



Evolution of Productivity in Mexico in the period 1990-2019: KLEMS model.



DGEE

6th World KLEMS Conference
March, 2021.

Contents:

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- II. Evolution of Productivity in Mexico**
- III. Dissemination of the TFP-KLEMS Mexico**
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I. Context

Previously, the results of the TFP KLEMS México, were published at the time in the Official Gazette of the Federation, on August 30, 2013.

In the section of the Program to Democratize Productivity 2013 - 2018, of the previous Government.

The screenshot shows the official website of the Mexican Government (www.dof.gob.mx). The header includes the logos of the Secretaría de Gobernación (SEGOB) and the Diario Oficial de la Federación. A search bar and navigation links are present. The main content area displays the date 'DOF: 30/08/2013' and the title 'PROGRAMA para Democratizar la Productividad 2013-2018'. Below this, a table lists various government institutions and their acronyms. On the right side, there is a calendar for August 2013, with the 30th highlighted. A sidebar on the right contains links to 'Crear Usuario', 'Búsqueda Avanzada', 'Novedades', 'Top Notas', 'Normas Oficiales', 'Suscripción', and 'Quejas y Sugerencias'.

SEGOB SECRETARÍA DE GOBERNACIÓN

DIARIO OFICIAL DE LA FEDERACIÓN

www.dof.gob.mx

Buscar... ir

Ejemplar de hoy Trámites Servicios Leyes y Reglamentos Preguntas Frecuentes

DOF: 30/08/2013

PROGRAMA para Democratizar la Productividad 2013-2018.

Programa para Democratizar la Productividad

Siglas y acrónimos

CEPAL	Comisión Económica para América Latina
CFE	Comisión Federal de Electricidad
COFEMER	Comisión Federal de Mejora Regulatoria
CONACYT	Consejo Nacional De Ciencia Y Tecnología
CONAGUA	Comisión Nacional del Agua
CONEVAL	Consejo Nacional de Evaluación de la Política de Desarrollo Social
CTI	Ciencia, tecnología e innovación
IMSS	Instituto Mexicano del Seguro Social
INEGI	Instituto Nacional de Estadística y Geografía
ISSSTE	Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado

CONSULTA POR FECHA

Ago 2013

Do	Lu	Ma	Mi	Ju	Vi	Sá
				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

Crear Usuario

Búsqueda Avanzada

Novedades

Top Notas

Normas Oficiales

Suscripción

Quejas y Sugerencias

I. Context

Currently, in the National Development Plan 2019-2024, the TFP is part of the indicators of the Axis: Economic Development.

As well as the Special Program for Productivity and Competitiveness 2020-2024 published on December 31, 2020.

The screenshot displays the official website of the Secretaría de Gobernación (SEGOB) and the Diario Oficial de la Federación (DOF). The header includes the SEGOB logo, the website URL www.dof.gob.mx, and a search bar. A navigation menu contains links for 'Ejemplar de hoy', 'Trámites', 'Servicios', 'Leyes y Reglamentos', and 'Preguntas Frecuentes'. The main content area shows the date 'DOF: 31/12/2020' and the title 'PROGRAMA Especial para la Productividad y la Competitividad 2020-2024'. Below the title, it identifies the issuing authority as the 'Secretaría de Hacienda y Crédito Público' and the program as 'PROGRAMA ESPECIAL DERIVADO DEL PLAN NACIONAL DE DESARROLLO 2020-2024'. A table of contents lists five main sections: 1. Fundamento normativo de elaboración del programa, 2. Siglas, acrónimos y conceptos, 3. Origen de los recursos para la instrumentación del PEPC, 4. Análisis del estado actual, and 5. Objetivos prioritarios. Under section 5, two specific objectives are listed: 5.1. Incrementar la dotación de los recursos de la economía nacional y mejorar su asignación, and 5.2. Impulsar el acceso a mecanismos que permitan la creación de nuevas empresas y mejorar la. On the right side, there is a 'CONSULTA POR FECHA' calendar for December 2020, with the 31st highlighted. Below the calendar, a sidebar offers various services: 'Crear Usuario', 'Búsqueda Avanzada', 'Novedades', 'Top Notas', 'Quejas y Sugerencias', 'Obtener Copia del DOF', and 'Verificar Copia del DOF'.

DOF: 31/12/2020

PROGRAMA Especial para la Productividad y la Competitividad 2020-2024.

