

Planning Department

13 October 2020

Instructions for Application Programming Interface (API) of the statistical database of the Finnish Centre for Pensions

You can retrieve machine-readable data from the statistical database of the Finnish Centre for Pensions in various formats in the Application Programming Interface (API). In these instructions, we explain how to use the API.

Search for statistics from the statistical database (<https://tilastot.etk.fi>) as usual according to instructions.

Screen capture 1

Statistical database, homepage (incl. subject area of statistics)

The screenshot shows a web browser window with the URL <https://tilastot.etk.fi/pxweb/en/ETK/?rxid=6f7538d8-f946-48fc>. The page title is "Finnish Centre for Pensions Statistical Database". The header includes the logo and the text "ELÄKETURVAKESKUS". A navigation bar shows three steps: "1 Choose table", "2 Choose variable", and "3 Show table". A search box is located on the right side of the page. The main content area displays a list of statistical categories, each with a folder icon and a list of sub-items:

- Earnings-related and national pension recipients
 - Number of pension recipients
 - Size of pension recipients' pension
 - Number of new retirees
 - Size of new retirees' pension
 - Share of population receiving a pension
 - Pension recipients living abroad
- Earnings-related pension recipients
 - Monthly statistics of earnings-related pension recipients
 - Number of earnings-related pension recipients
 - Size of earnings-related pension recipients' pension
 - Number of new retirees on earnings-related pension
 - Size of pension of new retirees on earnings-related pension
 - Recipients of earnings-related pension living abroad
- Effective retirement age
- Pension expenditure
- Pension applications
- Earnings-related pension rehabilitation
- Insured persons
 - Persons insured for earnings-related pension
 - Confirmed income of the self-employed
- Insurance for work abroad and posted workers
 - From Finland abroad
- Financing of earnings-related pensions
 - Cash flows
 - Financial statements figures
 - Cost of division figures
 - Time series
 - Companies' earnings-related pension contributions
- Index figures

The footer contains the text "Finnish Centre for Pensions" and "Tel. +358 29 411 20".

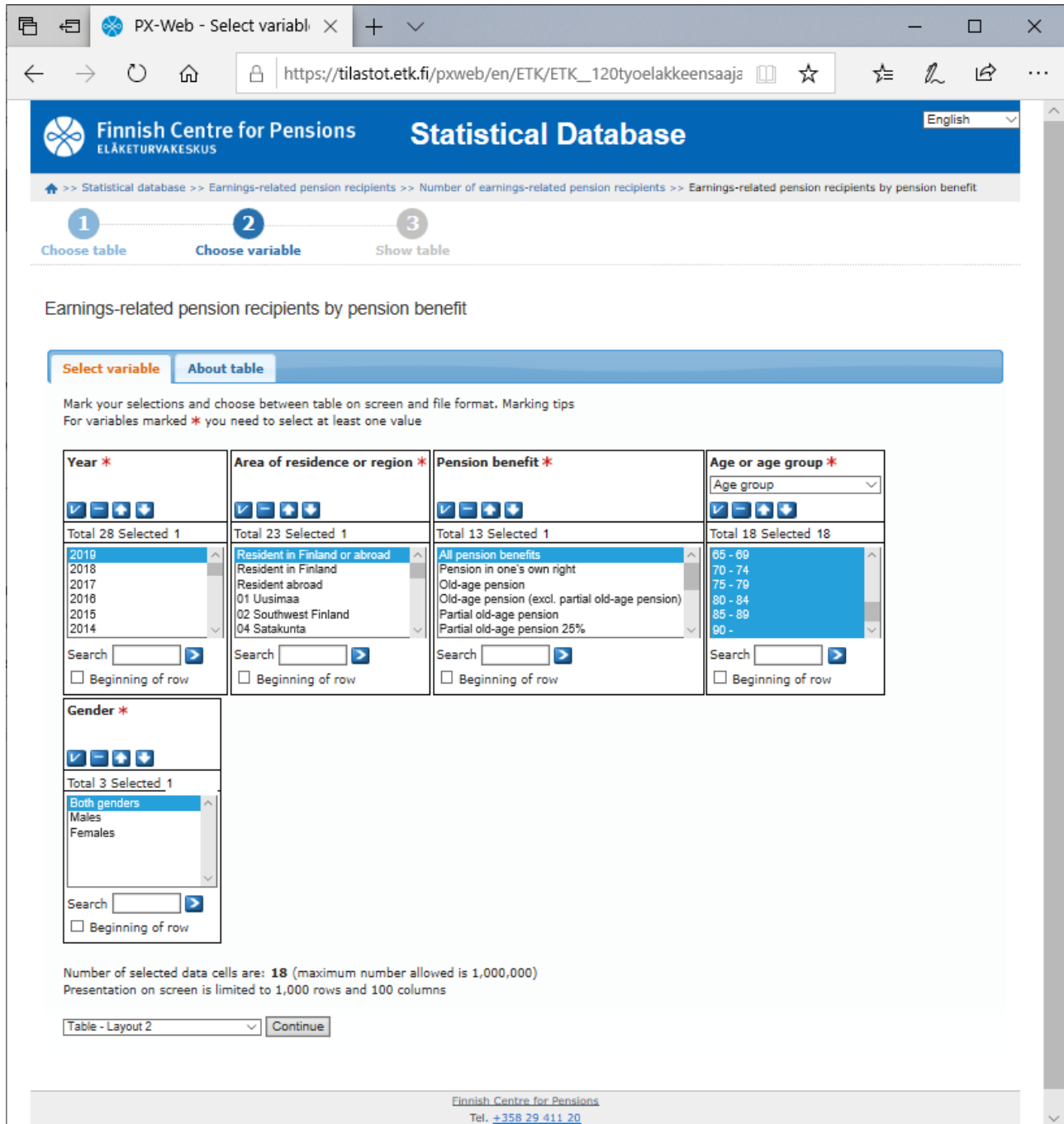
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In the index, select the area of statistics that includes the statistical table which you want to form an API with, for example Earnings-related pension recipients, Number of earnings-related pension recipients and statistical database table Earnings-related pension recipients by pension benefit. Select the desired variables in the drop-down menu and press “Continue”.

