years available for different frequencies, so the valid combinations of years and frequencies are shown for each NIPA table. For example, Table 1 (at the time of this writing) has annual data from 1930 through 2016, Quarterly data from 1947 through 2017, and no monthly data as indicated in this example return data from the GetParameterValues method:









### ShowMillions Parameter

The valid values for the ShowMillions parameter are:

Invalid values for the ShowMillions parameter (e. g. “Z” or “cupcake”) are ignored.

## NIPA Dataset Result Data

The NIPA dataset returns data in the standard form described in the API User documentation. In XML form, the main structure of a result is:

```
<BEAAPI>
  <Request>
    <Results UTCProductionTime="Apr 16 2013 2:36PM" Statistic="NIPA Table">
</BEAAPI>
```

The Request node of the result contains the parameters supplied to the request. For purposes of this example, the parameters are:

```
<RequestParam ParameterName="USERID" ParameterValue="11111111-2222-3333-EEEE-FFFFFFFFFFFF" />
<RequestParam ParameterName="METHOD" ParameterValue="GetData" />
<RequestParam ParameterName="DatasetName" ParameterValue="NIPA" />
<RequestParam ParameterName="TableID" ParameterValue="5" />
<RequestParam ParameterName="Frequency" ParameterValue="A" />
<RequestParam ParameterName="Year" ParameterValue="2009" />
<RequestParam ParameterName="ShowMillions" ParameterValue="N" />
<RequestParam ParameterName="ResultFormat" ParameterValue="XML" />
```

The result returned from this request would be:

```
<Dimensions Ordinal="1" Name="TableID" DataType="numeric" IsValue="0" />
<Dimensions Ordinal="2" Name="SeriesCode" DataType="string" IsValue="0" />
<Dimensions Ordinal="3" Name="LineNumber" DataType="numeric" IsValue="0" />
<Dimensions Ordinal="4" Name="LineDescription" DataType="string" IsValue="0" />
<Dimensions Ordinal="5" Name="TimePeriod" DataType="string" IsValue="0" />
<Dimensions Ordinal="6" Name="CL_UNIT" DataType="string" IsValue="0" />
<Dimensions Ordinal="7" Name="UNIT_MULT" DataType="numeric" IsValue="0" />
<Dimensions Ordinal="8" Name="DataValue" DataType="numeric" IsValue="1" />
<Data TableID="5" SeriesCode="A191RC" LineNumber="1" LineDescription="Gross domestic product" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="13,973. 7"
NoteRef="5" />
<Data TableID="5" SeriesCode="DPCERC" LineNumber="2" LineDescription="Personal consumption expenditures" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9"
DataValue="9,845. 9" NoteRef="5" />
<Data TableID="5" SeriesCode="DGDSRC" LineNumber="3" LineDescription="Goods" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="3,194. 4" NoteRef="5" />
<Data TableID="5" SeriesCode="DDURRC" LineNumber="4" LineDescription="Durable goods" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="1,029. 6"
NoteRef="5" />
<Data TableID="5" SeriesCode="DNDGRC" LineNumber="5" LineDescription="Nondurable goods" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="2,164. 8"
NoteRef="5" />
<Data TableID="5" SeriesCode="DSERRC" LineNumber="6" LineDescription="Services" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="6,651. 5" NoteRef="5" />
<Data TableID="5" SeriesCode="A006RC" LineNumber="7" LineDescription="Gross private domestic investment" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9"
DataValue="1,549. 3" NoteRef="5" />
<Data TableID="5" SeriesCode="A007RC" LineNumber="8" LineDescription="Fixed investment" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="1,703. 5"
NoteRef="5" />
```



```

<Data TableID="5" SeriesCode="A008RC" LineNumber="9" LineDescription="Nonresidential" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="1,349.3"
NoteRef="5" />
<Data TableID="5" SeriesCode="B009RC" LineNumber="10" LineDescription="Structures" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="451.1" NoteRef="5" />
<Data TableID="5" SeriesCode="B010RC" LineNumber="11" LineDescription="Equipment and software" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="898.2"
NoteRef="5" />
<Data TableID="5" SeriesCode="A011RC" LineNumber="12" LineDescription="Residential" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="354.1" NoteRef="5" />
<Data TableID="5" SeriesCode="A014RC" LineNumber="13" LineDescription="Change in private inventories" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="-154.2"
NoteRef="5" />
<Data TableID="5" SeriesCode="A019RC" LineNumber="14" LineDescription="Net exports of goods and services" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="-388.7"
NoteRef="5" />
<Data TableID="5" SeriesCode="B020RC" LineNumber="15" LineDescription="Exports" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="1,587.4" NoteRef="5" />
<Data TableID="5" SeriesCode="A253RC" LineNumber="16" LineDescription="Goods" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="1,064.7" NoteRef="5" />
<Data TableID="5" SeriesCode="A646RC" LineNumber="17" LineDescription="Services" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="522.7" NoteRef="5" />
<Data TableID="5" SeriesCode="B021RC" LineNumber="18" LineDescription="Imports" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="1,976.2" NoteRef="5" />
<Data TableID="5" SeriesCode="A255RC" LineNumber="19" LineDescription="Goods" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="1,587.5" NoteRef="5" />
<Data TableID="5" SeriesCode="B656RC" LineNumber="20" LineDescription="Services" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="388.7" NoteRef="5" />
<Data TableID="5" SeriesCode="A822RC" LineNumber="21" LineDescription="Government consumption expenditures and gross investment" TimePeriod="2009" CL_UNIT="USD"
UNIT_MULT="9" DataValue="2,967.2" NoteRef="5" />
<Data TableID="5" SeriesCode="A823RC" LineNumber="22" LineDescription="Federal" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="1,143.6" NoteRef="5" />
<Data TableID="5" SeriesCode="A824RC" LineNumber="23" LineDescription="National defense" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="776.0"
NoteRef="5" />
<Data TableID="5" SeriesCode="A825RC" LineNumber="24" LineDescription="Nondefense" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="367.6" NoteRef="5"
/>
<Data TableID="5" SeriesCode="A829RC" LineNumber="25" LineDescription="State and local" TimePeriod="2009" CL_UNIT="USD" UNIT_MULT="9" DataValue="1,823.6"
NoteRef="5" />
<Notes NoteRef="5" NoteText="Table 1. 1. 5. Gross Domestic Product - [Billions of dollars]" />

```

All requests for the NIPA dataset will return similar results, including the elements that describe the dimensions, data, and footnotes (Dimensions, Data, and Notes).

## Dimensions Elements

The dimensions included in the returned data are:

Ordinal	Name	Datatype	IsValue
1	TableID	numeric	No
2	SeriesCode	string	No
3	LineNumber	numeric	No
4	LineDescription	No	No
5	TimePeriod	string	No
6	CL_UNIT	string	No
7	UNIT_MULT	numeric	No
8	DataValue	numeric	Yes
	NoteRef <sup>4</sup>	string	No

Within the set of “Data” elements returned in the result, each of the dimensions is represented as an attribute (name/value pair). All the dimensions (attributes) have a single value, except the Noteref dimension, which can have multiple values represented as a comma-delimited string. The dimensions (attributes) are defined as follows:

**TableID** – The standard NIPA table ID as submitted in the request (an integer).

**SeriesCode** – A string containing the a unique identifier for the line item in the published NIPA table.

**LineNumber** – The line number of the data item as shown in published print versions of the published NIPA table.

---

<sup>4</sup> The Noteref attribute included in the data is not shown as one of the dimension elements. Noterefs may appear as an attribute of any element in the result data (except other Noterefs), and refer to a particular NoteRef element.

***LineDescription*** – The “stub” or description of the statistic in the published NIPA table.

***TimePeriod*** – A string containing the time period for the data item in the form YYYY for annual data, YYYYQn for quarterly data (where n is the quarter digit), and YYYYMnn for monthly data (where nn is 2 digits representing the month – i. e. ‘01’ through ‘12’).

***CL\_UNIT*** – A string containing “USD” when the reported statistic is in U. S. dollars, or “PC” when the reported statistic is a percent, index, or contribution.

***UNIT\_MULT*** – An integer representing the base-10 exponent of the multiplier used to interpret the data value. For example “6” refers to millions ( $\text{DataValue} \times 10^6$ ) and “9” refers to billions ( $\text{DataValue} \times 10^9$ ).

***DataValue*** – An integer or decimal value of the statistic. Always a numeric value, but may contain embedded commas.

***NoteRef*** – a reference to one of the Notes elements. Noteref in a data element always corresponds to the Noteref in a Notes element. The Noteref attribute may have multiple values represented by a comma-delimited string. This attribute can appear in any data element, or in the Results element. Any Noteref attribute included in the data is guaranteed to have a corresponding Notes element. For the NIPA dataset, every data element includes at least one Noteref that corresponds to a Note element containing the title of the table. Additional footnote references that apply to specific lines/series/timeperiods may be included in the comma-delimited Noteref string value.

## Appendix C – NIUnderlyingDetail (National Income and Product Accounts)

The NIUnderlyingDetail dataset contains detailed estimate data from underlying NIPA series that appear in the national income and product account (NIPA) tables as published in the *Survey of Current Business*. Three parameters are used to retrieve data from the NIUnderlyingDetail dataset, as follows:

Name	Type	Description	Is Required	Multiple Values Accepted	"All" value
TableID	Integer	The standard NIPA table identifier	Yes	No	N/A
Frequency	String	A - Annual, Q- Quarterly, M- Monthly	Yes	Yes	N/A
Year	integer	List of year(s) of data to retrieve	Yes	Yes	X ALL

### TableID Parameter

The TableID parameter is an integer that refers to a specific NIPA table. As shown above, the parameter is required, and only one Underlying Detail table can be requested in each GetData submission.

The full list of valid Underlying Detail TableIDs is as follows (**SUBJECT TO CHANGE**):

```
<ParamValue TableID="2001" Description="Table 1AU. Real Manufacturing and Trade Inventories, Seasonally Adjusted, End of Period [Chained 1996 dollars, 1967-96, SIC] (Q) (M)"/>
<ParamValue TableID="2012" Description="Table 1AU2. Real Manufacturing and Trade Inventories, Seasonally Adjusted, End of Period [Chained 2009 dollars, 1967-96, SIC] (Q) (M)"/>
<ParamValue TableID="2023" Description="Table 1BU. Real Manufacturing and Trade Inventories, Seasonally Adjusted, End of Period [Chained 2009 dollars, 1997 forward, NAICS] (A) (Q) (M)"/>
<ParamValue TableID="2034" Description="Table 1BUC. Current Dollar Manufacturing and Trade Inventories, Seasonally Adjusted, End of Period [1997 forward, NAICS] (A) (Q) (M)"/>
<ParamValue TableID="2045" Description="Table 2AU. Real Manufacturing and Trade Sales, Seasonally Adjusted at Monthly Rate [Chained 1996 dollars, 1967-96, SIC] (Q) (M)"/>
<ParamValue TableID="2056" Description="Table 2AUI. Implicit Price Deflators for Manufacturing and Trade Sales [Index base 1996, 1967-96, SIC] (Q) (M)"/>
<ParamValue TableID="2059" Description="Table 2BU. Real Manufacturing and Trade Sales, Seasonally Adjusted at Monthly Rate [Chained 2009 dollars, 1997 forward, NAICS] (A) (Q) (M)"/>
<ParamValue TableID="2060" Description="Table 2BUI. Implicit Price Deflators for Manufacturing and Trade Sales [Index base 2009, 1997 forward, NAICS] (A) (Q) (M)"/>
<ParamValue TableID="2061" Description="Table 3AU. Real Inventory-Sales Ratios for Manufacturing and Trade, Seasonally Adjusted [Based on chained 1996 dollars, 1967-96, SIC] (Q) (M)"/>
<ParamValue TableID="2002" Description="Table 3BU. Real Inventory-Sales Ratios for Manufacturing and Trade, Seasonally Adjusted [Based on chained 2009 dollars, 1997 forward, NAICS] (A) (Q) (M)"/>
<ParamValue TableID="2003" Description="Table 4AU1. Real Manufacturing Inventories, by Stage of Fabrication (Materials and supplies), Seasonally Adjusted, End of Period [Chained 2009 dollars, 1967-97 forward, SIC] (Q) (M)"/>
<ParamValue TableID="2004" Description="Table 4AU2. Real Manufacturing Inventories, by Stage of Fabrication (Works-in-process), Seasonally Adjusted, End of Period [Chained 2009 dollars, 1967-97 forward, SIC] (Q) (M)"/>
<ParamValue TableID="2005" Description="Table 4AU3. Real Manufacturing Inventories, by Stage of Fabrication (Finished goods), Seasonally Adjusted, End of Period [Chained 2009 dollars, 1967-97 forward, SIC] (Q) (M)"/>
<ParamValue TableID="2006" Description="Table 4BU1. Real Manufacturing Inventories, by Stage of Fabrication (Materials and supplies), Seasonally Adjusted, End of Period [Chained 2009 dollars, 1997 forward, NAICS] (A) (Q) (M)"/>
<ParamValue TableID="2007" Description="Table 4BU2. Real Manufacturing Inventories, by Stage of Fabrication (Work-in-process), Seasonally Adjusted, End of Period [Chained 2009 dollars, 1997 forward, NAICS] (A) (Q) (M)"/>
<ParamValue TableID="2008" Description="Table 4BU3. Real Manufacturing Inventories, by Stage of Fabrication (Finished goods), Seasonally Adjusted, End of Period [Chained 2009 dollars, 1997 forward, NAICS] (A) (Q) (M)"/>
<ParamValue TableID="2009" Description="Table 5U. BEA Retail and Food Service Sales (A) (Q) (M)"/>
<ParamValue TableID="2010" Description="Table 6U. Real BEA Retail and Food Service Sales (A) (Q) (M)"/>
<ParamValue TableID="2011" Description="Table 7U. Chain-Type Price Indexes for BEA Retail and Food Service Sales (A) (Q) (M)"/>
<ParamValue TableID="2013" Description="Table 2.3.4U. Price Indexes for Personal Consumption Expenditures by Major Type of Product and by Major Function (A) (Q) (M)"/>
<ParamValue TableID="2014" Description="Table 2.3.5U. Personal Consumption Expenditures by Major Type of Product and by Major Function (A) (Q) (M)"/>
<ParamValue TableID="2015" Description="Table 2.3.6U. Real Personal Consumption Expenditures by Major Type of Product and by Major Function (A) (Q) (M)"/>
<ParamValue TableID="2017" Description="Table 2.4.3U. Real Personal Consumption Expenditures by Type of Product, Quantity Indexes (A) (Q) (M)"/>
<ParamValue TableID="2016" Description="Table 2.4.4U. Price Indexes for Personal Consumption Expenditures by Type of Product (A) (Q) (M)"/>
<ParamValue TableID="2017" Description="Table 2.4.5U. Personal Consumption Expenditures by Type of Product (A) (Q) (M)"/>
<ParamValue TableID="2018" Description="Table 2.4.6U. Real Personal Consumption Expenditures by Type of Product, Chained Dollars (A) (Q) (M)"/>
<ParamValue TableID="2019" Description="Table 3.4U. Personal Current Tax Receipts (Q)"/>
<ParamValue TableID="2020" Description="Table 3.5U. Taxes on Production and Imports (Q)"/>
<ParamValue TableID="2021" Description="Table 3.6U. Contributions for Government Social Insurance (Q)"/>
<ParamValue TableID="2022" Description="Table 3.7U. Government Current Transfer Receipts (Q)"/>
<ParamValue TableID="2024" Description="Table 3.8U. Current Surplus of Government Enterprises (Q)"/>
<ParamValue TableID="2025" Description="Table 3.12U. Government Social Benefits (Q)"/>
<ParamValue TableID="2026" Description="Table 3.13U. Subsidies (Q)"/>
<ParamValue TableID="2027" Description="Table 3.24U. Federal Grants-in-Aid to State and Local Governments (Q)"/>
<ParamValue TableID="2028" Description="Table 3.25U. Compensation of General Government Employees (A)"/>
```



```

<ParamValue TableID="2114" Description="Table 4.2.3U. Real Exports and Imports of Goods and Services by Type of Product, Quantity Indexes (A) (Q)"/>
<ParamValue TableID="2111" Description="Table 4.2.4U. Price Indexes for Exports and Imports of Goods and Services by Type of Product (A) (Q)"/>
<ParamValue TableID="2113" Description="Table 4.2.5U. Exports and Imports of Goods and Services by Type of Product (A) (Q)"/>
<ParamValue TableID="2112" Description="Table 4.2.6U. Real Exports and Imports of Goods and Services by Type of Product, Chained Dollars (A) (Q)"/>
<ParamValue TableID="2073" Description="Table 4.3BU. Relation of Foreign Transactions in the National Income and Product Accounts to the Corresponding Items in the International Transactions Accounts (Q)"/>
<ParamValue TableID="2070" Description="Table 5.2.3U. Real Gross and Net Domestic Investment by Major Type, Quantity Indexes (Q)"/>
<ParamValue TableID="2071" Description="Table 5.2.5U. Gross and Net Domestic Investment by Major Type (Q)"/>
<ParamValue TableID="2072" Description="Table 5.2.6U. Real Gross and Net Domestic Investment by Major Type, Chained Dollars (Q)"/>
<ParamValue TableID="2029" Description="Table 5.4.4U. Price Indexes for Private Fixed Investment in Structures by Type (A) (Q)"/>
<ParamValue TableID="2030" Description="Table 5.4.5U. Private Fixed Investment in Structures by Type (A) (Q)"/>
<ParamValue TableID="2031" Description="Table 5.4.6U. Private Fixed Investment in Structures by Type, Chained dollars (A) (Q)"/>
<ParamValue TableID="2032" Description="Table 5.5.4U. Price Indexes for Private Fixed Investment in Equipment by Type (A) (Q)"/>
<ParamValue TableID="2033" Description="Table 5.5.5U. Private Fixed Investment in Equipment by Type (A) (Q)"/>
<ParamValue TableID="2035" Description="Table 5.5.6U. Private Fixed Investment in Equipment by Type, Chained dollars (A) (Q)"/>
<ParamValue TableID="2081" Description="Table 5.7.5AM1. Change in Private Inventories by Industry (M)"/>
<ParamValue TableID="2082" Description="Table 5.7.5AM2. Change in Book Value by Industry (M)"/>
<ParamValue TableID="2083" Description="Table 5.7.5AM3. Inventory Valuation Adjustment by Industry (M)"/>
<ParamValue TableID="2084" Description="Table 5.7.5AU1. Change in Private Inventories by Industry (Q)"/>
<ParamValue TableID="2085" Description="Table 5.7.5AU2. Change in Book Value by Industry (Q)"/>
<ParamValue TableID="2086" Description="Table 5.7.5AU3. Inventory Valuation Adjustment by Industry (Q)"/>
<ParamValue TableID="2087" Description="Table 5.7.5BM1. Change in Private Inventories by Industry (M)"/>
<ParamValue TableID="2088" Description="Table 5.7.5BM2. Change in Book Value by Industry (M)"/>
<ParamValue TableID="2089" Description="Table 5.7.5BM3. Inventory Valuation Adjustment by Industry (M)"/>
<ParamValue TableID="2090" Description="Table 5.7.5BU1. Change in Private Inventories by Industry (A) (Q)"/>
<ParamValue TableID="2091" Description="Table 5.7.5BU2. Change in Book Value by Industry (A) (Q)"/>
<ParamValue TableID="2092" Description="Table 5.7.5BU3. Inventory Valuation Adjustment by Industry (A) (Q)"/>
<ParamValue TableID="2093" Description="Table 5.7.6AM. Change in Real Private Inventories by Industry (M)"/>
<ParamValue TableID="2094" Description="Table 5.7.6AU. Change in Real Private Inventories by Industry (Q)"/>
<ParamValue TableID="2095" Description="Table 5.7.6BM. Change in Real Private Inventories by Industry (M)"/>
<ParamValue TableID="2096" Description="Table 5.7.6BU. Change in Real Private Inventories by Industry (A) (Q)"/>
<ParamValue TableID="2053" Description="Table 5.11U. Capital Transfers Paid and Received, by Sector and by Type (Q)"/>
<ParamValue TableID="2054" Description="Table 7.2.4U. Price Indexes for Motor Vehicle Output (A) (Q)"/>
<ParamValue TableID="2055" Description="Table 7.2.5S. Auto and Truck Unit Sales, Production, Inventories, Expenditures, and Price (M)"/>
<ParamValue TableID="2057" Description="Table 7.2.5U. Motor Vehicle Output (A) (Q)"/>
<ParamValue TableID="2058" Description="Table 7.2.6U. Real Motor Vehicle Output, Chained Dollars (A) (Q)"/>
<ParamValue TableID="2075" Description="Table 9.1U. Reconciliation of Percent Change in the CPI with Percent Change in the PCE Price Index (Q) (M)"/>
<ParamValue TableID="2076" Description="Table 9.2U. Final Sales of Domestic Computers (A) (Q)"/>
<ParamValue TableID="2077" Description="Table 9.3U. Gross Domestic Product and Final Sales of Software (A)"/>
<ParamValue TableID="2078" Description="Table 9.4U. Software investment and prices (A)"/>
<ParamValue TableID="2079" Description="Table 9.5U. Contributions to Percent Change in Real Gross Domestic Product From Final Sales of Computers, Software, and Communications Equipment (A)"/>