Programa Especial para la Productividad y la Competitividad 2020-2024

Secretaría de Hacienda y Crédito Público

PROGRAMA ESPECIAL

DERIVADO DEL PLAN NACIONAL DE DESARROLLO

2020-2024

Índice

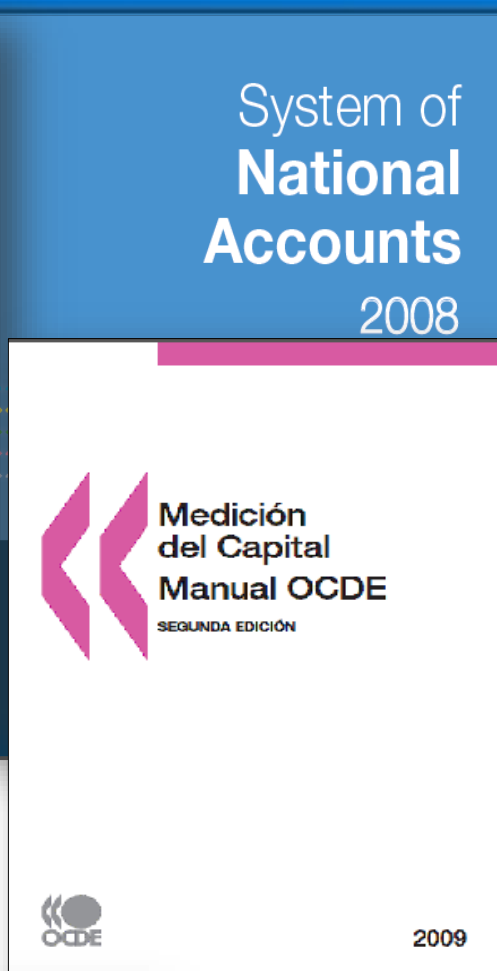
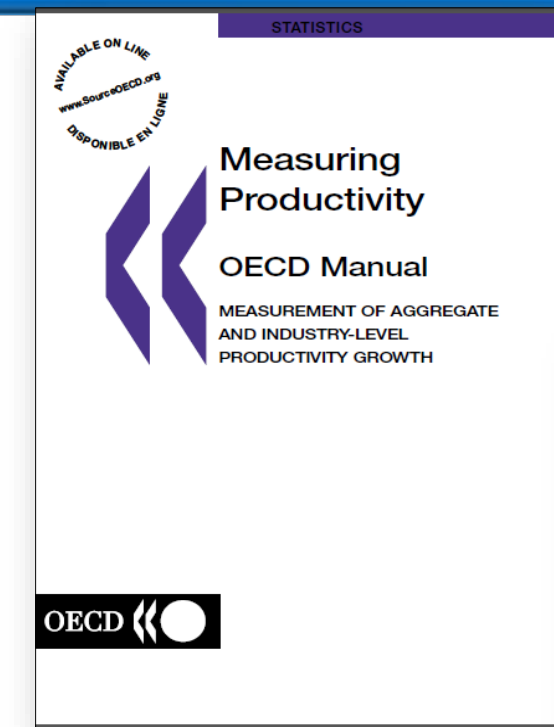
1. Fundamento normativo de elaboración del programa
2. Siglas, acrónimos y conceptos
3. Origen de los recursos para la instrumentación del PEPC
4. Análisis del estado actual
5. Objetivos prioritarios
 - 5.1. Objetivo prioritario 1: Incrementar la dotación de los recursos de la economía nacional y mejorar su asignación
 - 5.2. Objetivo prioritario 2: Impulsar el acceso a mecanismos que permitan la creación de nuevas empresas y mejorar la

Total Factor Productivity KLEMS

Objective: Measure the TFP from the behavior of production and the contribution of inputs: capital (K), work (L), energy (E), materials (M), and services (S) to broaden the analytical field, support for public policies and decision-making concerning economic growth.

Conceptual framework:

- SCN2008
- Manual on Productivity Measurement, OECD.
- Capital Measurement Manual, OECD.