Screen capture 2

You have selected a table from the statistical database that you want to form an API with



You get the results of the search on your screen.

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Screen capture 3

The statistical data has been retrieved from the table in the statistical database

The screenshot shows a web browser window with the URL https://tilastot.etk.fi/pxweb/en/ETK/ETK_120tyoelakkeensaaja. The page title is "Finnish Centre for Pensions Statistical Database". The breadcrumb trail is: "Statistical database >> Earnings-related pension recipients >> Number of earnings-related pension recipients >> Earnings-related pension recipients by pension benefit".

The interface includes a navigation bar with three steps: "1 Choose table", "2 Choose variable", and "3 Show table". Below this, there are tabs for "Show table" and "About table". The "Show table" tab is active, displaying a table with the following data:

			Both genders	
2019	Resident in Finland or abroad	All pension benefits	All age groups	
				1,512,208
			0 - 15	8,201
			16 - 19	3,356
			20 - 24	377
			25 - 29	1,464
			30 - 34	2,771
			35 - 39	4,823
			40 - 44	7,438
			45 - 49	11,319
			50 - 54	23,054
			55 - 59	46,152
			60 - 64	169,833
			65 - 69	348,130
			70 - 74	351,388
			75 - 79	216,585
			80 - 84	164,707
			85 - 89	97,883
			90 -	54,727

At the bottom of the page, the contact information for the Finnish Centre for Pensions is provided: "Finnish Centre for Pensions Tel. +358 29 411 20".