```

Note that the description of each table also indicates the frequencies that are available for each table – A=Annual, Q=Quarterly, M=Monthly.

Requesting an invalid TableID returns this error:

```

<Error APIErrorCode="201" APIErrorDescription="Error retrieving NIPA data. ">
  <ErrorDetail Description="Invalid table IDs were requested." />
</Error>

```

Omitting the TableID parameter returns this error:

```

<Error APIErrorCode="40" APIErrorDescription="The dataset requested requires parameters that were missing from the request. ">
  <AdditionalDetail>
    <MissingParameter ParameterName="TableID" ParameterDescription="The standard NI underlying detail table identifier" />
  </AdditionalDetail>
</Error>

```

### Frequency Parameter

The Frequency parameter is a string that refers to the time series for the requested Underlying Detail table. As shown above, the parameter is required, and multiple frequencies can be requested in each GetData submission. Multiple frequencies are requested by specifying them as a comma-delimited string, e. g. “A,Q,M”. When data is requested for frequencies that don’t exist for a particular Underlying Detail table, only data that exists is returned.

The full list of valid frequencies is as follows:

```

<ParamValue FrequencyID="A" Description="Annual" />
<ParamValue FrequencyID="Q" Description="Quarterly" />
<ParamValue FrequencyID="M" Description="Monthly" />

```

If an invalid frequency is supplied in the GetData request (e. g. “Z”), this error is returned:

```
<Error APIErrorCode="201" APIErrorDescription="Error retrieving NIPA data. ">
  <ErrorDetail Description="Invalid frequencies were included in the request: Z" />
</Error>
```

If only frequencies that don’t exist for a particular table are requested, this error is returned:

```
<Error APIErrorCode="201" APIErrorDescription="Error retrieving NIPA data. ">
  <ErrorDetail Description="The requested parameters did not return data. " />
</Error>
```

Omitting the Frequency parameter returns this error:

```
<Error APIErrorCode="40" APIErrorDescription="The dataset requested requires parameters that were missing from the request. ">
  <AdditionalDetail>
    <MissingParameter ParameterName="Frequency" ParameterDescription="A - Annual, Q-Quarterly, M-Monthly" />
  </AdditionalDetail>
</Error>
```

### *Year Parameter*

The Year parameter is an integer that specifies the year(s) of data for the requested Underlying Detail table. As shown above, the parameter is required, and multiple years can be requested in each GetData submission. Multiple years are requested by specifying them as a comma-delimited string, e. g. “2000,2001,2002”. When data is requested for years that don’t exist for a particular Underlying Detail table, only data that exists is returned. For example, if years in the future are requested – like “2013,2014,2015”, the most recent available data is returned starting with 2013. If the request supplies the special value X or ALL for the Year parameter, all available years of data are returned. Note that using the X or ALL value for all years can return large amounts of data, and should be avoided when the actual required years are known.

If only years that don’t exist for a particular table are requested, this error is returned:

```
<Error APIErrorCode="201" APIErrorDescription="Error retrieving NIPA data. ">
  <ErrorDetail Description="The requested parameters did not return data. " />
</Error>
```

Omitting the Year parameter returns this error:

```
<Error APIErrorCode="40" APIErrorDescription="The dataset requested requires parameters that were missing from the request. ">
  <AdditionalDetail>
    <MissingParameter ParameterName="Year" ParameterDescription="List of year(s) of data to retrieve (X for All)" />
  </AdditionalDetail>
</Error>
```

Using the GetParameterValues meta-data retrieval method for the Year parameter returns a list of the valid year ranges for each UNDERLYING DETAIL table. Each UNDERLYING DETAIL table may have a different range of years available for different frequencies, so the valid combinations of years and frequencies are shown for each UNDERLYING DETAIL table. For example, Table 1 (at the time of this writing) has no annual data,

Quarterly data from 1967 through 1997, and monthly data from 1967 through 1997 as indicated in this example return data from the GetParameterValues method:

```
<ParamValue LastMonthlyYear="1996" FirstMonthlyYear="1967" LastQuarterlyYear="1996" FirstQuarterlyYear="1967" LastAnnualYear="0" FirstAnnualYear="0" TableID="2001"/>
<ParamValue LastMonthlyYear="2015" FirstMonthlyYear="1997" LastQuarterlyYear="2015" FirstQuarterlyYear="1997" LastAnnualYear="2014" FirstAnnualYear="1997"
TableID="2002"/>
<ParamValue LastMonthlyYear="1997" FirstMonthlyYear="1967" LastQuarterlyYear="1997" FirstQuarterlyYear="1967" LastAnnualYear="0" FirstAnnualYear="0" TableID="2003"/>
```



```
<ParamValue LastMonthlyYear="0" FirstMonthlyYear="0" LastQuarterlyYear="2015" FirstQuarterlyYear="1997" LastAnnualYear="2014" FirstAnnualYear="1997" TableID="2096"/>
<ParamValue LastMonthlyYear="0" FirstMonthlyYear="0" LastQuarterlyYear="2015" FirstQuarterlyYear="1999" LastAnnualYear="2014" FirstAnnualYear="1999" TableID="2111"/>
<ParamValue LastMonthlyYear="0" FirstMonthlyYear="0" LastQuarterlyYear="2015" FirstQuarterlyYear="1999" LastAnnualYear="2014" FirstAnnualYear="1999" TableID="2112"/>
<ParamValue LastMonthlyYear="0" FirstMonthlyYear="0" LastQuarterlyYear="2015" FirstQuarterlyYear="1999" LastAnnualYear="2014" FirstAnnualYear="1999" TableID="2113"/>
<ParamValue LastMonthlyYear="0" FirstMonthlyYear="0" LastQuarterlyYear="2015" FirstQuarterlyYear="1999" LastAnnualYear="2014" FirstAnnualYear="1999" TableID="2114"/>
```

## UNDERLYING DETAIL Dataset Result Data

The UNDERLYING DETAIL dataset returns data in the standard form described in the API User documentation. In XML form, the main structure of a result is:

```
<BEAAPI>
  <Request>
    <Results UTCProductionTime="Apr 16 2013 2:36PM" Statistic="Underlying Detail Table">
  </BEAAPI>
```

The Request node of the result contains the parameters supplied to the request. For purposes of this example, the parameters are:

```
<RequestParam ParameterName="USERID" ParameterValue="1111111-2222-3333-EEEE-FFFFFFFFFFFF" />
<RequestParam ParameterName="METHOD" ParameterValue="GetData" />
<RequestParam ParameterName="DatasetName" ParameterValue="NIUnderlyingDetail"/>
<RequestParam ParameterName="TableID" ParameterValue="2013" />
<RequestParam ParameterName="Frequency" ParameterValue="A" />
<RequestParam ParameterName="Year" ParameterValue="2010" />
<RequestParam ParameterName="ResultFormat" ParameterValue="XML" />
```

The result returned from this request would be:

```
<Dimensions IsValue="0" DataType="numeric" Name="TableID" Ordinal="1"/>
<Dimensions IsValue="0" DataType="string" Name="SeriesCode" Ordinal="2"/>
<Dimensions IsValue="0" DataType="numeric" Name="LineNumber" Ordinal="3"/>
<Dimensions IsValue="0" DataType="string" Name="LineDescription" Ordinal="4"/>
<Dimensions IsValue="0" DataType="string" Name="TimePeriod" Ordinal="5"/>
<Dimensions IsValue="0" DataType="string" Name="CL_UNIT" Ordinal="6"/>
<Dimensions IsValue="0" DataType="numeric" Name="UNIT_MULT" Ordinal="7"/>
<Dimensions IsValue="1" DataType="numeric" Name="DataValue" Ordinal="8"/>
<Data NoteRef="2013" DataValue="101.653" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Personal consumption expenditures (PCE)"
LineNumber="1" SeriesCode="DPCERG" TableID="2013"/>
<Data NoteRef="2013" DataValue="101.637" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Goods" LineNumber="2"
SeriesCode="DGDSRG" TableID="2013"/>
<Data NoteRef="2013" DataValue="98.622" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Durable goods" LineNumber="3"
SeriesCode="DDURRG" TableID="2013"/>
<Data NoteRef="2013" DataValue="105.735" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Motor vehicles and parts"
LineNumber="4" SeriesCode="DMOTRG" TableID="2013"/>
<Data NoteRef="2013" DataValue="95.761" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Furnishings and durable household
equipment" LineNumber="5" SeriesCode="DFDHRG" TableID="2013"/>
<Data NoteRef="2013" DataValue="92.854" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Recreational goods and vehicles"
LineNumber="6" SeriesCode="DREQRG" TableID="2013"/>
<Data NoteRef="2013" DataValue="100.430" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Other durable goods" LineNumber="7"
SeriesCode="DODGRG" TableID="2013"/>
<Data NoteRef="2013" DataValue="103.085" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Nondurable goods" LineNumber="8"
SeriesCode="DNDGRG" TableID="2013"/>
<Data NoteRef="2013" DataValue="100.309" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Food and beverages purchased for off-
premises consumption" LineNumber="9" SeriesCode="DFXARG" TableID="2013"/>
<Data NoteRef="2013" DataValue="99.347" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Clothing and footwear" LineNumber="10"
SeriesCode="DCLORG" TableID="2013"/>
<Data NoteRef="2013" DataValue="118.140" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Gasoline and other energy goods"
LineNumber="11" SeriesCode="DGOERG" TableID="2013"/>
<Data NoteRef="2013" DataValue="101.954" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Other nondurable goods"
LineNumber="12" SeriesCode="DONGRG" TableID="2013"/>
<Data NoteRef="2013" DataValue="101.661" UNIT_MULT="0" CL_UNIT="PC" TimePeriod="2010" LineDescription="Services" LineNumber="13"
SeriesCode="DSERRG" TableID="2013"/>
```



<Data NoteRef="2013" DataValue="101.778" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Household consumption expenditures (for services)" LineNumber="14" SeriesCode="DHCERG" TableID="2013"/>