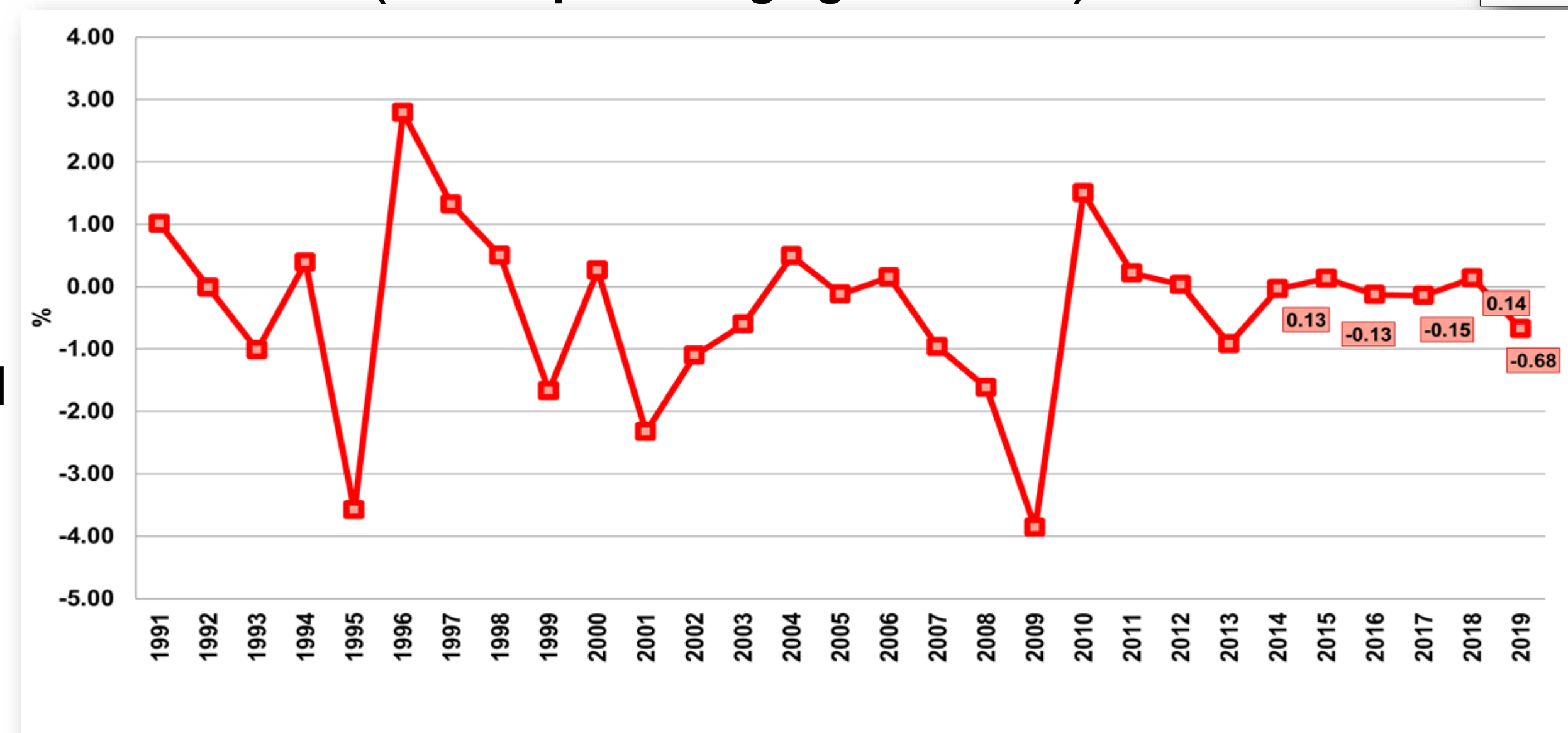
Opportunity: 12 months after the end of the study year.

Disaggregation: 77 economic activities SCIAN 2013.

Presentation of results: factors contributions: ICT and Non-ICT capital services, labor services in gender, age and level of education, intermediate inputs in energy, raw materials, and services.