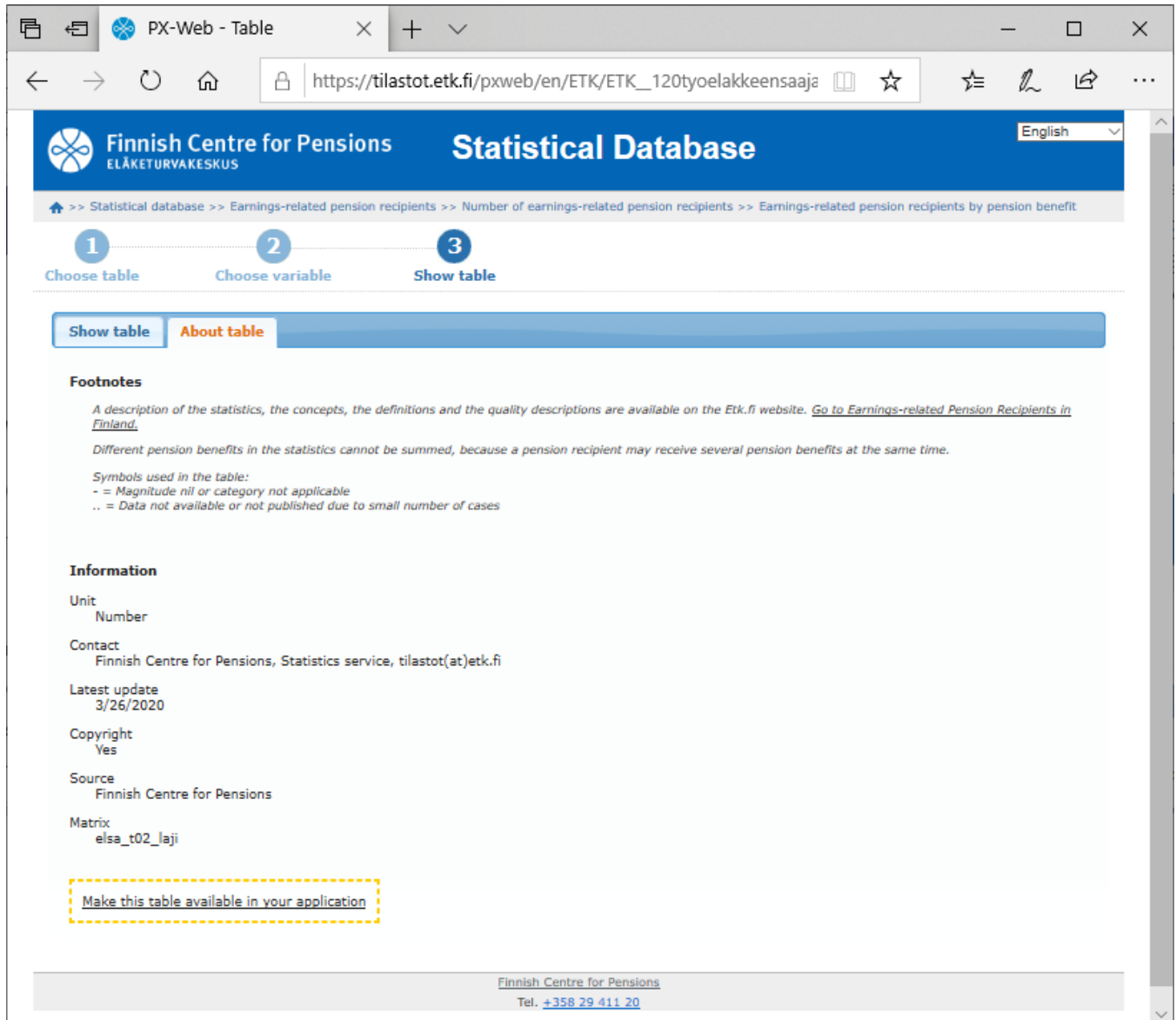
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To create the interface, go to “About table” and click the box with yellow dotted lines (at the bottom of the page) containing the text “Make this table available in your application”.

Screen capture 4

“About table” displays table information



The screenshot shows a web browser window with the URL https://tilastot.etk.fi/pxweb/en/ETK/ETK_120tyoelakkeensaaja. The page title is "Finnish Centre for Pensions Statistical Database". The breadcrumb trail is: Statistical database >> Earnings-related pension recipients >> Number of earnings-related pension recipients >> Earnings-related pension recipients by pension benefit. The page has three numbered steps: 1. Choose table, 2. Choose variable, and 3. Show table. The "About table" tab is selected. The "Footnotes" section contains the following text: "A description of the statistics, the concepts, the definitions and the quality descriptions are available on the Etk.fi website. [Go to Earnings-related Pension Recipients in Finland.](#) Different pension benefits in the statistics cannot be summed, because a pension recipient may receive several pension benefits at the same time. Symbols used in the table: - = Magnitude nil or category not applicable .. = Data not available or not published due to small number of cases". The "Information" section lists: Unit: Number; Contact: Finnish Centre for Pensions, Statistics service, tilastot(at)etk.fi; Latest update: 3/26/2020; Copyright: Yes; Source: Finnish Centre for Pensions; Matrix: elsa_t02_laji. A yellow dotted box highlights the text "Make this table available in your application" at the bottom of the page. The footer contains the Finnish Centre for Pensions logo and contact information: Tel. +358 29 411 20.