<Data NoteRef="2013" DataValue="100.249" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Housing and utilities" LineNumber="15" SeriesCode="DHUTRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="102.517" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Health care" LineNumber="16" SeriesCode="DHLCRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="102.024" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Transportation services" LineNumber="17" SeriesCode="DTRSrg" TableID="2013"/>

<Data NoteRef="2013" DataValue="101.075" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Recreation services" LineNumber="18" SeriesCode="DRCARG" TableID="2013"/>

<Data NoteRef="2013" DataValue="101.330" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Food services and accommodations" LineNumber="19" SeriesCode="DFSARG" TableID="2013"/>

<Data NoteRef="2013" DataValue="103.993" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Financial services and insurance" LineNumber="20" SeriesCode="DIFSrg" TableID="2013"/>

<Data NoteRef="2013" DataValue="102.393" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Other services" LineNumber="21" SeriesCode="DOTSRG" TableID="2013"/>

<Data NoteRef="2013,2013.1" DataValue="98.946" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Final consumption expenditures of nonprofit institutions serving households (NPISHs)" LineNumber="22" SeriesCode="DNPIRG" TableID="2013"/>

<Data NoteRef="2013,2013.2" DataValue="101.830" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Gross output of nonprofit institutions" LineNumber="23" SeriesCode="DNPERG" TableID="2013"/>

<Data NoteRef="2013,2013.3" DataValue="102.826" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Less: Receipts from sales of goods and services by nonprofit institutions" LineNumber="24" SeriesCode="DNPSRG" TableID="2013"/>

<Data NoteRef="2013,2013.4" DataValue="101.286" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="PCE excluding food and energy" LineNumber="25" SeriesCode="DPCCRG" TableID="2013"/>

<Data NoteRef="2013,2013.5" DataValue="110.072" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Energy goods and services" LineNumber="26" SeriesCode="DNRGRG" TableID="2013"/>

<Data NoteRef="2013,2013.6" DataValue="101.497" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Market-based PCE" LineNumber="27" SeriesCode="DPCMRG" TableID="2013"/>

<Data NoteRef="2013,2013.6" DataValue="101.047" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Market-based PCE excluding food and energy" LineNumber="28" SeriesCode="DPCXRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="101.653" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Personal consumption expenditures" LineNumber="29" SeriesCode="DPCERG" TableID="2013"/>

<Data NoteRef="2013,2013.7" DataValue="101.730" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Household consumption expenditures" LineNumber="30" SeriesCode="DPHCRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="100.309" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Food and beverages purchased for off-premises consumption" LineNumber="31" SeriesCode="DFXARG" TableID="2013"/>

<Data NoteRef="2013" DataValue="99.496" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Clothing, footwear, and related services" LineNumber="32" SeriesCode="DCAFRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="100.452" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Housing, utilities, and fuels" LineNumber="33" SeriesCode="DHUFRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="97.197" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Furnishings, household equipment, and routine household maintenance" LineNumber="34" SeriesCode="DFHHRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="102.610" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Health" LineNumber="35" SeriesCode="DHLTRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="108.248" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Transportation" LineNumber="36" SeriesCode="DTRNRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="99.720" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Communication" LineNumber="37" SeriesCode="DCMCRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="97.462" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Recreation" LineNumber="38" SeriesCode="DRRLRG" TableID="2013"/>

<Data NoteRef="2013" DataValue="104.699" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Education" LineNumber="39" SeriesCode="DEDURG" TableID="2013"/>

<Data NoteRef="2013" DataValue="101.330" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Food services and accommodations" LineNumber="40" SeriesCode="DFSARG" TableID="2013"/>

<Data NoteRef="2013" DataValue="103.993" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Financial services and insurance" LineNumber="41" SeriesCode="DIFSrg" TableID="2013"/>

<Data NoteRef="2013" DataValue="102.992" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Other goods and services" LineNumber="42" SeriesCode="DOISRG" TableID="2013"/>

<Data NoteRef="2013,2013.1" DataValue="98.946" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Final consumption expenditures of nonprofit institutions serving households (NPISHs)" LineNumber="44" SeriesCode="DNPIRG" TableID="2013"/>

<Data NoteRef="2013,2013.2" DataValue="101.830" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Gross output of nonprofit institutions" LineNumber="45" SeriesCode="DNPERG" TableID="2013"/>

<Data NoteRef="2013,2013.3" DataValue="102.826" UNIT\_MULT="0" CL\_UNIT="PC" TimePeriod="2010" LineDescription="Less: Receipts from sales of goods and services by nonprofit institutions" LineNumber="46" SeriesCode="DNPSRG" TableID="2013"/>

<Notes NoteRef="2013" NoteText="Table 2.3.4U. Price Indexes for Personal Consumption Expenditures by Major Type of Product and by Major Function - [Index numbers, 2009=100; quarters and months are seasonally adjusted] Last Revised: August 05, 2015"/>

<Notes NoteRef="2013.1" NoteText="1. Net expenses of NPISHs, defined as their gross operating expenses less primary sales to households."/>

<Notes NoteRef="2013.2" NoteText="2. Gross output is net of unrelated sales, secondary sales, and sales to business, to government, and to the rest of the world; excludes own-account investment (construction and software)."/>

<Notes NoteRef="2013.3" NoteText="3. Excludes unrelated sales, secondary sales, and sales to business, to government, and to the rest of the world; includes membership dues and fees."/>

<Notes NoteRef="2013.4" NoteText="4. Food consists of food and beverages purchased for off-premises consumption; food services, which include purchased meals and beverages, are not classified as food."/>

<Notes NoteRef="2013.5" NoteText="5. Consists of gasoline and other energy goods and of electricity and gas services."/>  
 <Notes NoteRef="2013.6" NoteText="6. Market-based PCE is a supplemental measure that is based on household expenditures for which there are observable price measures. It excludes most imputed transactions (for example, financial services furnished without payment) and the final consumption expenditures of nonprofit institutions serving households."/>  
 <Notes NoteRef="2013.7" NoteText="7. Consists of household purchases of goods and services from business, government, nonprofit institutions, and the rest of the world."/>

All requests for the Underlying Detail dataset will return similar results, including the elements that describe the dimensions, data, and footnotes (Dimensions, Data, and Notes).

## Dimensions Elements

The dimensions included in the returned data are:

Ordinal	Name	Datatype	IsValue
1	TableID	numeric	No
2	SeriesCode	string	No
3	LineNumber	numeric	No
4	LineDescription	No	No
5	TimePeriod	string	No
6	CL_UNIT	string	No
7	UNIT_MULT	numeric	No
8	DataValue	numeric	Yes
	NoteRef <sup>5</sup>	string	No

<sup>5</sup> The Noteref attribute included in the data is not shown as one of the dimension elements. Noterefs may appear as an attribute of any element in the result data (except other Noterefs), and refer to a particular NoteRef element.

Within the set of “Data” elements returned in the result, each of the dimensions is represented as an attribute (name/value pair). All the dimensions (attributes) have a single value, except the Noteref dimension, which can have multiple values represented as a comma-delimited string. The dimensions (attributes) are defined as follows:

**TableID** – The standard Underlying Detail table ID as submitted in the request (an integer).

**SeriesCode** – A string containing a unique identifier for the line item in the published Underlying Detail table.

**LineNumber** – The line number of the data item as shown in published print versions of the published Underlying Detail table.

**LineDescription** – The “stub” or description of the statistic in the published Underlying Detail table.

**TimePeriod** – A string containing the time period for the data item in the form YYYY for annual data, YYYYQn for quarterly data (where n is the quarter digit), and YYYYMnn for monthly data (where nn is 2 digits representing the month – i. e. ‘01’ through ‘12’).

**CL\_UNIT** – A string containing “USD” when the reported statistic is in U. S. dollars, or “PC” when the reported statistic is a percent, index, or contribution.

***UNIT\_MULT*** – An integer representing the base-10 exponent of the multiplier used to interpret the data value. For example “6” refers to millions (DataValue X 10<sup>6</sup>) and “9” refers to billions (DataValue X 10<sup>9</sup>).

***DataValue*** – An integer or decimal value of the statistic. Always a numeric value, but may contain embedded commas.

***NoteRef*** – a reference to one of the Notes elements. Noteref in a data element always corresponds to the Noteref in a Notes element. The Noteref attribute may have multiple values represented by a comma-delimited string. This attribute can appear in any data element, or in the Results element. Any Noteref attribute included in the data is guaranteed to have a corresponding Notes element. For the Underlying Detail dataset, every data element includes at least one Noteref that corresponds to a Note element containing the title of the table. Additional footnote references that apply to specific lines/series/timeperiods may be included in the comma-delimited Noteref string value.



## Appendix D – Fixed Assets

The FixedAssets dataset contains data from the standard set of Fixed Assets tables as published online. Two parameters are used to retrieve data from the Fixed Assets dataset, as follows:

Name	Type	Description	Is Required	Multiple Values Accepted	“All” value
TableID	Integer	The standard Fixed Assets table identifier	Yes	No	N/A
Year	integer	List of year(s) of	Yes	Yes	X ALL

### TableID Parameter

The TableID parameter is an integer that refers to a specific Fixed Assets table. As shown above, the parameter is required, and only one Fixed Assets table can be requested in each GetData submission.