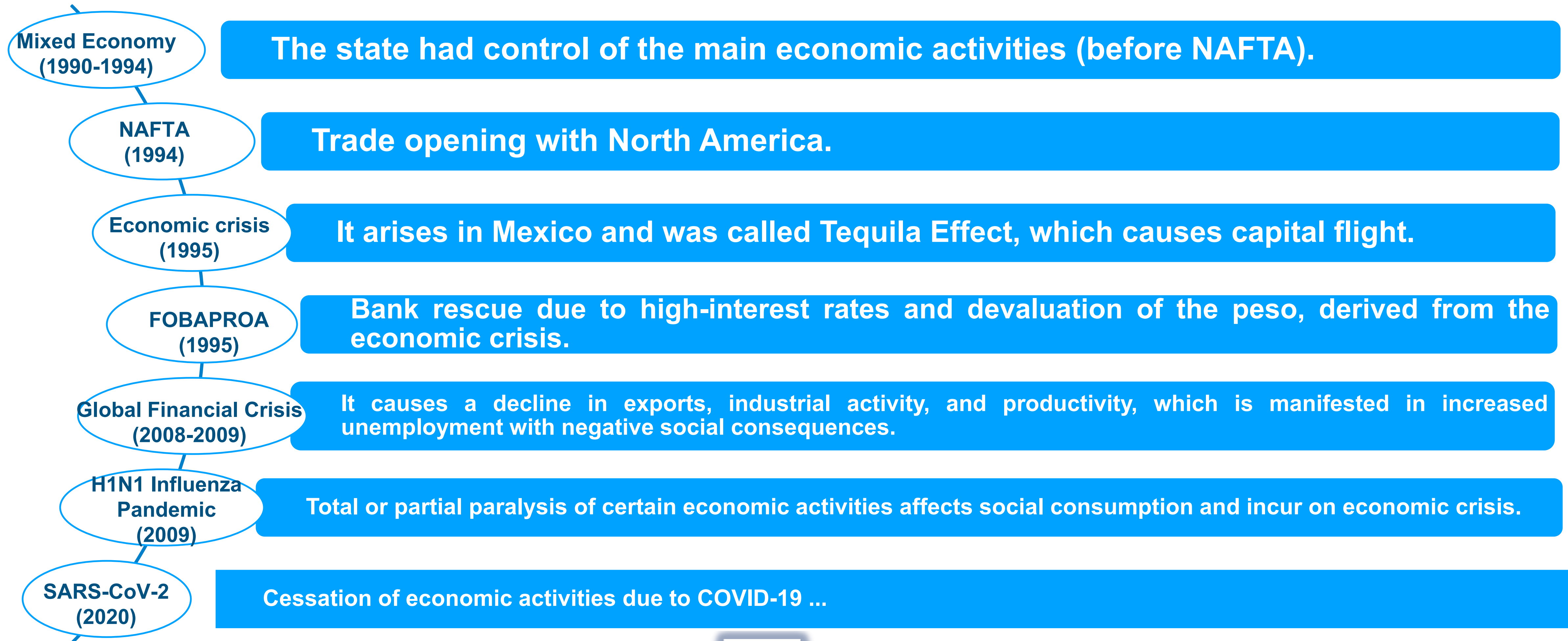
Series disponibles: anual 1990 a 2019

Graphic 1. Total factor productivity (TFP). Total of the economy. (annual percentage growth rate).



II. Evolution of Productivity in Mexico

Events that influenced the results of the Mexican Economy



II. Evolution of Productivity in Mexico

Table 1. Total Productivity of the Factors by periods. Total of the Economy.

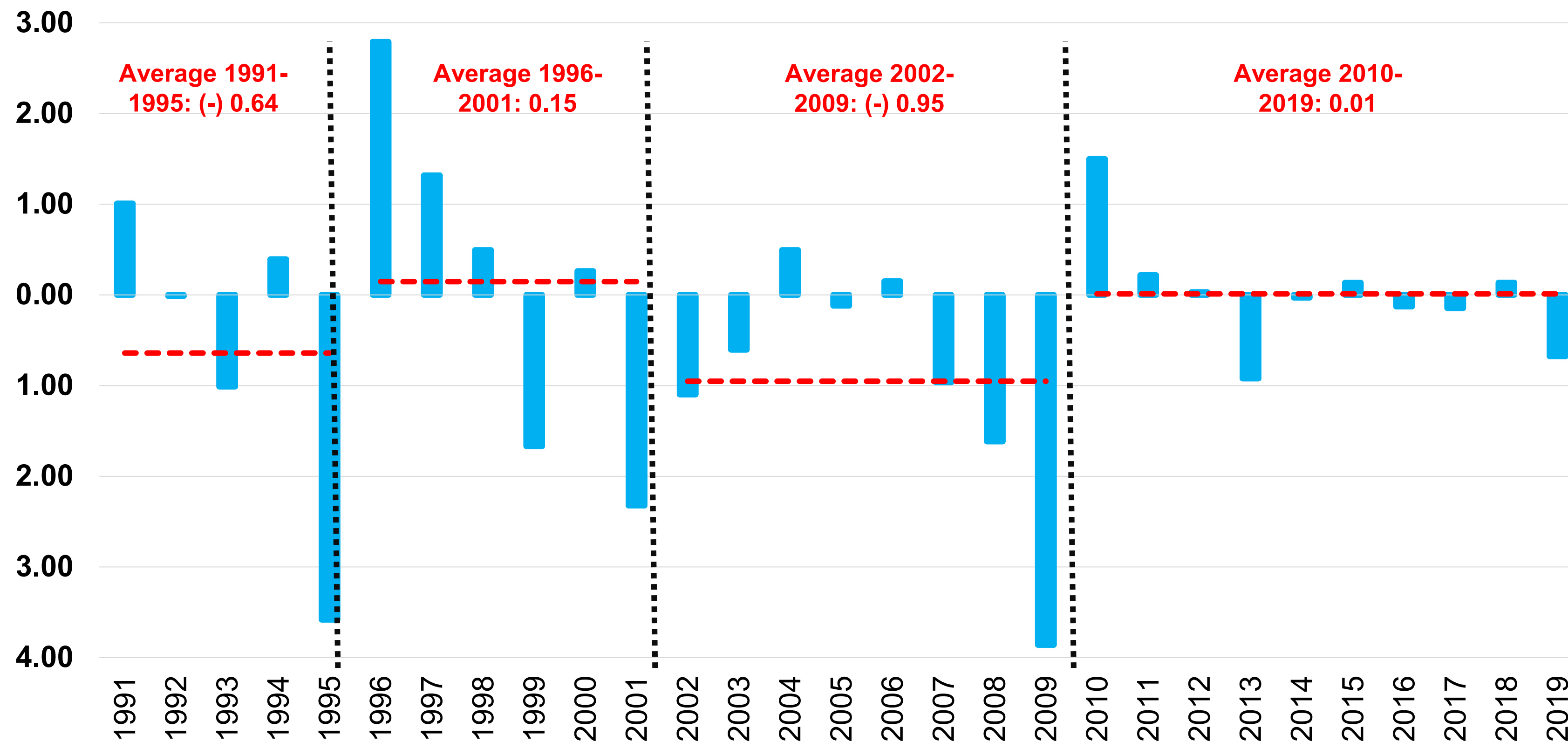
(Average annual percentage growth rates)