When you click “Make this table available in your application”, you get the required information to form the interface. It includes the URL address and a JSON query. They are used to form a machine-readable connection with the table in the statistical database.

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Screen capture 5

Search result of the table in the statistical database. It includes a ready query for the interface

The screenshot shows a web browser window titled "PX-Web - Table" displaying the "Finnish Centre for Pensions Statistical Database" interface. The page is in English and shows a search result for a table. The breadcrumb trail is: "Statistical database >> Earnings-related pension recipients >> Number of earnings-related pension recipients >> Earnings-related pension recipients by pension benefit". The interface has three steps: 1. Choose table, 2. Choose variable, and 3. Show table. The "Show table" button is active. Below the navigation, there are tabs for "Show table" and "About table". The "About table" tab is selected, showing "Footnotes" and "Information". The "Information" section includes details such as Unit (Number), Contact (Finnish Centre for Pensions, Statistics service, tilastot(at)etk.fi), Latest update (3/26/2020), Copyright (Yes), Source (Finnish Centre for Pensions), and Matrix (elsa_t02_lajj). A "Hide information" button is present. Below the information, there is a "More information" section containing a JSON query for API access. The URL is: https://tilastot.etk.fi:443/api/v1/en/ETK/120tyoelakkeensaajat/20tyoelakkeensaajien_lkm. The JSON query is:

```
{
  "query": [
    {
      "code": "Vuosi",
      "selection": {
        "filter": "iten",
        "values": [
          "2019"
        ]
      }
    },
    {
      "code": "Asumialue tai maakunta",
      "selection": {
        "filter": "iten",
        "values": [
          "000"
        ]
      }
    }
  ]
}
```

URL:

(https://tilastot.etk.fi:443/api/v1/en/ETK/120tyoelakkeensaajat/20tyoelakkeensaajien_lkm/elsa_t02_lajj.px)

Use the query http-POST to send the example query to the given URL. The parameters of the query indicate which data are retrieved from the statistical database. Using the GET query (or by opening the link in your browser), you can see the metadata of the statistical table, that is, its structure.

Choose the format in the query (json, json-stat, xlsx or px). By leaving out the variable in the query, the result will include all values for the variable in question.

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The interface can be used with all techniques and software languages that can be used to make http queries and handle material in JSON form.