The full list of valid Fixed Assets TableIDs is as follows:

```
<ParamValue TableID="16" Description="Table 1. 1. Current-Cost Net Stock of Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="17" Description="Table 1. 2. Chain-Type Quantity Indexes for Net Stock of Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="86" Description="Table 1. 3. Current-Cost Depreciation of Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="87" Description="Table 1. 4. Chain-Type Quantity Indexes for Depreciation of Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="96" Description="Table 1. 5. Investment in Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="97" Description="Table 1. 6. Chain-Type Quantity Indexes for Investment in Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="105" Description="Table 1. 7. Current-Cost Other Changes in Volume of Assets for Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="124" Description="Table 1. 8. Historical-Cost Other Changes in Volume of Assets for Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="125" Description="Table 1. 9. Current-Cost Average Age at Yearend of Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="18" Description="Table 2. 1. Current-Cost Net Stock of Private Fixed Assets, Equipment, Structures, and Intellectual Property Products by Type (A)" />
<ParamValue TableID="19" Description="Table 2. 2. Chain-Type Quantity Indexes for Net Stock of Private Fixed Assets, Equipment, Structures, and Intellectual Property Products by Type (A)" />
<ParamValue TableID="42" Description="Table 2. 3. Historical-Cost Net Stock of Private Fixed Assets, Equipment, Structures, and Intellectual Property Products by Type (A)" />
<ParamValue TableID="65" Description="Table 2. 4. Current-Cost Depreciation of Private Fixed Assets, Equipment, Structures, and Intellectual Property Products by Type (A)" />
<ParamValue TableID="66" Description="Table 2. 5. Chain-Type Quantity Indexes for Depreciation of Private Fixed Assets, Equipment, Structures, and Intellectual Property Products by Type (A)" />
<ParamValue TableID="67" Description="Table 2. 6. Historical-Cost Depreciation of Private Fixed Assets, Equipment, Structures, and Intellectual Property Products by Type (A)" />
<ParamValue TableID="51" Description="Table 2. 7. Investment in Private Fixed Assets, Equipment, Structures, and Intellectual Property Products by Type (A)" />
<ParamValue TableID="52" Description="Table 2. 8. Chain-Type Quantity Indexes for Investment in Private Fixed Assets, Equipment, Structures, and Intellectual Property Products by Type (A)" />
<ParamValue TableID="106" Description="Table 2. 9. Current-Cost Average Age at Yearend of Private Fixed Assets, Equipment, Structures, and Intellectual Property Products by Type (A)" />
<ParamValue TableID="107" Description="Table 2. 10. Historical-Cost Average Age at Yearend of Private Fixed Assets, Equipment, Structures, and Intellectual Property Products by Type (A)" />
<ParamValue TableID="21" Description="Table 3. 1E. Current-Cost Net Stock of Private Equipment by Industry (A)" />
<ParamValue TableID="126" Description="Table 3. 1ESI. Current-Cost Net Stock of Private Fixed Assets by Industry (A)" />
<ParamValue TableID="127" Description="Table 3. 1I. Current-Cost Net Stock of Intellectual Property Products by Industry (A)" />
<ParamValue TableID="22" Description="Table 3. 1S. Current-Cost Net Stock of Private Structures by Industry (A)" />
<ParamValue TableID="24" Description="Table 3. 2E. Chain-Type Quantity Indexes for Net Stock of Private Equipment by Industry (A)" />
<ParamValue TableID="128" Description="Table 3. 2ESI. Chain-Type Quantity Indexes for Net Stock of Private Fixed Assets by Industry (A)" />
<ParamValue TableID="129" Description="Table 3. 2I. Chain-Type Quantity Indexes for Net Stock of Intellectual Property Products by Industry (A)" />
<ParamValue TableID="25" Description="Table 3. 2S. Chain-Type Quantity Indexes for Net Stock of Private Structures by Industry (A)" />
<ParamValue TableID="44" Description="Table 3. 3E. Historical-Cost Net Stock of Private Equipment by Industry (A)" />
<ParamValue TableID="130" Description="Table 3. 3ESI. Historical-Cost Net Stock of Private Fixed Assets by Industry (A)" />
<ParamValue TableID="131" Description="Table 3. 3I. Historical-Cost Net Stock of Private Intellectual Property Products by Industry (A)" />
<ParamValue TableID="45" Description="Table 3. 3S. Historical-Cost Net Stock of Private Structures by Industry (A)" />
<ParamValue TableID="69" Description="Table 3. 4E. Current-Cost Depreciation of Private Equipment by Industry (A)" />
<ParamValue TableID="132" Description="Table 3. 4ESI. Current-Cost Depreciation of Private Fixed Assets by Industry (A)" />
<ParamValue TableID="133" Description="Table 3. 4I. Current-Cost Depreciation of Private Intellectual Property Products by Industry (A)" />
<ParamValue TableID="70" Description="Table 3. 4S. Current-Cost Depreciation of Private Structures by Industry (A)" />
<ParamValue TableID="72" Description="Table 3. 5E. Chain-Type Quantity Indexes for Depreciation of Private Equipment by Industry (A)" />
<ParamValue TableID="134" Description="Table 3. 5ESI. Chain-Type Quantity Indexes for Depreciation of Private Fixed Assets by Industry (A)" />
<ParamValue TableID="135" Description="Table 3. 5I. Chain-Type Quantity Indexes for Depreciation of Private Intellectual Property Products by Industry (A)" />
<ParamValue TableID="73" Description="Table 3. 5S. Chain-Type Quantity Indexes for Depreciation of Private Structures by Industry (A)" />
<ParamValue TableID="75" Description="Table 3. 6E. Historical-Cost Depreciation of Private Equipment by Industry (A)" />
<ParamValue TableID="136" Description="Table 3. 6ESI. Historical-Cost Depreciation of Private Fixed Assets by Industry (A)" />
<ParamValue TableID="137" Description="Table 3. 6I. Historical-Cost Depreciation of Private Intellectual Property Products by Industry (A)" />
<ParamValue TableID="76" Description="Table 3. 6S. Historical-Cost Depreciation of Private Structures by Industry (A)" />
<ParamValue TableID="54" Description="Table 3. 7E. Investment in Private Equipment by Industry (A)" />
<ParamValue TableID="138" Description="Table 3. 7ESI. Investment in Private Fixed Assets by Industry (A)" />
<ParamValue TableID="139" Description="Table 3. 7I. Investment in Private Intellectual Property Products by Industry (A)" />
<ParamValue TableID="55" Description="Table 3. 7S. Investment in Private Structures by Industry (A)" />
<ParamValue TableID="57" Description="Table 3. 8E. Chain-Type Quantity Indexes for Investment in Private Equipment by Industry (A)" />
<ParamValue TableID="140" Description="Table 3. 8ESI. Chain-Type Quantity Indexes for Investment in Private Fixed Assets by Industry (A)" />
```

```

<ParamValue TableID="141" Description="Table 3. 8I. Chain-Type Quantity Indexes for Investment in Private Intellectual Property Products by Industry (A)" />
<ParamValue TableID="58" Description="Table 3. 8S. Chain-Type Quantity Indexes for Investment in Private Structures by Industry (A)" />
<ParamValue TableID="108" Description="Table 3. 9E. Current-Cost Average Age at Yearend of Private Equipment by Industry (A)" />
<ParamValue TableID="142" Description="Table 3. 9ESI. Current-Cost Average Age at Yearend of Private Fixed Assets by Industry (A)" />
<ParamValue TableID="143" Description="Table 3. 9I. Current-Cost Average Age at Yearend of Private Intellectual Property Products by Industry (A)" />
<ParamValue TableID="110" Description="Table 3. 9S. Current-Cost Average Age at Yearend of Private Structures by Industry (A)" />
<ParamValue TableID="111" Description="Table 3. 10E. Historical-Cost Average Age at Yearend of Private Equipment by Industry (A)" />
<ParamValue TableID="144" Description="Table 3. 10ESI. Historical-Cost Average Age at Yearend of Private Fixed Assets by Industry (A)" />
<ParamValue TableID="145" Description="Table 3. 10I. Historical-Cost Average Age at Yearend of Private Intellectual Property Products by Industry (A)" />
<ParamValue TableID="113" Description="Table 3. 10S. Historical-Cost Average Age at Yearend of Private Structures by Industry (A)" />
<ParamValue TableID="26" Description="Table 4. 1. Current-Cost Net Stock of Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="27" Description="Table 4. 2. Chain-Type Quantity Indexes for Net Stock of Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="46" Description="Table 4. 3. Historical-Cost Net Stock of Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="77" Description="Table 4. 4. Current-Cost Depreciation of Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="78" Description="Table 4. 5. Chain-Type Quantity Indexes for Depreciation of Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="79" Description="Table 4. 6. Historical-Cost Depreciation of Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="59" Description="Table 4. 7. Investment in Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="60" Description="Table 4. 8. Chain-Type Quantity Indexes for Investment in Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="114" Description="Table 4. 9. Current-Cost Average Age at Yearend of Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="115" Description="Table 4. 10. Historical-Cost Average Age at Yearend of Private Nonresidential Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="28" Description="Table 5. 1. Current-Cost Net Stock of Residential Fixed Assets by Type of Owner, Legal Form of Organization, and Tenure Group (A)" />
<ParamValue TableID="29" Description="Table 5. 2. Chain-Type Quantity Indexes for Net Stock of Residential Fixed Assets by Type of Owner, Legal Form of Organization, and Tenure Group (A)" />
<ParamValue TableID="47" Description="Table 5. 3. Historical-Cost Net Stock of Residential Fixed Assets by Type of Owner, Legal Form of Organization, and Tenure Group (A)" />
<ParamValue TableID="88" Description="Table 5. 4. Current-Cost Depreciation of Residential Fixed Assets by Type of Owner, Legal Form of Organization, and Tenure Group (A)" />
<ParamValue TableID="89" Description="Table 5. 5. Chain-Type Quantity Indexes for Depreciation of Residential Fixed Assets by Type of Owner, Legal Form of Organization, and Tenure Group (A)" />
<ParamValue TableID="90" Description="Table 5. 6. Historical-Cost Depreciation of Residential Fixed Assets by Type of Owner, Legal Form of Organization, and Tenure Group (A)" />
<ParamValue TableID="98" Description="Table 5. 7. Investment in Residential Fixed Assets by Type of Owner, Legal Form of Organization, and Tenure Group (A)" />
<ParamValue TableID="99" Description="Table 5. 8. Chain-Type Quantity Indexes for Investment in Residential Fixed Assets by Type of Owner, Legal Form of Organization, and Tenure Group (A)" />
<ParamValue TableID="116" Description="Table 5. 9. Current-Cost Average Age at Yearend of Residential Fixed Assets by Type of Owner, Legal Form of Organization, and Tenure Group (A)" />
<ParamValue TableID="117" Description="Table 5. 10. Historical-Cost Average Age at Yearend of Residential Fixed Assets by Type of Owner, Legal Form of Organization, and Tenure Group (A)" />
<ParamValue TableID="41" Description="Table 6. 1. Current-Cost Net Stock of Private Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="48" Description="Table 6. 2. Chain-Type Quantity Indexes for Net Stock of Private Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="49" Description="Table 6. 3. Historical-Cost Net Stock of Private Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="80" Description="Table 6. 4. Current-Cost Depreciation of Private Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="81" Description="Table 6. 5. Chain-Type Quantity Indexes for Depreciation of Private Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="82" Description="Table 6. 6. Historical-Cost Depreciation of Private Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="61" Description="Table 6. 7. Investment in Private Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="62" Description="Table 6. 8. Chain-Type Quantity Indexes for Investment in Private Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="118" Description="Table 6. 9. Current-Cost Average Age at Yearend of Private Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="119" Description="Table 6. 10. Historical-Cost Average Age at Yearend of Private Fixed Assets by Industry Group and Legal Form of Organization (A)" />
<ParamValue TableID="35" Description="Table 7. 1A. Current-Cost Net Stock of Government Fixed Assets, 1925-1996 (A)" />
<ParamValue TableID="30" Description="Table 7. 1B. Current-Cost Net Stock of Government Fixed Assets (A)" />
<ParamValue TableID="36" Description="Table 7. 2A. Chain-Type Quantity Indexes for Net Stock of Government Fixed Assets, 1925-1996 (A)" />
<ParamValue TableID="31" Description="Table 7. 2B. Chain-Type Quantity Indexes for Net Stock of Government Fixed Assets (A)" />
<ParamValue TableID="91" Description="Table 7. 3A. Current-Cost Depreciation of Government Fixed Assets, 1925-1996 (A)" />
<ParamValue TableID="92" Description="Table 7. 3B. Current-Cost Depreciation of Government Fixed Assets (A)" />
<ParamValue TableID="93" Description="Table 7. 4A. Chain-Type Quantity Indexes for Depreciation of Government Fixed Assets, 1925-1996 (A)" />
<ParamValue TableID="94" Description="Table 7. 4B. Chain-Type Quantity Indexes for Depreciation of Government Fixed Assets (A)" />
<ParamValue TableID="100" Description="Table 7. 5A. Investment in Government Fixed Assets, 1901-1996 (A)" />
<ParamValue TableID="101" Description="Table 7. 5B. Investment in Government Fixed Assets (A)" />
<ParamValue TableID="102" Description="Table 7. 6A. Chain-Type Quantity Indexes for Investment in Government Fixed Assets, 1901-1996 (A)" />
<ParamValue TableID="103" Description="Table 7. 6B. Chain-Type Quantity Indexes for Investment in Government Fixed Assets (A)" />
<ParamValue TableID="120" Description="Table 7. 7A. Current-Cost Average Age at Yearend of Government Fixed Assets, 1925-1996 (A)" />
<ParamValue TableID="121" Description="Table 7. 7B. Current-Cost Average Age at Yearend of Government Fixed Assets (A)" />
<ParamValue TableID="32" Description="Table 8. 1. Current-Cost Net Stock of Consumer Durable Goods (A)" />
<ParamValue TableID="33" Description="Table 8. 2. Chain-Type Quantity Indexes for Net Stock of Consumer Durable Goods (A)" />
<ParamValue TableID="50" Description="Table 8. 3. Historical-Cost Net Stock of Consumer Durable Goods (A)" />
<ParamValue TableID="83" Description="Table 8. 4. Current-Cost Depreciation of Consumer Durable Goods (A)" />
<ParamValue TableID="84" Description="Table 8. 5. Chain-Type Quantity Indexes for Depreciation of Consumer Durable Goods (A)" />
<ParamValue TableID="85" Description="Table 8. 6. Historical-Cost Depreciation of Consumer Durable Goods (A)" />
<ParamValue TableID="63" Description="Table 8. 7. Investment in Consumer Durable Goods (A)" />
<ParamValue TableID="64" Description="Table 8. 8. Chain-Type Quantity Indexes for Investment in Consumer Durable Goods (A)" />
<ParamValue TableID="122" Description="Table 8. 9. Current-Cost Average Age at Yearend of Consumer Durable Goods (A)" />
<ParamValue TableID="123" Description="Table 8. 10. Historical-Cost Average Age at Yearend of Consumer Durable Goods (A)" />
<ParamValue TableID="34" Description="Table 9. 1. Real Net Stock of Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="95" Description="Table 9. 2. Real Depreciation of Fixed Assets and Consumer Durable Goods (A)" />
<ParamValue TableID="104" Description="Table 9. 3. Real Investment in Fixed Assets and Consumer Durable Goods (A)" />

```

Note that the description of each table also indicates that only annual data is available.

Requesting an invalid TableID returns this error:

```

<Error APIErrorCode="201" APIErrorDescription="Error retrieving Fixed Assets data. ">
  <ErrorDetail Description="Invalid table IDs were requested. " />

```

</Error>

Omitting the TableID parameter returns this error:

```
<Error APIErrorCode="40" APIErrorDescription="The dataset requested requires parameters that were missing from the request. ">
  <AdditionalDetail>
    <MissingParameter ParameterName="TableID" ParameterDescription="The standard Fixed Assets table identifier" />
  </AdditionalDetail>
</Error>
```

### *Year Parameter*

The Year parameter is an integer that specifies the year(s) of data for the requested Fixed Assets table. As shown above, the parameter is required, and multiple years can be requested in each GetData submission. Multiple years are requested by specifying them as a comma-delimited string, e. g. “2000,2001,2002”. When data is requested for years that don’t exist for a particular Fixed Assets table, only data that exists is returned. For example, if years in the future are requested – like “2013,2014,2015”, the most recent available data is returned starting with 2013. If the request supplies the special value X or ALL for the Year parameter, all available years of data are returned. Note that using the X or ALL value for all years can return large amounts of data, and should be avoided when the actual required years are known.

If only years that don’t exist for a particular table are requested, this error is returned:

```
<Error APIErrorCode="201" APIErrorDescription="Error retrieving Fixed Assets data. ">
  <ErrorDetail Description="The requested parameters did not return data. " />
</Error>
```

Omitting the Year parameter returns this error:

```
<Error APIErrorCode="40" APIErrorDescription="The dataset requested requires parameters that were missing from the request. ">
  <AdditionalDetail>
    <MissingParameter ParameterName="Year" ParameterDescription="List of year(s) of data to retrieve (X for All)" />
  </AdditionalDetail>
</Error>
```

Using the GetParameterValues meta-data retrieval method for the Year parameter returns a list of the valid year ranges for each Fixed Assets table. Each Fixed Assets table may have a different range of years. For example, Table 1 (at the time of this writing) has annual data from 1925 through 2012 available as indicated in this example return data from the GetParameterValues method:

```
<ParamValue TableID="16" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="17" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="18" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="19" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="21" FirstAnnualYear="1947" LastAnnualYear="2012" />
<ParamValue TableID="22" FirstAnnualYear="1947" LastAnnualYear="2012" />
<ParamValue TableID="24" FirstAnnualYear="1947" LastAnnualYear="2012" />
<ParamValue TableID="25" FirstAnnualYear="1947" LastAnnualYear="2012" />
<ParamValue TableID="26" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="27" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="28" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="29" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="30" FirstAnnualYear="1997" LastAnnualYear="2012" />
<ParamValue TableID="31" FirstAnnualYear="1997" LastAnnualYear="2012" />
<ParamValue TableID="32" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="33" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="34" FirstAnnualYear="1999" LastAnnualYear="2012" />
<ParamValue TableID="35" FirstAnnualYear="1925" LastAnnualYear="1996" />
<ParamValue TableID="36" FirstAnnualYear="1925" LastAnnualYear="1996" />
<ParamValue TableID="41" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="42" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="44" FirstAnnualYear="1947" LastAnnualYear="2012" />
<ParamValue TableID="45" FirstAnnualYear="1947" LastAnnualYear="2012" />
<ParamValue TableID="46" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="47" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="48" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="49" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="50" FirstAnnualYear="1925" LastAnnualYear="2012" />
<ParamValue TableID="51" FirstAnnualYear="1901" LastAnnualYear="2012" />
<ParamValue TableID="52" FirstAnnualYear="1901" LastAnnualYear="2012" />
```

[illegible]



## Fixed Assets Dataset Result Data

The Fixed Assets dataset returns data in the standard form described in the API User documentation. In XML form, the main structure of a result is:

```
<BEAAPI>
  <Request>
    <Results UTCProductionTime="Apr 16 2013 2:36PM" Statistic="Fixed Assets Table">
  </BEAAPI>
```

The Request node of the result contains the parameters supplied to the request. For purposes of this example, the parameters are:

```
<RequestParam ParameterName="USERID" ParameterValue="11111111-2222-3333-EEEE-FFFFFFFFFFFF" />
<RequestParam ParameterName="METHOD" ParameterValue="GetData" />
<RequestParam ParameterName="DatasetName" ParameterValue="FIXEDASSETS" />
<RequestParam ParameterName="TableID" ParameterValue="16" />
<RequestParam ParameterName="Year" ParameterValue="2012" />
<RequestParam ParameterName="ResultFormat" ParameterValue="XML" />
```

The result returned from this request would be:

```
<Dimensions Ordinal="1" Name="TableID" DataType="numeric" IsValue="0" />
<Dimensions Ordinal="2" Name="SeriesCode" DataType="string" IsValue="0" />
<Dimensions Ordinal="3" Name="LineNumber" DataType="numeric" IsValue="0" />
<Dimensions Ordinal="4" Name="LineDescription" DataType="string" IsValue="0" />
<Dimensions Ordinal="5" Name="TimePeriod" DataType="string" IsValue="0" />
<Dimensions Ordinal="6" Name="CL_UNIT" DataType="string" IsValue="0" />
<Dimensions Ordinal="7" Name="UNIT_MULT" DataType="numeric" IsValue="0" />
<Dimensions Ordinal="8" Name="DataValue" DataType="numeric" IsValue="1" />
<Data TableID="16" SeriesCode="k1wtotl1es00" LineNumber="1" LineDescription="Fixed assets and consumer durable goods" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9"
DataValue="53,571.6" NoteRef="16" />
<Data TableID="16" SeriesCode="k1ttotl1es00" LineNumber="2" LineDescription="Fixed assets" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="48,723.6"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1ptotl1es00" LineNumber="3" LineDescription="Private" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="36,215.6"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1ntotl1es00" LineNumber="4" LineDescription="Nonresidential" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="19,903.3"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1ntotl1eq00" LineNumber="5" LineDescription="Equipment" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="5,622.9"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1ntotl1st00" LineNumber="6" LineDescription="Structures" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="11,944.6"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1ntotl1ip00" LineNumber="7" LineDescription="Intellectual property products" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9"
DataValue="2,335.8" NoteRef="16" />
<Data TableID="16" SeriesCode="k1r53101es00" LineNumber="8" LineDescription="Residential" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="16,312.3"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1gtotl1es00" LineNumber="9" LineDescription="Government" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="12,508.0"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1gtotl1esnr" LineNumber="10" LineDescription="Nonresidential" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="12,160.1"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1gtotl1eq00" LineNumber="11" LineDescription="Equipment" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="980.3"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1gtotl1stnr" LineNumber="12" LineDescription="Structures" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="10,108.6"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1gtotl1ip00" LineNumber="13" LineDescription="Intellectual property products" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9"
DataValue="1,071.2" NoteRef="16" />
<Data TableID="16" SeriesCode="k1gtotl1sa00" LineNumber="14" LineDescription="Residential" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="347.9"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1ctotl1cd00" LineNumber="15" LineDescription="Consumer durable goods" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9"
DataValue="4,848.0" NoteRef="16" />
<Data TableID="16" SeriesCode="k1ttotl1es00" LineNumber="16" LineDescription="Private and government fixed assets" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9"
DataValue="48,723.6" NoteRef="16" />
<Data TableID="16" SeriesCode="k1ytotl1es00" LineNumber="17" LineDescription="Nonresidential" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="32,063.4"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1ytotl1eq00" LineNumber="18" LineDescription="Equipment" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="6,603.2"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1ytotl1st00" LineNumber="19" LineDescription="Structures" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="22,053.1"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1ytotl1ip00" LineNumber="20" LineDescription="Intellectual property products" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9"
DataValue="3,407.0" NoteRef="16" />
<Data TableID="16" SeriesCode="k1x53101es00" LineNumber="21" LineDescription="Residential" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="16,660.2"
NoteRef="16" />
<Data TableID="16" SeriesCode="k1gtotl1es00" LineNumber="22" LineDescription="Government fixed assets" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9"
DataValue="12,508.0" NoteRef="16" />
```

```

<Data TableID="16" SeriesCode="k1gfdres00" LineNumber="23" LineDescription="Federal" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="3,121.6
NoteRef="16" />
<Data TableID="16" SeriesCode="k1gstlres00" LineNumber="24" LineDescription="State and local" TimePeriod="2012" CL_UNIT="USD" UNIT_MULT="9" DataValue="9,386.3
" NoteRef="16" />
<Notes NoteRef="16" NoteText="Table 1. 1. Current-Cost Net Stock of Fixed Assets and Consumer Durable Goods - [Billions of dollars; yearend estimates]" />

```

All requests for the Fixed Assets dataset will return similar results, including the elements that describe the dimensions, data, and footnotes (Dimensions, Data, and Notes).