Periods	Production value	Total capital services	ICT capital services	Non-ICT capital services	Total labor services	Energy	Materials	Services	Factor contribution	Total factor productivity
1990-1995	2.39	1.76	- 0.02	1.78	0.39	0.22	0.51	0.15	3.04	- 0.64
1996-2001	4.94	1.51	0.12	1.38	0.61	0.20	1.99	0.49	4.79	0.15
2002-2009	1.24	1.32	0.13	1.19	0.30	0.01	0.32	0.25	2.19	- 0.95
2010-2019	2.44	1.16	0.10	1.05	0.28	- 0.19	0.85	0.33	2.43	0.01
1991-2019	2.62	1.38	0.09	1.29	0.37	0.02	0.88	0.31	2.96	-0.34

Growth is observed in the value of production, expressed in constant values at 2013 prices in all periods; however, the falls in TFP are located mainly in the secondary and tertiary sectors. The primary sector falls in the first and second periods.

II. Evolution of Productivity in Mexico

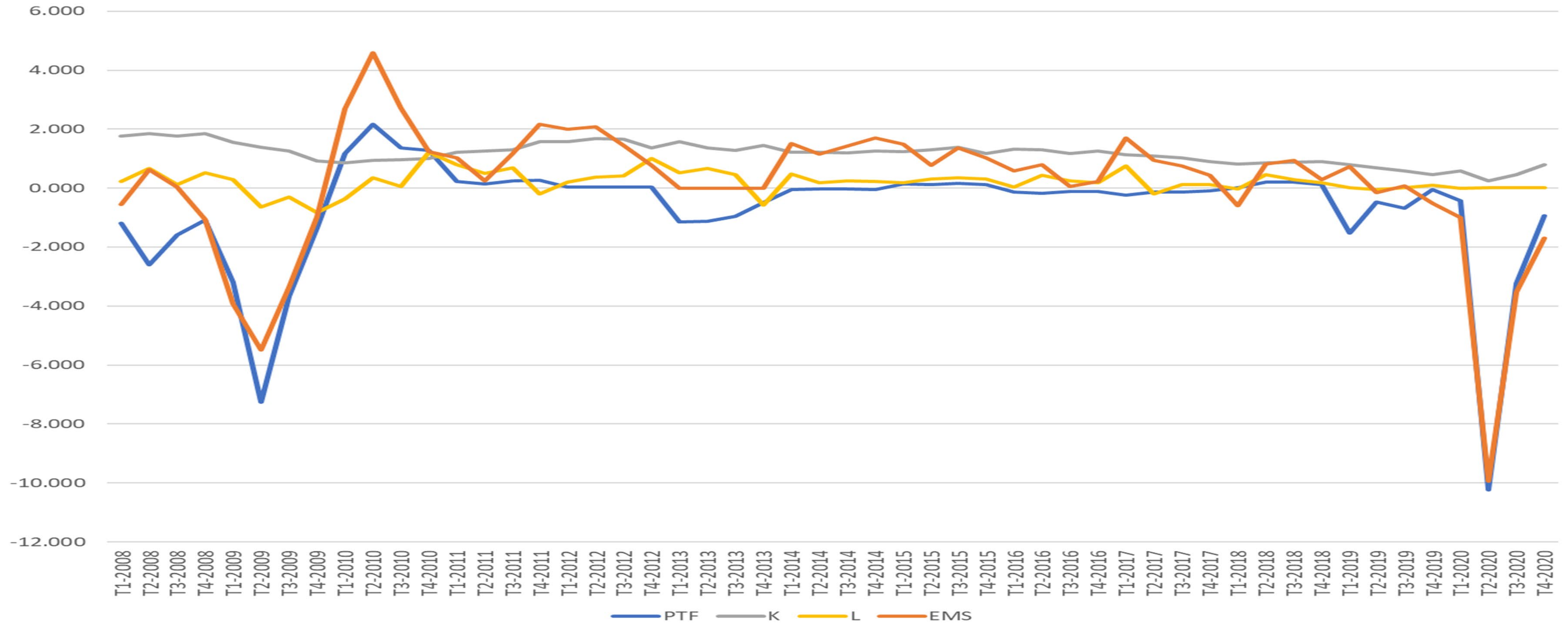
Graphic 2. Total Factor Productivity by periods.
Total Economy
 (percentage growth rates annual)



- In the 1991-1995 average, TFP falls **(-) 0.64%**, highlighting the fall due to the crisis in 1995, which began in Mexico, which arose from the lack of international reserves, causing the devaluation of the Mexican peso.
- In the 1996-2001 average, TFP grows **0.15%**, due to the "economic rebound" of 1996. Likewise, growth is maintained in 1997 and 1998. However, in 1999 and 2001, falls were reported due to the inability of the economy to efficient use of productive inputs and the severe contraction of international trade that harmed the performance of the Mexican economy, coupled with losses in investment, employment, and low wage levels.
- In the 2002-2009 average, TFP falls **(-) 0.95%**, influenced by the results of 2008 and 2009, which were affected by the Global Financial Crisis. Mainly, in 2009 when the H1N1 influenza pandemic occurred, which implied the reduction of important activities of the Mexican economy.
- In the 2010-2019 average, TFP grows **0.01%**. Influenced by the "economic rebound" of 2010.