Example of the structure of the statistics of the link retrieved using the GET query:

```
{
  "title": "Earnings-related pension recipients by pension benefit",
  "variables": [
    {
      "code": "Vuosi",
      "text": "Year",
      "values": ["1992", "1993", "1994", "1995", "1996", "1997", "1998", "1999", "2000", "2001", "2002", "2003", "2004", "2005", "2006", "2007", "2008", "2009", "2010", "2011", "2012", "2013", "2014", "2015", "2016", "2017", "2018", "2019"],
      "valueTexts": ["1992", "1993", "1994", "1995", "1996", "1997", "1998", "1999", "2000", "2001", "2002", "2003", "2004", "2005", "2006", "2007", "2008", "2009", "2010", "2011", "2012", "2013", "2014", "2015", "2016", "2017", "2018", "2019"],
      "time": true,
      "code": "Asuinalue tai maakunta",
      "text": "Area of residence or region",
      "values": ["000", "001", "002", "01", "02", "04", "05", "06", "07", "08", "09", "10", "11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21"],
      "valueTexts": ["Resident in Finland or abroad", "Resident in Finland", "Resident abroad", "01 Uusimaa", "02 Southwest Finland", "04 Satakunta", "05 Kanta-Häme", "06 Pirkanmaa", "07 Päijät-Häme", "08 Kymenlaakso", "09 South Karelia", "10 South Savo", "11 North Savo", "12 North Karelia", "13 Central Finland", "14 South Ostrobothnia", "15 Ostrobothnia", "16 Central Ostrobothnia", "17 North Ostrobothnia", "18 Kainuu", "19 Lapland", "20 Itä-Uusimaa", "21 Åland"]
    },
    {
      "code": "Eläkelaji",
      "text": "Pension benefit",
      "values": ["e00", "e10", "e40", "e42", "e44", "e46", "e48", "e50", "e60", "e70", "e80", "e92", "e94"],
      "valueTexts": ["All pension benefits", "Pension in one's own right", "Old-age pension", "Old-age pension (excl. partial old-age pension)", "Partial old-age pension", "Partial old-age pension 25%", "Partial old-age pension 50%", "Disability pension", "Unemployment pension", "Part-time pension", "Special pension for farmers", "Surviving spouse's pension", "Orphan's pension"]
    },
    {
      "code": "Ikä tai ikäluokka",
      "text": "Age or age group",
      "values": ["999", "0", "1", "2", "3", "4", "5", "6", "7", "8", "9", "10", "11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21", "22", "23", "24", "25", "26", "27", "28", "29", "30", "31", "32", "33", "34", "35", "36", "37", "38", "39", "40", "41", "42", "43", "44", "45", "46", "47", "48", "49", "50", "51", "52", "53", "54", "55", "56", "57", "58", "59", "60", "61", "62", "63", "64", "65", "66", "67", "68", "69", "70", "71", "72", "73", "74", "75", "76", "77", "78", "79", "80", "81", "82", "83", "84", "85", "86", "87", "88", "89", "90", "91", "92", "93", "94", "95", "96", "97", "98", "99", "100", "101", "102", "103", "104", "105", "106", "107", "108", "109", "110", "111", "112", "113", "114", "115", "116", "117"],
      "valueTexts": ["All age groups", "0", "1", "2", "3", "4", "5", "6", "7", "8", "9", "10", "11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21", "22", "23", "24", "25", "26", "27", "28", "29", "30", "31", "32", "33", "34", "35", "36", "37", "38", "39", "40", "41", "42", "43", "44", "45", "46", "47", "48", "49", "50", "51", "52", "53", "54", "55", "56", "57", "58", "59", "60", "61", "62", "63", "64", "65", "66", "67", "68", "69", "70", "71", "72", "73", "74", "75", "76", "77", "78", "79", "80", "81", "82", "83", "84", "85", "86", "87", "88", "89", "90", "91", "92", "93", "94", "95", "96", "97", "98", "99", "100 -", "0 - 15", "16 - 19", "20 - 24", "25 - 29", "30 - 34", "35 - 39", "40 - 44", "45 - 49", "50 - 54", "55 - 59", "60 - 64", "65 - 69", "70 - 74", "75 - 79", "80 - 84", "85 - 89", "90 -"]
    },
    {
      "code": "Sukupuoli",
      "text": "Gender",
      "values": ["Mol", "M", "N"],
      "valueTexts": ["Both genders", "Males", "Females"]
    }
  ]
}
```

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JSON query (with which, by using the POST query, you can pick values listed as parameters from the database):

```
{
  "query": [
    {
      "code": "Vuosi",
      "selection": {
        "filter": "item",
        "values": [
          "2019"
        ]
      }
    },
    {
      "code": "Asuinalue tai maakunta",
      "selection": {
        "filter": "item",
        "values": [
          "000"
        ]
      }
    },
    {
      "code": "Eläkelaji",
      "selection": {
        "filter": "item",
        "values": [
          "e00"
        ]
      }
    },
    {
      "code": "Ikä tai ikäluokka",
      "selection": {
        "filter": "agg:Age group.agg",
        "values": [
          "999",
          "101",
          "102",
          "103",
          "104",
          "105",
          "106",
          "107",
        ]
      }
    }
  ]
}
```

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```
        "108",
        "109",
        "110",
        "111",
        "112",
        "113",
        "114",
        "115",
        "116",
        "117"
    ]
}
},
{
    "code": "Sukupuoli",
    "selection": {
        "filter": "item",
        "values": [
            "Moi"
        ]
    }
}
],
"response": {
    "format": "px"
}
}
```

More information

For more information on the use of the PxWeb API interface, go to Statistics Finland http://www.stat.fi/org/avoindata/pxweb_en.html

Statistics Sweden (SCB)

<https://scb.se/en/services/oppna-data/api-for-the-statistical-database/>

License of statistics of the statistical database

The statistical database of the Finnish Centre for Pensions has been licensed with the license Creative Commons Attribution 4.0 International (CC BY 4.0) license.

<https://www.etk.fi/en/research-statistics-and-projections/statistics/statistical-database/>

When using data from our statistical database, the source - the Finnish Centre for Pensions – must be mentioned.