### Dimensions Elements

The dimensions included in the returned data are:

Ordinal	Name	Datatype	IsValue
1	TableID	numeric	No
2	SeriesCode	string	No
3	LineNumber	numeric	No
4	LineDescription	No	No
5	TimePeriod	string	No
6	CL_UNIT	string	No
7	UNIT_MULT	numeric	No
8	DataValue	numeric	Yes
	NoteRef <sup>6</sup>	string	No

Within the set of “Data” elements returned in the result, each of the dimensions is represented as an attribute (name/value pair). All the dimensions (attributes) have a single value, except the Noteref dimension, which can have multiple values represented as a comma-delimited string. The dimensions (attributes) are defined as follows:

**TableID** – The standard Fixed Assets table ID as submitted in the request (an integer).

**SeriesCode** – A string containing the a unique identifier for the line item in the published Fixed Assets table.

**LineNumber** – The line number of the data item as shown in published print versions of the published Fixed Assets table.

**LineDescription** – The “stub” or description of the statistic in the published Fixed Assets table.

**TimePeriod** – A string containing the time period for the data item in the form YYYY for annual data.

**CL\_UNIT** – A string containing “USD” when the reported statistic is in U. S. dollars, or “PC” when the reported statistic is a percent, index, or contribution.

**UNIT\_MULT** – An integer representing the base-10 exponent of the multiplier used to interpret the data value. For example “6” refers to millions (DataValue X 10<sup>6</sup>) and “9” refers to billions (DataValue X 10<sup>9</sup>).

---

<sup>6</sup> The Noteref attribute included in the data is not shown as one of the dimension elements. Noterefs may appear as an attribute of any element in the result data (except other Noterefs), and refer to a particular NoteRef element.

**DataValue** – An integer or decimal value of the statistic. Always a numeric value, but may contain embedded commas.

**NoteRef** – a reference to one of the Notes elements. Noteref in a data element always corresponds to the Noteref in a Notes element. The Noteref attribute may have multiple values represented by a comma-delimited string. This attribute can appear in any data element, or in the Results element. Any Noteref attribute included in the data is guaranteed to have a corresponding Notes element. For the Fixed Assets dataset, every data element includes at least one Noteref that corresponds to a Note element containing the title of the table. Additional footnote references that apply to specific lines may be included in the comma-delimited Noteref string value.



## Appendix E – Data on Direct Investment and Multinational Enterprises (MNEs)

The DataSetName is MNE. This dataset contains two types of statistics:

1. Direct Investment (DI)—income and financial transactions in direct investment that underlie the U. S. balance of payments statistics, and direct investment positions that underlie the U. S. international investment positions; and
2. Activities of Multinational Enterprises (AMNE)—operations and finances of U. S. parent enterprises and their foreign affiliates and U. S. affiliates of foreign MNEs.

API requests for the two types of statistics share most of the same parameters, though the allowable values for each parameter may be different, depending on the type of statistic desired (e. g. , DI or AMNE).

### Type 1: Direct Investment (DI) Data Request

Parameter Name	Type	Description	Required	Multiple Values Accepted	“All” value	Default
<a href="#">DirectionOfInvestment</a>	String	Outward = US direct investment abroad Inward = Foreign investment in the US	Yes	No	Not accepted	
<a href="#">SeriesID</a>	Integer	Data Series Identifier	No	Yes	All	All
<a href="#">Classification</a>	String	Results by country and/or industry	Yes	No	Not accepted	
<a href="#">Year</a>	String	Time Period	Yes	Yes	All	
<a href="#">Country</a>	String	Geographic Area Code	No	Yes	All	All
<a href="#">Industry</a>	String	Industry Code	No	Yes	All	All
<a href="#">GetFootnotes</a>	String	Yes = Include footnotes No = Exclude footnotes	No	No	Not accepted	No

### Examples of Direct Investment (DI) Data Requests

U. S. direct investment position in China and Asia for 2011 and 2012

<https://www.bea.gov/api/data/?&SeriesId=30&UserId= Your-36Character-Key&method=GetData&DataSetName=MNE&Year=2012,2011&Country=650,699&DirectionOfInvestment=Outward&Classification=Country&ResultFormat=xml>

Foreign direct investment position in the U. S. from Germany in the manufacturing industry for 2011 and 2012

<https://www.bea.gov/api/data/?&SeriesId=22,23,24,25,26,27&UserId= Your-36Character-Key&method=GetData&DataSetName=MNE&Year=2013,2012,2011,2010&Country=308&Industry=3000&Directi>

## Type 2: Activities of Multinational Enterprises (AMNE) Data Request

Parameter Name	Type	Description	Required	Multiple Values Accepted	"All" value	Default
<a href="#">DirectionOfInvestment</a>	String	Outward, Inward, State, Parent	Yes	No	Not accepted	
<a href="#">OwnershipLevel</a>	Binary	0 = Majority-Owned Affiliates 1 = All Affiliates	Yes	No	Not accepted	
<a href="#">NonBankAffiliatesOnly</a>	Binary	0 = Both Bank and NonBank Affiliates 1 = Nonbank Affiliates	Yes	No	Not accepted	
<a href="#">SeriesID</a>	Integer	Data Series Identifier	No	Yes	All	All
<a href="#">Classification</a>	String	Results by country and/or industry	Yes	No	Not accepted	
<a href="#">Year</a>	String	Time Period	Yes	Yes	All	
<a href="#">Country</a>	String	Geographic Area Code	No	Yes	All	All
<a href="#">Industry</a>	String	Industry Code	No	Yes	All	All
<a href="#">State</a>	String	Two-digit State FIPS Code	No	No	All	All
<a href="#">GetFootnotes</a>	String	Yes = Include footnotes No = Exclude footnotes	No	No	Not accepted	No

## Examples of Activities of Multinational Enterprises (AMNE) Data Requests

Net income and sales for Brazilian affiliates of U. S. parent enterprises, all industries, 2011 and 2012

<https://www.bea.gov/api/data/?&UserID= Your-36Character-Key&method=GetData&DataSetName=MNE&Year=2012,2011&Country=202&Industry=all&DirectionOfInvestment=Outward&Classification=CountryByIndustry&SeriesId=5,4&NonBankAffiliatesOnly=0&OwnershipLevel=0&ResultFormat=xml>

Total employment in U. S. affiliates of foreign-owned enterprises, all countries, 2011, include footnotes

<https://www.bea.gov/api/data/?&UserID= Your-36Character-Key&method=GetData&DataSetName=MNE&Year=2011&Country=all&Industry=0000&DirectionOfInvestment=Inward&Classification=Country&SeriesId=8&OwnershipLevel=0&NonbankAffiliatesOnly=0&GetFootnotes=Yes&ResultFormat=xml>

## API Call [GETPARAMETERVALUES] to Obtain a List of Available Values & Descriptions for Each Parameter

*[Details of each are described in the section below. ]*

Parameter Name	Parameter Value List
<a href="#"><u>DirectionOfInvestment</u></a>	<a href="https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key Y&amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=DirectionOfInvestment&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key Y&amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=DirectionOfInvestment&amp;ResultFormat=xml</a>
<a href="#"><u>OwnershipLevel</u></a>	<a href="https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=OwnershipLevel&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=OwnershipLevel&amp;ResultFormat=xml</a>
<a href="#"><u>NonBankAffiliatesOnly</u></a>	<a href="https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=NonbankAffiliatesOnly&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=NonbankAffiliatesOnly&amp;ResultFormat=xml</a>
<a href="#"><u>SeriesID</u></a>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=SeriesID&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=SeriesID&amp;ResultFormat=xml</a>
<a href="#"><u>Classification</u></a>	<a href="https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=Classification&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=Classification&amp;ResultFormat=xml</a>
<a href="#"><u>Year</u></a>	<a href="https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=Year&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=Year&amp;ResultFormat=xml</a>
<a href="#"><u>Country</u></a>	<a href="https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=country&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=country&amp;ResultFormat=xml</a>
<a href="#"><u>Industry</u></a>	<a href="https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=Industry&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=Industry&amp;ResultFormat=xml</a>
<a href="#"><u>State</u></a>	<a href="https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=state&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=state&amp;ResultFormat=xml</a>
<a href="#"><u>GetFootnotes</u></a>	<a href="https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=GetFootnotes&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID= Your-36Character-Key &amp;method=GetParameterValues&amp;DataSetName=MNE&amp;ParameterName=GetFootnotes&amp;ResultFormat=xml</a>

## Parameter Details

### *DirectionOfInvestment Parameter* – (Required, single value)

DirectionOfInvestment can take on two values for DI statistics and four for AMNE statistics. The two values shared by DI and AMNE statistics are:

1. ‘Outward’ – for AMNE statistics, provides data for foreign affiliates; for DI statistics, provides data on transactions and positions between foreign affiliates and their U. S. parent enterprises.
2. ‘Inward’ – for AMNE statistics, provides data for U. S. affiliates; for DI statistics, provides data on transactions and positions between U. S. affiliates and their foreign parent groups.

*For AMNE statistics only* there are two additional options:

3. ‘State’ – provides data on U. S. affiliates of foreign multinational enterprises at the state level. Note that only data on employment (and for 2007 and earlier years, property, plant, and equipment) are available at the state level.
4. ‘Parent’ – provides data on U. S. parent enterprises.

### *OwnershipLevel Parameter* – (used with AMNE statistics only, required, single value)

1. 1 – Returns data for all affiliates
2. 0 – Returns data for majority-owned affiliates only

If DirectionOfInvestment = “Parent” then OwnershipLevel must be set to 1.

### *NonBankAffiliatesOnly Parameter* – (used with AMNE statistics only, required, single value)

1. 1 – Returns data for nonbank affiliates only
2. 0 – Returns data for both bank and nonbank affiliates only

Select NonBankAffiliatesOnly = 0 for data from 2009 – present for ‘outward’ AMNE and from 2007 – present for ‘inward’ AMNE

Select NonBankAffiliatesOnly = 1 for data up to 2008 for ‘outward’ AMNE and up to 2006 for ‘inward’ AMNE

### *SeriesID Parameter* – (optional, default = 0, multiple values allowed)

Refer to the GETPARAMETERVALUES API call above for the list of SeriesID values and their descriptions. Note that not all series are available for all classes of ownership and years.

A value of 0 will return data for all available series given the other parameters. Separate

multiple values with a comma.

*Classification Parameter* – (required, single value)

Refer to the GETPARAMETERVALUES API call above for the list of CLASSIFICATION parameter values and their descriptions. Note that not all series are available for all classifications. The CLASSIFICATION parameter is required and must be single-valued.

*Year Parameter* (required, multiple values allowed)

Use the four-digit year to request data for a specific year. Use ‘all’ to return data for all available years. Separate multiple values with a comma.

*Country Parameter* – (optional, default = all, multiple values allowed)

Refer to the GETPARAMETERVALUES API call above for the list of three-digit country and region identification values. Use ‘000’ for the total of all countries and ‘all’ for all available countries and regions. Separate multiple values with a comma.

*Industry Parameter* – (optional, default = all, multiple values allowed)

Refer to the GETPARAMETERVALUES API call above for the list of four-digit industry identification values. These generally follow the North American Industry Classification System (NAICS). Use ‘0000’ for the all- industries total and ‘all’ for all available industries. Separate multiple values with a comma.

*State Parameter* – (optional, default = all, multiple values allowed)

At the state level, data are only available on employment and (for limited years), gross property, plant, and equipment.

Refer to the GETPARAMETERVALUES API call above for the list of the two-digit Federal Information Processing Standards (FIPS) codes, available at: <https://www.bls.gov/cew/cewedr10.htm>.

Use ‘70’ for “Other U. S. Areas”, ‘75’ for “Foreign”, ‘00’ for total U. S., and ‘all’ for all states and areas. Separate multiple values with a comma.

*GetFootnotes Parameter* – (optional, default=no, single value)

1. ‘yes’ – Include footnotes with data returned
2. ‘no’ – Do not include footnotes with data returned

## Appendix F – Gross Domestic Product by Industry (GDPbyIndustry)

The gross domestic product by industry data are contained within a dataset called GDPbyIndustry. BEA's industry accounts are used extensively by policymakers and businesses to understand industry interactions, productivity trends, and the changing structure of the U. S. economy. The GDP-by-industry dataset includes data in both current and chained (real) dollars. The dataset contains estimates for value added, gross output, intermediate inputs, KLEMS and employment statistics.

### Gross Domestic Product by Industry (GDPbyIndustry) Data Request

Parameter Name	Type	Description	Required	Multiple Values Accepted	"All" value	Default
TableID	Integer	The unique GDP by Industry table identifier (ALL for All)	Yes	Yes	ALL	N/A
<u>Frequency</u>	String	A - Annual, Q-Quarterly	Yes	Yes	A,Q	N/A
<u>Year</u>	Integer	List of year(s) of data to retrieve (ALL for All)	Yes	Yes	ALL	N/A
Industry	String	List of industries to retrieve (ALL for All)	Yes	Yes	ALL	N/A

### Examples of GDP by Industry (GDPbyIndustry) Data Requests

Annual Value Added by Industry data for all industries for years 2011 and 2012:

<https://www.bea.gov/api/data/?&UserID=%20Your-36Character-Key&method=GetData&DataSetName=GDPbyIndustry&Year=2012,2011&Industry=ALL&tableID=1&Frequency=A&ResultFormat=xml>

All annual and quarterly data in all tables for the Agriculture industry in 2010.