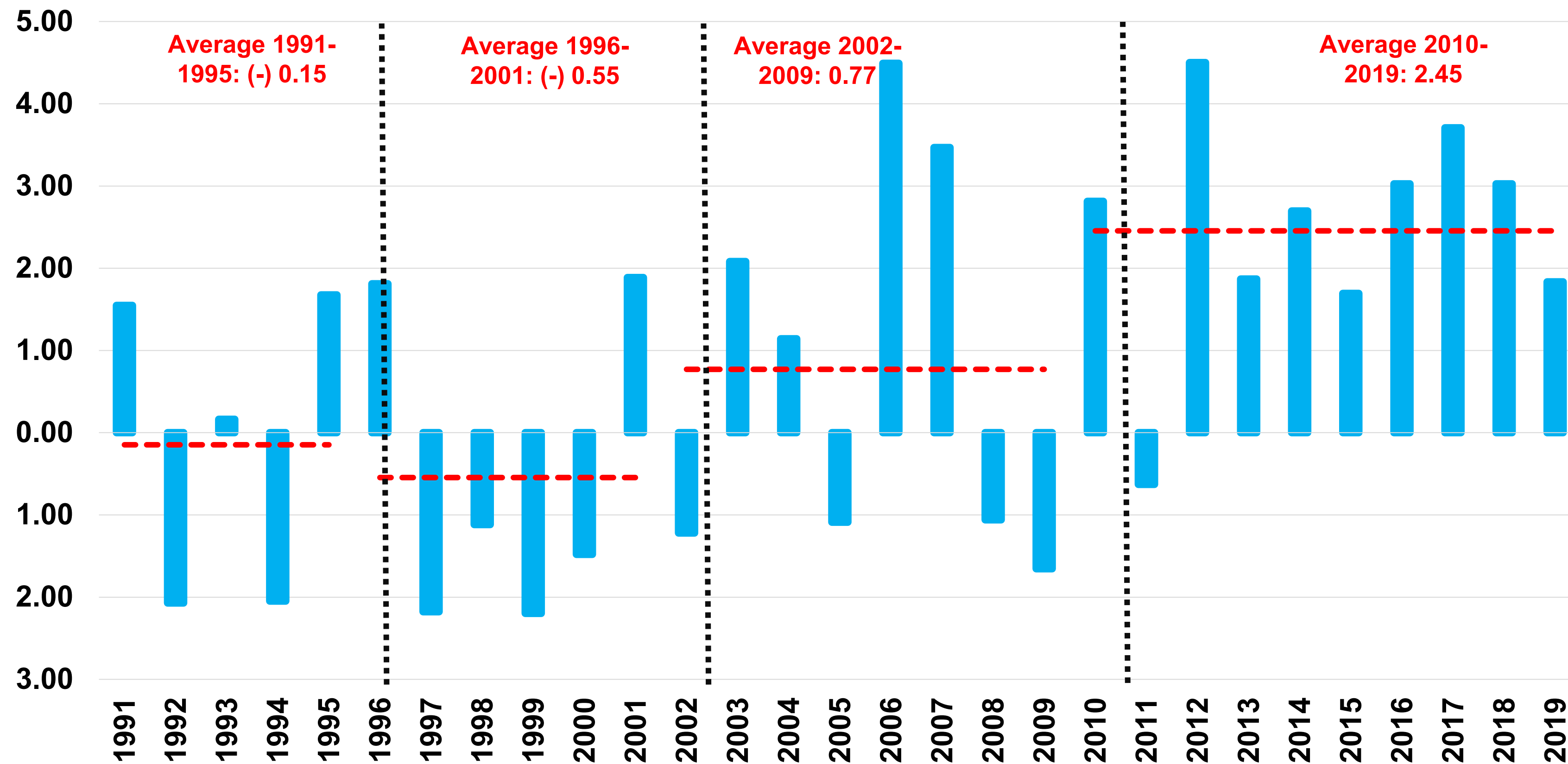
Contribution to KLEMS growth, by quarter.

Graph 3. Quarterly forecast for 2020.