<https://www.bea.gov/api/data/?&UserID=%20Your-36Character-Key&method=GetData&DataSetName=GDPbyIndustry&Year=2010&Industry=11&tableID=ALL&Frequency=A,Q&ResultFormat=xml>

### API Call [GETPARAMETERVALUES] to Obtain a List of Available Values & Descriptions for Each Parameter

*[Details of each are described in the section below. ]*

Parameter Name	Parameter Value List
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<u>TableID</u>	<a href="https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=GDPbyIndustry&amp;ParameterName=TableID&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=GDPbyIndustry&amp;ParameterName=TableID&amp;ResultFormat=xml</a>
<b>Frequency</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=GDPbyIndustry&amp;ParameterName=Frequency&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=GDPbyIndustry&amp;ParameterName=Frequency&amp;ResultFormat=xml</a>
<b>Year</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=GDPbyIndustry&amp;ParameterName=Year&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=GDPbyIndustry&amp;ParameterName=Year&amp;ResultFormat=xml</a>
<b>Industry</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=GDPbyIndustry&amp;ParameterName=Industry&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=GDPbyIndustry&amp;ParameterName=Industry&amp;ResultFormat=xml</a>

## Parameter Details

**TableID Parameter** – (Required, multiple values accepted, no default value, ‘ALL’ for all tables)

- The TableID parameter is a unique table identifier. This parameter is required to query data and does accept multiple comma separated values. If all tables are required, use the ‘ALL’ keyword.
- All tables are published annually, but only a subset are published quarterly. The Descr in the GetParameterValues result will contain (A) if the table is published annually and (Q) indicating that the table is also published quarterly.

**Frequency Parameter** – (Required, multiple values accepted, no default value, ‘A,Q’ for all frequencies)

- The Frequency parameter indicates whether annual or quarterly data are to be returned. This parameter is required to query data and does accept multiple comma separated values.
- All tables are published annually (Frequency = A) but only a subset are published quarterly (Frequency = Q)
- If a data request is submitted for both annual and quarterly data from a table that is only published annually then only the annual data will be returned.
- If a data request is submitted for quarterly data from a table that is only published annually then the user will receive the following error:

```
<Error APIErrorCode="204" APIErrorDescription="Error retrieving GDP by Industry data. ">
  <ErrorDetail Description="This TableID is not published quarterly: 25" />
</Error>
```

**Year Parameter** – (Required, multiple values accepted, no default value, ‘ALL’ for all years)

- The Year parameter indicates what periods of data are requested. This parameter is required to query data and does accept multiple comma separated values. Use the keyword ‘ALL’ to return all periods of data.
- If requesting quarterly frequency data, all available quarters for a year will be returned.
- Annual data publications begin in 1997 for most tables and 1998 for percent change and contributions tables. Quarterly data began publication in 2005.

- If a data request is submitted for quarterly or annual data before the earliest estimate period the user will receive one of the following errors:

```
<Error APIErrorCode="204" APIErrorDescription="Error retrieving GDP by Industry data. ">
  <ErrorDetail Description="Quarterly data begin in 2005. Invalid year: 1997" />
</Error>
```

```
<Error APIErrorCode="204" APIErrorDescription="Error retrieving GDP by Industry data. ">
  <ErrorDetail Description="Annual data begin in 1997 and quarterly data begins in
2005. Invalid year: 1996" />
</Error>
```

**Industry Parameter** – (Required, multiple values accepted, no default value, ‘ALL’ for all industries)

- The Industry parameter indicates what periods of data are requested. This parameter is required to query data and does accept multiple comma separated values. Use the keyword ‘ALL’ to return all industries.
- All industries are published annually, but only a subset are published quarterly. The Descr in the GetParameterValues result will contain (A) if the industry is published annually and (Q) indicating that the industry is also published quarterly.
- If a data request is submitted for an industry that is not published in the requested tables the user will receive the following error:

```
<Error APIErrorCode="204" APIErrorDescription="Error retrieving GDP by Industry data. ">
  <ErrorDetail Description="Invalid industry: 111CA" />
</Error>
```

### General Use

- Data will be returned for all data cells that fit the requested criteria. If the request contains parameter values requesting data for which only part of a set is available, only the data matching the criteria will be returned. For example, requesting ALL TableIDs for 1997 will return only annual data because the quarterly publications begin in estimate year 2005. Blanks will not be returned for missing data.
- If no data fit the selected criteria the user will receive the following error:

```
<Error APIErrorCode="204" APIErrorDescription="Error retrieving GDP by Industry data. ">
  <ErrorDetail Description="No data exist for selected criteria" />
</Error>
```

## Appendix G – ITA (International Transactions)

The DataSetName is ITA. This dataset contains data on U. S. international transactions. BEA's international transactions (balance of payments) accounts include all transactions between U. S. and foreign residents. Four parameters are used to retrieve data from the ITA dataset, as follows:

### ITA (International Transactions) Data Request Parameters

Parameter Name	Type	Description	Required	Multiple Values Accepted	“All” value	Default
<b>Indicator</b>	String	The indicator code for the type of transaction requested	No	Yes	All	All
<b>AreaOrCountry</b>	String	The area or country requested	No	Yes	All	AllCountries
<b>Frequency</b>	String	A - Annual, QSA - Quarterly seasonally adjusted, QNSA - Quarterly not seasonally adjusted	No	Yes	All	All
<b>Year</b>	String	Year requested	No	Yes	All	All

### Examples of ITA (International Transactions) Data Requests

Balance on goods with China for 2011 and 2012

<https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetData&DataSetName=ITA&Indicator=BalGds&AreaOrCountry=China&Frequency=A&Year=2011,2012&ResultFormat=xml>

Net U. S. acquisition of portfolio investment assets (quarterly not seasonally adjusted) for 2013

<https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetData&DataSetName=ITA&Indicator=PfInvAssets&AreaOrCountry=AllCountries&Frequency=QNSA&Year=2013&ResultFormat=xml>

## API Call [GETPARAMETERVALUES] to Obtain a List of Available Values & Descriptions for Each Parameter

*[Details of each are described in the section below. ]*

Parameter Name	Parameter Value List
<b>Indicator</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=ITA&amp;ParameterName=Indicator&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=ITA&amp;ParameterName=Indicator&amp;ResultFormat=xml</a>
<b>AreaOrCountry</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=ITA&amp;ParameterName=AreaOrCountry&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=ITA&amp;ParameterName=AreaOrCountry&amp;ResultFormat=xml</a>
<b>Frequency</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=ITA&amp;ParameterName=Frequency&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=ITA&amp;ParameterName=Frequency&amp;ResultFormat=xml</a>
<b>Year</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=ITA&amp;ParameterName=Year&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=ITA&amp;ParameterName=Year&amp;ResultFormat=xml</a>

### Parameter Details

*Indicator Parameter* – (optional, multiple values allowed)

The Indicator parameter specifies the type of transaction. The Indicator parameter values usually correspond to lines in ITA tables at <https://www.bea.gov/iTable/iTableHtml.cfm?reqid=62&step=2&isuri=1&6210=1>.

Exactly one Indicator parameter value must be provided in all data requests unless exactly one AreaOrCountry parameter value other than “ALL” and “AllCountries” is requested. That is, multiple Indicators can only be specified if a single AreaOrCountry is specified.

*AreaOrCountry Parameter* – (optional, multiple values allowed)

The AreaOrCountry parameter specifies the counterparty area or country of the transactions.

The default parameter value (“AllCountries”) returns the total for all countries, while “All” returns all data available by area and country.

Exactly one AreaOrCountry parameter value must be provided in all data requests unless exactly one Indicator parameter value is requested. This single parameter value may not be either “ALL” or “AllCountries.” That is, a list of countries or the grand total for all countries can only be specified if a single Indicator is specified.

For information on geographic area definitions, see

[https://www.bea.gov/international/bp\\_web/geographic\\_area\\_definitions.cfm](https://www.bea.gov/international/bp_web/geographic_area_definitions.cfm)

*Frequency Parameter* – (optional, multiple values allowed)

3. A – Annual
4. QSA – Quarterly seasonally adjusted
5. QNSA – Quarterly not seasonally adjusted

**Year Parameter** – (optional, multiple values allowed)

The Year parameter specifies the year of the data requested. When quarterly data are requested, all available quarters for the specified year will be returned.

## ITA (International Transactions) Dimensions Elements in Return Data

Parameter Name	Ordinal	Datatype	IsValue	Description
<b>Indicator</b>	1	String	No	The Indicator parameter value of the data item.
<b>AreaOrCountry</b>	2	String	No	The AreaOrCountry parameter value of the data item.
<b>Frequency</b>	3	String	No	The Frequency parameter value of the data item.
<b>Year</b>	4	String	No	The Year parameter value of the data item.
<b>TimeSeriesId</b>	5	String	No	A unique identifier for the time series of the data item.
<b>TimeSeriesDescription</b>	6	String	No	A description of the transactions measured in the data item.
<b>TimePeriod</b>	7	String	No	A string containing the time period for the data item in the form YYYY for annual data and YYYYQn for quarterly data (where n is the quarter digit)
<b>CL_UNIT</b>	8	String	No	A string indicating the base unit of measurement of the data item. For example, “USD” is used when the reported statistic is in U. S. dollars.
<b>UNIT_MULT</b>	9	String	No	An integer representing the base-10 exponent of the multiplier used to interpret the data value. For example “6” refers to millions ( $\text{DataValue} \times 10^6$ ).
<b>DataValue</b>	10	Numeric	No	An integer or decimal value of the statistic. May be blank.

A NoteRef attribute is also included in all data elements and acts as a reference to one of the Notes elements in the returned data. The NoteRef attribute may have multiple values represented by a comma-delimited string. Any NoteRef attribute included in the data is guaranteed to have a corresponding Notes element. The NoteRef attribute may be blank.



## Appendix H – IIP (International Investment Position)

The DataSetName is IIP. This dataset contains data on the U. S. international investment position. BEA's international investment position accounts include the end of period value of accumulated stocks of U. S. financial assets and liabilities. Four parameters are used to retrieve data from the IIP dataset, as follows:

### IIP (International Investment Position) Data Request Parameters

Parameter Name	Type	Description	Required	Multiple Values Accepted	“All” value	Default
<b>TypeOfInvestment</b>	String	Type of investment	No	Yes	All	All
<b>Component</b>	String	Component of changes in position	No	Yes	All	All
<b>Frequency</b>	String	A - Annual, QNSA - Quarterly not seasonally adjusted	No	Yes	All	All
<b>Year</b>	String	Year requested	No	Yes	All	All

### Examples of IIP (International Investment Position) Data Requests

U. S. assets excluding financial derivatives; change in position attributable to price changes for all available years

<https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetData&DataSetName=IIP&TypeOfInvestment=FinAssetsExclFinDeriv&Component=ChgPosPrice&Frequency=A&Year=ALL&ResultFormat=xml>

U. S. liabilities to foreign official agencies (quarterly not seasonally adjusted) for 2013

<https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetData&DataSetName=IIP&TypeOfInvestment=FinLiabsFoa&Component=Pos&Frequency=QNSA&Year=2013&ResultFormat=xml>

## API Call [GETPARAMETERVALUES] to Obtain a List of Available Values & Descriptions for Each Parameter

*[Details of each are described in the section below. ]*

Parameter Name	Parameter Value List
<b>TypeOfInvestment</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IIP&amp;ParameterName=TypeOfInvestment&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IIP&amp;ParameterName=TypeOfInvestment&amp;ResultFormat=xml</a>
<b>Component</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IIP&amp;ParameterName=Component&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IIP&amp;ParameterName=Component&amp;ResultFormat=xml</a>
<b>Frequency</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IIP&amp;ParameterName=Frequency&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IIP&amp;ParameterName=Frequency&amp;ResultFormat=xml</a>
<b>Year</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IIP&amp;ParameterName=Year&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IIP&amp;ParameterName=Year&amp;ResultFormat=xml</a>

### Parameter Details

**TypeOfInvestment Parameter** – (optional, multiple values allowed)

The TypeOfInvestment parameter specifies the type of investment. The TypeOfInvestment parameter values usually correspond to lines in IIP tables at <https://www.bea.gov/iTable/iTableHtml.cfm?reqid=62&step=5&isuri=1&6210=2>.

Exactly one TypeOfInvestment parameter value must be provided in all data requests unless exactly one Year parameter value other than “ALL” is requested. That is, more than one TypeOfInvestment can only be specified if a single Year is specified.

**Component Parameter** – (optional, multiple values allowed)

The Component parameter specifies either the position (“Pos”) or a component in the change of position from the previous period. For instance, the parameter value “ChgPosTrans” specifies changes due to financial-account transactions.

**Frequency Parameter** – (optional, multiple values allowed)

1. A – Annual
2. QNSA – Quarterly not seasonally adjusted

**Year Parameter** – (optional, multiple values allowed)

The Year parameter specifies the year of the data requested. When quarterly data are requested, all available quarters for the specified year will be returned.

Exactly one Year parameter value must be provided in all data requests unless exactly one TypeOfInvestment parameter value other than “ALL” is requested. That is, more than one Year can only be specified if a single TypeOfInvestment is specified.

## IIP (International Investment Position) Dimensions Elements in Return Data

Parameter Name	Ordinal	Datatype	IsValue	Description
<b>TypeOfInvestment</b>	1	String	No	The TypeOfInvestment parameter value of the data item.
<b>Component</b>	2	String	No	The Component parameter value of the data item.
<b>Frequency</b>	3	String	No	The Frequency parameter value of the data item.
<b>Year</b>	4	String	No	The Year parameter value of the data item.
<b>TimeSeriesId</b>	5	String	No	A unique identifier for the time series of the data item.
<b>TimeSeriesDescription</b>	6	String	No	A description of the transactions measured in the data item.
<b>TimePeriod</b>	7	String	No	A string containing the time period for the data item in the form YYYY for annual data and YYYYQn for quarterly data (where n is the quarter digit)
<b>CL_UNIT</b>	8	String	No	A string indicating the base unit of measurement of the data item. For example, “USD” is used when the reported statistic is in U. S. dollars.
<b>UNIT_MULT</b>	9	String	No	An integer representing the base-10 exponent of the multiplier used to interpret the data value. For example “6” refers to millions ( $\text{DataValue} \times 10^6$ ).
<b>DataValue</b>	10	Numeric	No	An integer or decimal value of the statistic. May be blank.

A NoteRef attribute is also included in all data elements and acts as a reference to one of the Notes elements in the returned data. The NoteRef attribute may have multiple values represented by a comma-delimited string. Any NoteRef attribute included in the data is guaranteed to have a corresponding Notes element. The NoteRef attribute may be blank.

## Appendix I – RegionalIncome (detailed regional income and employment data sets)

The RegionalIncome dataset contains income and employment estimates from the Regional Economic Accounts by state, county, and metropolitan area. All data accessible through the Regional Interactive Tables on bea.gov are also available through this data set and the RegionalProduct data set.

### RegionalIncome Request Parameters

Parameter Name	Type	Description	Required	Multiple Values Accepted	“All” value*	Default
<b>TableName</b>	String	Published table name	Yes	No		
<b>LineCode</b>	Integer	Line code in table	Yes	No		
<b>GeoFips</b>	String	The state, county or MSA code	Yes	Yes	STATE COUNTY MSA MIC PORT DIV CSA <i>PO code*</i>	
<b>Year</b>	String	Year requested	No	Yes	ALL LAST5 LAST10	LAST5

\*GeoFips -- Comma-delimited list of 5-character geographic codes; COUNTY for all counties, STATE for all states, MSA for all MSAs, MIC for all Micropolitan Areas, PORT for all state metropolitan/nonmetropolitan portions, DIV for all Metropolitan Divisions, CSA for all Combined Statistical Areas, state post office abbreviation for all counties in one state (e.g. NY).

### Examples of RegionalIncome Requests

Personal income for 2012 and 2013 for all counties, in JSON

format <https://bea.gov/api/data/?UserID=Your-36Character-Key&method=GetData&datasetname=RegionalIncome&TableName=CA1&LineCode=1&Year=2012,2013&GeoFips=COUNTY&ResultFormat=json>

Real per capita personal income for all states, all years, in XML format

<https://bea.gov/api/data/?UserID=Your-36Character-Key&method=GetData&datasetname=RegionalIncome&TableName=RPI1&LineCode=2&Year=ALL&GeoFips=STATE&ResultFormat=xml>

## API Call [GETPARAMETERVALUESFILTERED] to Obtain a List of Available Values & Descriptions for Each Parameter, Filtered by Another Parameter *[Examples below]*

Parameter Name	Filtered Parameter Names	Parameter Value List	Explanation
<b>Year</b>	<b>TableName</b>	<a href="https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalIncome&amp;TargetParameter=Year&amp;TableName=CA5N,CA25N&amp;ResultFormat=xml">https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalIncome&amp;TargetParameter=Year&amp;TableName=CA5N,CA25N&amp;ResultFormat=xml</a>	List Years for given TableNames
<b>GeoFips</b>	<b>TableName LineCode</b>	<a href="https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalIncome&amp;TargetParameter=GeoFips&amp;TableName=CA4&amp;LineCode=10&amp;ResultFormat=xml">https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalIncome&amp;TargetParameter=GeoFips&amp;TableName=CA4&amp;LineCode=10&amp;ResultFormat=xml</a>	List of GeoFips for a given TableName and LineCode
<b>TableName</b>	<b>Year Geofips</b>	<a href="https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalIncome&amp;TargetParameter=TableName&amp;GeoFips=00000&amp;Year=2014&amp;ResultFormat=xml">https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalIncome&amp;TargetParameter=TableName&amp;GeoFips=00000&amp;Year=2014&amp;ResultFormat=xml</a>	List of TableNames for a given Year and GeoFips
<b>LineCode</b>	<b>TableName</b>	<a href="https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalIncome&amp;TargetParameter=LineCode&amp;TableName=SA25N&amp;ResultFormat=json">https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalIncome&amp;TargetParameter=LineCode&amp;TableName=SA25N&amp;ResultFormat=json</a>	List of LineCodes for a TableName

## Parameter Details

*TableName parameter* – (required, single value)

TableName specifies a published table from the regional income accounts. Exactly one TableName must be provided.

TableName	Description	Years	Areas
CA1	Personal Income Summary: Personal Income, Population, Per Capita Personal Income	1969-->	All
CA25	Total Full-Time and Part-Time Employment by SIC Industry	1969-2000	All



CA25N	Total Full-Time and Part-Time Employment by NAICS Industry	2001-2014	All
CA30	Economic Profile	1969→	All
CA35	Personal Current Transfer Receipts	1969→	All
CA4	Personal Income and Employment by Major Component	1969→	All
CA45	Farm Income and Expenses	1969→	All
CA5	Personal Income by Major Component and Earnings by SIC Industry	1969-2000	All
CA5N	Personal Income by Major Component and Earnings by NAICS Industry	2001→	All
CA6	Compensation of Employees by SIC Industry	1998-2000	All
CA6N	Compensation of Employees by NAICS Industry	2001→	All
CA91	Gross Flow of Earnings	1990→	Counties
IRPD1	Implicit Regional Price Deflator by state	2008→	States
IRPD2	Implicit Regional Price Deflator by MSA and state portion	2008→	MSAs, Portions
RPI1	Real Personal Income by state	2008→	States, US
RPI2	Real Personal Income by MSA and state portion	2008→	MSA, Portions
RPP1	Regional Price Parities by state	2008→	States, US
RPP2	Regional Price Parities by MSA and state portion	2008→	MSAs, Portions
SA1	Personal Income Summary: Personal Income, Population, Per Capita Personal Income	1929→	States, Regions, US
SA25	Total Full-Time and Part-Time Employment by SIC Industry	1969-2001	States, Regions, US

SA25N	Total Full-Time and Part-Time Employment by NAICS Industry	1998→	States, Regions, US
SA27	Full-Time and Part-Time Wage and Salary Employment by SIC Industry	1969-2001	States, Regions, US
SA27N	Full-Time and Part-Time Wage and Salary Employment by NAICS Industry	1998→	States, Regions, US
SA30	Economic Profile	1958→	States, Regions, US
SA35	Personal Current Transfer Receipts	1929→	States, Regions, US
SA4	Personal Income and Employment by Major Component	1929→	States, Regions, US
SA40	Property Income	1958→	States, Regions, US
SA45	Farm Income and Expenses	1969→	States, Regions, US
SA5	Personal Income by Major Component and Earnings by SIC Industry	1958-2001	States, Regions, US
SA50	Personal Current Taxes	1948→	States, Regions, US
SA51	Disposable Personal Income Summary: Disposable Personal Income, Population, and Per Capita Disposable Personal Income	1948→	States, Regions, US
SA5H	Personal Income by Major Component and Earnings by Industry (Historical)	1929-1957	States, Regions, US
SA5N	Personal Income by Major Component and Earnings by NAICS Industry	1998→	States, Regions, US
SA6	Compensation of Employees by SIC Industry	1958-2001	States, Regions, US
SA6N	Compensation of Employees by NAICS Industry	1998→	States, Regions, US

SA7	Wages and Salaries by SIC Industry	1958-2001	States, Regions, US
SA7H	Wages and Salaries by Industry (Historical)	1929-1957	States, Regions, US
SA7N	Wages and Salaries by NAICS Industry	1998→	States, Regions, US
SQ1	Personal Income Summary: Personal Income, Population, Per Capita Personal Income	1948→	States, Regions, US
SQ35	Personal Current Transfer Receipts	1948→	States, Regions, US
SQ4	Personal Income by Major Component	1948→	States, Regions, US
SQ5	Personal Income by Major Component and Earnings by SIC Industry	1958-2001	States, Regions, US
SQ5H	Personal Income by Major Component and Earnings by Industry (Historical)	1948-1957	States, Regions, US
SQ5N	Personal Income by Major Component and Earnings by NAICS Industry	1998→	States, Regions, US
SQ6	Compensation of Employees by SIC Industry	1958-2001	States, Regions, US
SQ6N	Compensation of Employees by NAICS Industry	1998→	States, Regions, US
SQ7	Wages and Salaries by SIC Industry	1958-2001	States, Regions, US
SQ7H	Wages and Salaries by Industry (Historical)	1948-1957	States, Regions, US
SQ7N	Wages and Salaries by NAICS Industry	1998→	States, Regions, US
ACEmp	Total Employment (Arts and Culture Satellite Account)	2001→	States

ACComp	Total Compensation (Arts and Culture Satellite Account)	2001→	States
ACEmpRatio	Arts Employment Ratio	2001→	States
ACCompRatio	Arts Compensation Ratio	2001→	States
ACArtsEmp	ACPSA Employment	2001→	States
ACArtsComp	ACPSA Compensation	2001→	States
ACEmpLQ	Arts Employment Location Quotient	2001→	States
ACCompLQ	Arts Compensation Location Quotient	2001→	States

**LineCode parameter** – (required, single value)

LineCode corresponds to the statistic in a table. The available LineCodes are queried using the GetParameterValuesFiltered method. For example:

<https://bea.gov/api/data/?UserID=Your-36Character-Key&method=GetParameterValuesFiltered&datasetname=RegionalIncome&TargetParameter=LineCode&TableName=SA25N&ResultFormat=json>

**GeoFips parameter** – (required, multiple value)

GeoFips specifies geography. It can be all states (STATE), all counties (COUNTY), all Metropolitan Statistical Areas (MSA), all Micropolitan Statistical Areas (MIC), all Metropolitan Divisions (DIV), all Combined Statistical Areas (CSA), or all metropolitan/nonmetropolitan portions (PORT). It can also be a list of ANSI state-county codes or metropolitan area codes. For example, the counties in Connecticut and Delaware–

09001,09003,09005,09007,09009,09011,09013,09015,10001,10003,10005

State, county, and metropolitan statistical area FIPS codes can be obtained from Census at <https://www.census.gov/geo/www/ansi/ansi.html>. A comprehensive list of MSAs and their component counties can be accessed here <https://www.bea.gov/regional/docs/msalist.cfm>.

**Year parameter** – (optional, multiple value)

Year is either a list of years, LAST5, LAST10, or ALL. Year will default to all available years if the parameter is not specified.

## Errors

An invalid TableName or LineCode will result in an error code of 40, “The dataset requested requires parameters that were missing from the request.”

An invalid Year or GeoFips will result in an error code of 101, “No result was returned.”  
Other errors may occur.

#### *Additional information*

Explanation of the estimates, including a schedule of the release of new regional data, can be found in the regional section of our website: <https://bea.gov/regional/>. Definitions of the estimates can be accessed at our glossary of regional definitions, at <https://bea.gov/regional/definitions/>. Regional Product and Income Methodologies can be found at <https://bea.gov/regional/methods.cfm>.

## Appendix J – RegionalProduct (detailed state and MSA product data sets)

The RegionalProduct dataset contains Gross Domestic Product (GDP) estimates from the Regional Economic Accounts by state and metropolitan area. All data accessible through the Regional Interactive Tables on [bea.gov](http://bea.gov) are also available through this data set and the RegionalIncome data set.

### RegionalProduct Request Parameters

Parameter Name	Type	Description	Required	Multiple Values Accepted	“All” value	Default
<b>Component</b>	String	Component name	Yes	No		
<b>IndustryId</b>	Integer	Industry code of the Component	Yes	No		
<b>GeoFips</b>	String	The state or MSA code	Yes	Yes	STATE MSA ALL	
<b>Year</b>	String	Year requested	No	Yes	LAST5 LAST10	LAST5

### Examples of RegionalProduct Requests

Real GDP for all years for all MSAs, in JSON format [https://bea.gov/api/data/?UserID=Your-36Character-Key&method=GetData&datasetname=RegionalProduct&Component=RGDP\\_MAN&IndustryId=1&Year=ALL&GeoFips=MSA&ResultFormat=json](https://bea.gov/api/data/?UserID=Your-36Character-Key&method=GetData&datasetname=RegionalProduct&Component=RGDP_MAN&IndustryId=1&Year=ALL&GeoFips=MSA&ResultFormat=json)

GDP for 2012 and 2013 for selected Southeast states, for the Retail Trade industry, in XML format [https://bea.gov/api/data/?UserID=Your-36Character-Key&method=GetData&datasetname=RegionalProduct&Component=GDP\\_sAN&IndustryId=35&Year=2012,2013&GeoFips=01000,05000,12000,13000,21000,22000,28000,37000,45000,47000,51000,54000&ResultFormat=XML](https://bea.gov/api/data/?UserID=Your-36Character-Key&method=GetData&datasetname=RegionalProduct&Component=GDP_sAN&IndustryId=35&Year=2012,2013&GeoFips=01000,05000,12000,13000,21000,22000,28000,37000,45000,47000,51000,54000&ResultFormat=XML)

API Call [GETPARAMETERVALUESFILTERED] to Obtain a List of Available Values & Descriptions for Each Parameter, Filtered by Another Parameter *[Examples below]*

Parameter Name	Filtered Parameter Names	Parameter Value List	Explanation



Year	Component	<a href="https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalProduct&amp;TargetParameter=Year&amp;Component=PCRGDP_SAN&amp;ResultFormat=xml">https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalProduct&amp;TargetParameter=Year&amp;Component=PCRGDP_SAN&amp;ResultFormat=xml</a>	List Years for given Component
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<b>GeoFips</b>	<b>Component IndustryId</b>	<a href="https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalProduct&amp;TargetParameter=GeoFips&amp;Component=GDP_SAN&amp;ResultFormat=xml">https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalProduct&amp;TargetParameter=GeoFips&amp;Component=GDP_SAN&amp;ResultFormat=xml</a>	List of GeoFips for a given Component
<b>Component</b>	<b>Year GeoFips</b>	<a href="https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalProduct&amp;TargetParameter=Component&amp;GeoFips=00000&amp;Year=2013&amp;ResultFormat=xml">https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalProduct&amp;TargetParameter=Component&amp;GeoFips=00000&amp;Year=2013&amp;ResultFormat=xml</a>	List of Components for a given Year and GeoFips
<b>IndustryId</b>	<b>Component</b>	<a href="https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalProduct&amp;TargetParameter=IndustryId&amp;Component=GDP_SAS&amp;ResultFormat=xml">https://bea.gov/api/data/?UserID=Your-36Character-Key&amp;method=GetParameterValuesFiltered&amp;datasetname=RegionalProduct&amp;TargetParameter=IndustryId&amp;Component=GDP_SAS&amp;ResultFormat=xml</a>	List of IndustryIds for a Component

## Parameter Details

*Component parameter* – (required, single value)

Component specifies a published table from the regional product accounts. Exactly one Component must be provided.

Component	Series	Description	Years
GDP_SQN	State Quarterly NAICS	GDP in current dollars	2005→
QI_SQN	State Quarterly NAICS	Quantity indexes for real GDP	2005→
RGDP_SQN	State Quarterly NAICS	Real GDP in chained dollars	2005→
GDP_MAN	Metro Annual NAICS	GDP in current dollars	2001→
PCRGDP_MAN	Metro Annual NAICS	Per capita real GDP	2001→
QI_MAN	Metro Annual NAICS	Quantity indexes for real GDP	2001→
RGDP_MAN	Metro Annual NAICS	Real GDP in chained dollars	2001→
COMP_SAN	State Annual NAICS	Compensation of employees	1997→
GDP_SAN	State Annual NAICS	GDP in current dollars	1997→

GOS_SAN	State Annual NAICS	Gross operating surplus	1997→
PCRGDP_SAN	State Annual NAICS	Per capita real GDP	1997→
QI_SAN	State Annual NAICS	Quantity indexes for real GDP	1997→
RGDP_SAN	State Annual NAICS	Real GDP in chained dollars	1997→
SUBS_SAN	State Annual NAICS	Subsidies	1997→
TOPI_SAN	State Annual NAICS	TOPI	1997→
TOPILS_SAN	State Annual NAICS	TOPI less subsidies	1997→
GDP_SAS	State Annual SIC	Gross domestic product (GDP) by state	1963-1997
TOPILS_SAS	State Annual SIC	Taxes on production and imports less subsidies	1963-1997
COMP_SAS	State Annual SIC	Compensation of employees	1963-1997
SUBS_SAS	State Annual SIC	Subsidies	1963-1997
TOPI_SAS	State Annual SIC	Taxes on production and imports	1963-1997
GOS_SAS	State Annual SIC	Gross operating surplus	1963-1997
QI_SAS	State Annual SIC	Quantity indexes for real GDP by state	1963-1997
RGDP_SAS	State Annual SIC	Real GDP by state	1963-1997
PCRGDP_SAS	State Annual SIC	Per capita real GDP by state	1963-1997
PCE_SAN	State Annual	Personal Consumption Expenditures (PCE) by state	1997→
PCPCE_SAN	State Annual	Per capita Personal Consumption Expenditures (PCE) by state	1997→

***GeoFips parameter***– (required, multiple value)

GeoFips specifies geography. It can be all states (STATE) or all Metropolitan Statistical Areas (MSA). It can also be a list of ANSI state-county codes or metropolitan area codes.

State and metropolitan statistical area FIPS codes can be obtained from Census at <https://www.census.gov/geo/www/ansi/ansi.html>. A comprehensive list of MSAs and their component counties can be accessed here <https://www.bea.gov/regional/docs/msalist.cfm>.

***Year parameter*** – (optional, multiple value)

Year is either a list of years, LAST5, LAST10, or ALL. Year will default to all available years if the

parameter is not specified.

### *Errors*

An invalid Component or IndustryId will result in an error code of 40, “The dataset requested requires parameters that were missing from the request.”

An invalid Year or GeoFips will result in an error code of 101, “No result was returned.”