II. Evolution of Productivity in Mexico

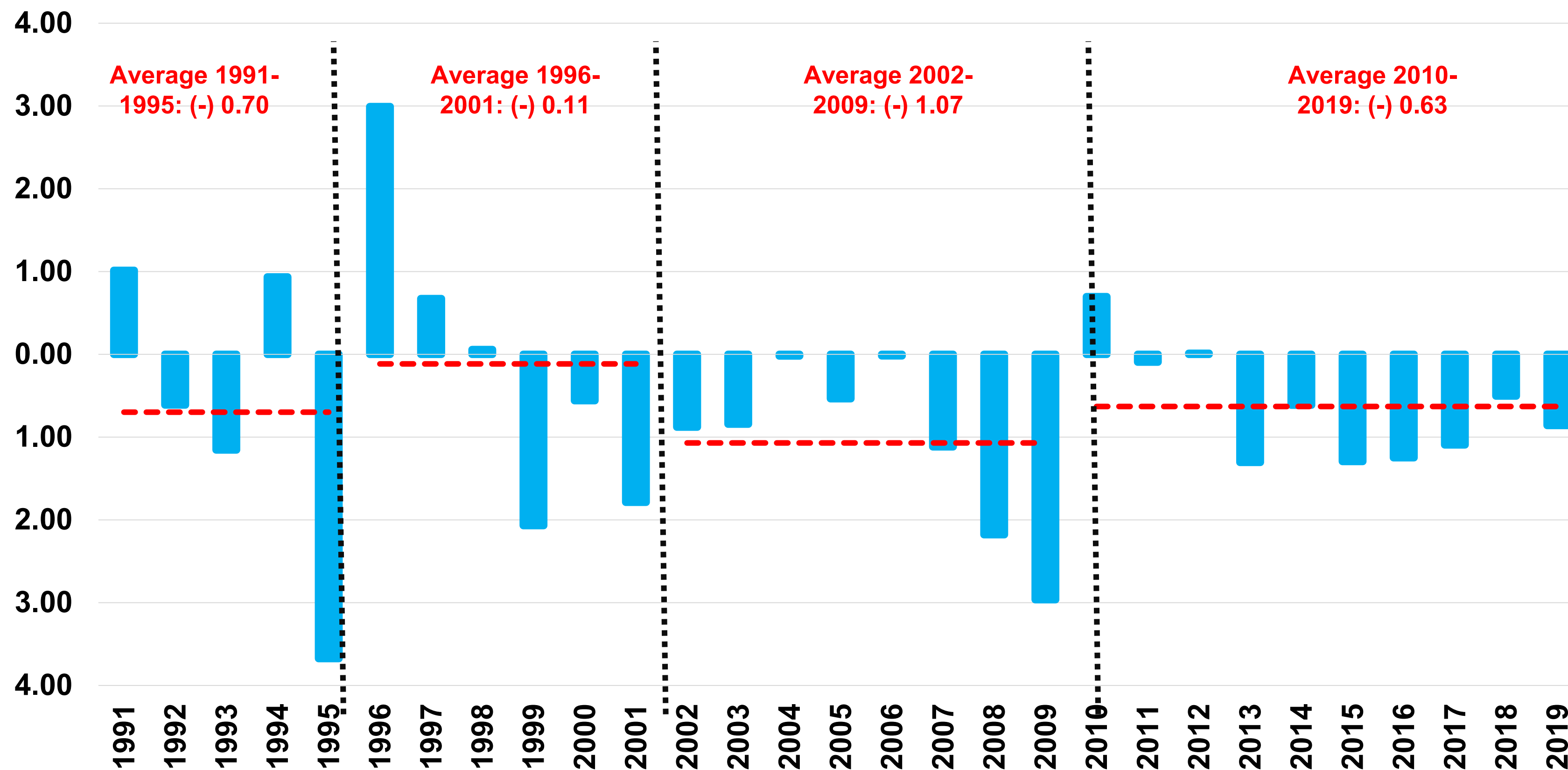
Graphic 4. Total Factor Productivity by periods.
Primary sector
 (annual percentage growth rates)



- In the 1991-1995 average, TFP falls **(-) 0.15%**, due to the behavior of the activities: “Animal husbandry and exploitation” and “Fishing, hunting, and capture”. **Particularly**, in the contribution of non-ICT capital services, in assets: “Other machines and equipment” and “Non-residential investment” for the years 1992 and 1994.
- In the 1996-2001 average, TFP falls **(-) 0.55%**, due to the behavior of the activities: “Animal husbandry and exploitation” and “Fishing, hunting, and capture”. **Particularly**, in the contribution of Non-ICT capital services, in assets: “Other machines and equipment” and “Non-residential investment” in the period from 1997 to 2000.
- In the 2002-2009 average, TFP grows **0.77%**, influenced by economic activities: “Animal husbandry and exploitation” and “Fishing, hunting, and capture”. **Particularly**, in the contribution of the Non-ICT capital service, in the “Non-residential investment”. In the periods of 2003-2004 and 2006-2007.
- In the 2010-2019 average, TFP grows **2.45%**, influenced by economic activities: “Animal husbandry and exploitation” and “Fishing, hunting, and capture”. **Particularly**, in the contribution of the Non-ICT capital service, in the “Non-residential investment” asset. In the period 2010-2019, except 2011.