Other errors may occur.

### *Additional Information*

Explanation of the estimates, including a schedule of the release of new regional data, can be found in the regional section of our website: <https://bea.gov/regional/>. Definitions of the estimates can be accessed at our glossary of regional definitions, at <https://bea.gov/regional/definitions/>. Regional Product and Income Methodologies can be found at <https://bea.gov/regional/methods.cfm>.

## Appendix K – Input-Output Statistics (InputOutput)

The Input-Output Statistics are contained within a dataset called InputOutput. BEA's industry accounts are used extensively by policymakers and businesses to understand industry interactions, productivity trends, and the changing structure of the U.S. economy. The input-output accounts provide a detailed view of the interrelationships between U.S. producers and users. The Input-Output dataset contains Make Tables, Use Tables, and Direct and Total Requirements tables.

### InputOutput Data Request

Parameter Name	Type	Description	Required	Multiple Values Accepted	"All" value	Default
TableID	Integer	The unique Input Output table identifier	Yes	Yes	N/A	N/A
<u>Year</u>	Integer	List of year(s) of data to retrieve	Yes	Yes	ALL	N/A

### Examples of InputOutput Data Requests

Data from The Use of Commodities by Industries, Before Redefinitions (Producer's Prices) sector level table for years 2010, 2011, and 2012:

<https://www.bea.gov/api/data/?&UserID=%Your-36Character-Key&method=GetData&DataSetName=InputOutput&Year=2010,2011,2012,2013&tableID=2&&ResultFormat=xm>  
[ml](#)

Data for 2007 from The Make of Commodities by Industries, Before Redefinitions sector and summary level tables:

<https://www.bea.gov/api/data/?&UserID=%Your-36Character-Key&method=GetData&DataSetName=InputOutput&Year=2007&tableID=46,47&&ResultFormat=xml>

### API Call [GETPARAMETERVALUES] to Obtain a List of Available Values & Descriptions for Each Parameter

*[Details of each are described in the section below.]*

Parameter Name	Parameter Value List
<u>TableID</u>	<a href="https://www.bea.gov/api/data/?&amp;UserID=%Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=InputOutput&amp;ParameterName=TableID&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=%Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=InputOutput&amp;ParameterName=TableID&amp;ResultFormat=xml</a>

Year

[https://www.bea.gov/api/data/?&UserID=%Your-36Character-Key  
&method=GetParameterValues&DataSetName=InputOutput&ParameterName=  
Year&ResultFormat=xml](https://www.bea.gov/api/data/?&UserID=%Your-36Character-Key&method=GetParameterValues&DataSetName=InputOutput&ParameterName=Year&ResultFormat=xml)

## Parameter Details

**TableID Parameter** (Required, multiple values accepted, no default value)

- The TableID parameter is a unique table identifier. This parameter is required to query data and does accept multiple comma separated values.

**Year Parameter** (Required, multiple values accepted, no default value, 'ALL' for all years)

- The Year parameter indicates what periods of data are requested. This parameter is required to query data and does accept multiple comma separated values. Use the keyword 'ALL' to return all periods of data.

## General Use

- Data will be returned for all data cells that fit the requested criteria. If the request contains parameter values requesting data for which only part of a set is available, only the data matching the criteria will be returned. For example, requesting ALL Years Use Tables evaluated in Purchasers Value will return data for only 2007 because these tables are only published in benchmark years. Blanks will not be returned for missing data.
- If no data fit the selected criteria the user will receive the following error:

```
<Error APIErrorCode="205" APIErrorDescription="Error retrieving Input-Output data.">  
  <ErrorDetail Description="No data exist for selected criteria" />  
</Error>
```



## Appendix L – Underlying Gross Domestic Product by Industry (UnderlyingGDPbyIndustry)

The underlying gross domestic product by industry data are contained within a dataset called UnderlyingGDPbyIndustry. BEA's industry accounts are used extensively by policymakers and businesses to understand industry interactions, productivity trends, and the changing structure of the U.S. economy. The underlying GDP-by-industry dataset includes data in both current and chained (real) dollars. The dataset contains estimates for value added, gross output, and intermediate input statistics. This dataset is structurally similar to the GDPbyIndustry dataset (Appendix F), but contains additional industry detail.

**Please Note:** Cautionary Note on use of underlying detail tables -- The Bureau of Economic Analysis does not include these detailed estimates in the published tables because their quality is significantly less than that of the higher level aggregates in which they are included.

### Underlying Gross Domestic Product by Industry (UnderlyingGDPbyIndustry) Data Request

Parameter Name	Type	Description	Required	Multiple Values Accepted	"All" value	Default
TableID	Integer	The unique GDP by Industry table identifier (ALL for All)	Yes	Yes	ALL	N/A
<u>Frequency</u>	String	Q-Quarterly	Yes	Yes	Q	N/A
<u>Year</u>	Integer	List of year(s) of data to retrieve (ALL for All)	Yes	Yes	ALL	N/A
Industry	String	List of industries to retrieve (ALL for All)	Yes	Yes	ALL	N/A

### Examples of Underlying GDP by Industry (UnderlyingGDPbyIndustry) Data Requests

Quarterly Value Added by Industry data for all industries for years 2012 and 2013:

<https://www.bea.gov/api/data/?&UserID=%20Your-36Character-Key&method=GetData&DataSetName=underlyingGDPbyIndustry&Year=2013,2012&Industry=ALL&tableID=1&Frequency=Q&ResultFormat=xml>

All quarterly data in all tables for the Agriculture industry in 2012.

<https://www.bea.gov/api/data/?&UserID=%20Your-36Character-Key&method=GetData&DataSetName=underlyingGDPbyIndustry&Year=2012&Industry=11&tableID=ALL&Frequency=Q&ResultFormat=xml>

## API Call [GETPARAMETERVALUES] to Obtain a List of Available Values & Descriptions for Each Parameter

*[Details of each are described in the section below.]*

Parameter Name	Parameter Value List
<b>TableID</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=underlyingGDPbyIndustry&amp;ParameterName=TableID&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=underlyingGDPbyIndustry&amp;ParameterName=TableID&amp;ResultFormat=xml</a>
<b>Frequency</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=underlyingGDPbyIndustry&amp;ParameterName=Frequency&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=underlyingGDPbyIndustry&amp;ParameterName=Frequency&amp;ResultFormat=xml</a>
<b>Year</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=underlyingGDPbyIndustry&amp;ParameterName=Year&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=underlyingGDPbyIndustry&amp;ParameterName=Year&amp;ResultFormat=xml</a>
<b>Industry</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=underlyingGDPbyIndustry&amp;ParameterName=Industry&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=%20Your-36Character-Key%20Y&amp;method=GetParameterValues&amp;DataSetName=underlyingGDPbyIndustry&amp;ParameterName=Industry&amp;ResultFormat=xml</a>

### Parameter Details

**TableID Parameter** (Required, multiple values accepted, no default value, 'ALL' for all tables)

- The TableID parameter is a unique table identifier. This parameter is required to query data and does accept multiple comma separated values. If all tables are required, use the 'ALL' keyword.
- The Descr in the GetParameterValues result will contain a (Q) indicating that the table is published quarterly. No Annual data is available in the underlying GDP by industry dataset

**Frequency Parameter** (Required, multiple values accepted, no default value)

- The Frequency parameter indicates whether annual or quarterly data are to be returned. This parameter is required to query data and does accept multiple comma separated values.
- All tables are published quarterly (Frequency = Q). No Annual data is currently available in the underlying GDP by industry dataset
- If a data request is submitted for annual data then the user will receive the following error:

```
<Error APIErrorCode="206" APIErrorDescription="Error retrieving GDP by Industry data.">
  <ErrorDetail Description="No annual data available in Underlying GDP by Industry:A" />
</Error>
```

**Year Parameter** (Required, multiple values accepted, no default value, 'ALL' for all years)

- The Year parameter indicates what periods of data are requested. This parameter is required to query data and does accept multiple comma separated values. Use the keyword 'ALL' to return all periods of data.
- All available quarters for a year will be returned.

- Underlying GDP by industry data publications begin in 2012 to present
- If a data request is submitted for quarterly data before the earliest estimate period the user will receive one of the following errors:

```
<Error APIErrorDescription="Error retrieving GDP by Industry data." APIErrorCode="206">
  <ErrorDetail Description="Invalid year: 2010"/>
</Error>
```

**Industry Parameter** (Required, multiple values accepted, no default value, 'ALL' for all industries)

- The Industry parameter indicates what periods of data are requested. This parameter is required to query data and does accept multiple comma separated values. Use the keyword 'ALL' to return all industries.
- The Descr in the GetParameterValues result will contain (Q) if the industry is published quarterly and (A) indicating that the industry is also published annually.
- If a data request is submitted for an industry that is not published in the requested tables the user will receive the following error:

```
<Error APIErrorCode="206" APIErrorDescription="Error retrieving GDP by Industry data.">
  <ErrorDetail Description="Invalid industry: 11" />
</Error>
```

### General Use

- Data will be returned for all data cells that fit the requested criteria. If the request contains parameter values requesting data for which only part of a set is available, only the data matching the criteria will be returned. For example, requesting 1,101 TableIDs for 2012 will return only table 1 data because the tableID 101 does not exist. Blanks will not be returned for missing data.
- If no data fit the selected criteria the user will receive the following error:

```
<Error APIErrorCode="206" APIErrorDescription="Error retrieving GDP by Industry data.">
  <ErrorDetail Description="No data exist for selected criteria" />
</Error>
```

## Appendix M – IntlServTrade (International Services Trade)

The DataSetName is IntlServTrade. This dataset contains annual data on U.S. international trade in services. These data are updated each October to reflect the International Transactions Accounts annual update released in June. BEA's statistics on services supplied through affiliates by multinational enterprises are not included in this dataset. Five parameters are used to retrieve data from the IntlServTrade dataset, as follows:

### IntlServTrade (International Services Trade) Data Request Parameters

Parameter Name	Type	Description	Required	Multiple Values Accepted	"All" value	Default
TypeOfService	String	The type of service requested	No	Yes	All	All
TradeDirection	String	The trade direction requested	No	Yes	All	All
Affiliation	String	The affiliation requested	No	Yes	All	All
AreaOrCountry	String	The area or country requested	No	Yes	All	AllCountries
Year	String	The year requested	No	Yes	All	All

### Examples of IntlServTrade (International Services Trade) Data Requests

Imports of services from Germany for 2014 and 2015

<https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetData&DataSetName=IntlServTrade&TypeOfService=AllServiceTypes&TradeDirection=Imports&Affiliation=AllAffiliations&AreaOrCountry=Germany&Year=2014,2015&ResultFormat=xml>

Exports of telecommunications services by U.S. parents to their foreign affiliates for all years

<https://www.bea.gov/api/data/?&UserID=Your-36Character-Key&method=GetData&DataSetName=IntlServTrade&TypeOfService=Telecom&TradeDirection=Exports&Affiliation=UsParents&AreaOrCountry=AllCountries&Year=All&ResultFormat=xml>

## API Call [GETPARAMETERVALUES] to Obtain a List of Available Values & Descriptions for Each Parameter

*[Details of each are described in the section below.]*

Parameter Name	Parameter Value List
<b>TypeOfService</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IntlServTrade&amp;ParameterName=TypeOfService&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IntlServTrade&amp;ParameterName=TypeOfService&amp;ResultFormat=xml</a>
<b>TradeDirection</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IntlServTrade&amp;ParameterName=TradeDirection&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IntlServTrade&amp;ParameterName=TradeDirection&amp;ResultFormat=xml</a>
<b>Affiliation</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IntlServTrade&amp;ParameterName=Affiliation&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IntlServTrade&amp;ParameterName=Affiliation&amp;ResultFormat=xml</a>
<b>AreaOrCountry</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IntlServTrade&amp;ParameterName=AreaOrCountry&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IntlServTrade&amp;ParameterName=AreaOrCountry&amp;ResultFormat=xml</a>
<b>Year</b>	<a href="https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IntlServTrade&amp;ParameterName=Year&amp;ResultFormat=xml">https://www.bea.gov/api/data/?&amp;UserID=Your-36Character-Key&amp;method=GetParameterValues&amp;DataSetName=IntlServTrade&amp;ParameterName=Year&amp;ResultFormat=xml</a>

### Parameter Details

**TypeOfService Parameter** (optional, multiple values allowed)

The TypeOfService parameter specifies the type of service being traded (e.g. travel, transport, or insurance services).

Exactly one TypeOfService parameter value other than “All” must be provided in all data requests unless exactly one AreaOrCountry parameter value other than “All” is requested. That is, multiple Indicators can only be specified if a single AreaOrCountry parameter is specified.

**TradeDirection Parameter** (optional, multiple values allowed)

The TradeDirection parameter specifies the trade direction of the services transactions. There are four valid parameter values other than “All”:

1. Exports – Exports
2. Imports – Imports
3. Balance – Balance (exports less imports)
4. SupplementalIns – Supplemental detail on insurance transactions

**Affiliation Parameter** (optional, multiple values allowed)

The Affiliation parameter specifies the trade direction for the services transactions. There are five valid parameter values other than “All”:

1. AllAffiliations – The total for all trade, whether affiliated or unaffiliated

2. Unaffiliated – Unaffiliated trade
3. Affiliated – Affiliated trade
4. UsParents – U.S. parents’ trade with their foreign affiliates
5. UsAffiliates – U.S. affiliates’ trade with their foreign parent groups

**AreaOrCountry Parameter** (optional, multiple values allowed)

The AreaOrCountry parameter specifies the counterparty area or country of the services transactions. The default parameter value (“AllCountries”) returns the total for all countries, while “All” returns all data available by area and country.

Exactly one AreaOrCountry parameter value must be provided in all data requests unless exactly one TypeOfService parameter value other than “All” is requested. That is, a list of countries can only be specified if a single TypeOfService is specified.

For information on geographic area definitions, see [https://www.bea.gov/international/bp\\_web/geographic\\_area\\_definitions.pdf](https://www.bea.gov/international/bp_web/geographic_area_definitions.pdf)

**Year Parameter** (optional, multiple values allowed)

The Year parameter specifies the year of the data requested.

## IntlServTrade (International Services Trade) Dimensions Elements in Return Data

Parameter Name	Ordinal	Datatype	IsValue	Description
<b>TypeOfService</b>	1	String	No	The TypeOfService parameter value of the data item.
<b>TradeDirection</b>	2	String	No	The TradeDirection parameter value of the data item.
<b>Affiliation</b>	3	String	No	The Affiliation parameter value of the data item.
<b>AreaOrCountry</b>	4	String	No	The AreaOrCountry parameter value of the data item.
<b>Year</b>	5	String	No	The Year parameter value of the data item.
<b>TimeSeriesId</b>	6	String	No	A unique identifier for the time series of the data item.
<b>TimeSeriesDescription</b>	7	String	No	A description of the transactions measured in the data item.
<b>TimePeriod</b>	8	String	No	A string containing the time period for the data item in the form YYYY for annual data
<b>CL_UNIT</b>	9	String	No	A string indicating the base unit of measurement of the data item. For example, “USD” is used when the reported statistic is in U.S. dollars.
<b>UNIT_MULT</b>	10	String	No	An integer representing the base-10 exponent of the multiplier used to interpret the data value. For example “6” refers to millions ( $\text{DataValue} \times 10^6$ ).
<b>DataValue</b>	11	Numeric	No	An integer or decimal value of the statistic. May be blank.



A NoteRef attribute is also included in all data elements and acts as a reference to one of the Notes elements in the returned data. The NoteRef attribute may have multiple values represented by a comma-delimited string. Any NoteRef attribute included in the data is guaranteed to have a corresponding Notes element. The NoteRef attribute may be blank.