II. Evolution of Productivity in Mexico

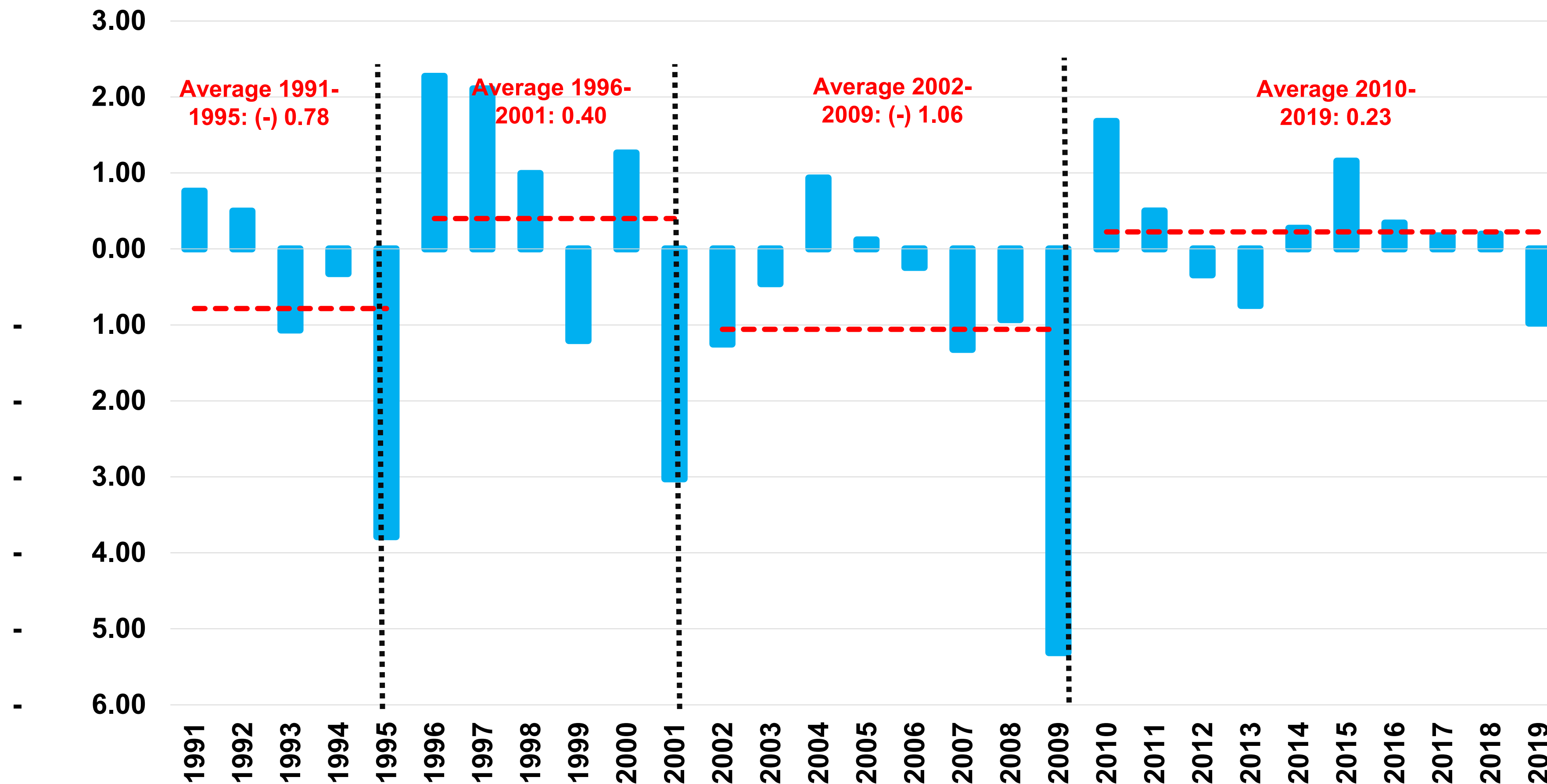
Graphic 5. Total Factor Productivity by periods.
Secondary sector
 (annual percentage growth rates)



- In the average 1991-1995, the TFP falls (-) **0.70%**, the economic activities that influence are "Oil and gas extraction, services related to mining and transportation by pipelines" and "Construction". **Particularly** in the Non-ICT capital service, in the "Non-residential Investment" asset and Materials.
- In the 1996-2001 average, TFP falls (-) **0.11%**, the economic activities that influence are "Construction", "Manufacture of petroleum and coal products" and "Manufacturing industries". **Particularly** in the Non-ICT capital service, in the "Non-residential Investment" asset and Materials.
- In the average 2002-2009 TFP falls (-) **1.07%**, the economic activities that influence are "Oil and gas extraction, services related to mining and transportation by pipelines", "Construction", "Manufacture of petroleum products and coal" and "Manufacturing industries". **Particularly** in the Non-ICT capital service, in the "Non-residential Investment" asset and Materials.
- In the 2010-2019 average, TFP falls (-) **0.63%**. The economic activities that influenced are the same as the previous period. **Particularly** in the Non-ICT capital service, in the "Non-residential Investment" asset and Materials.

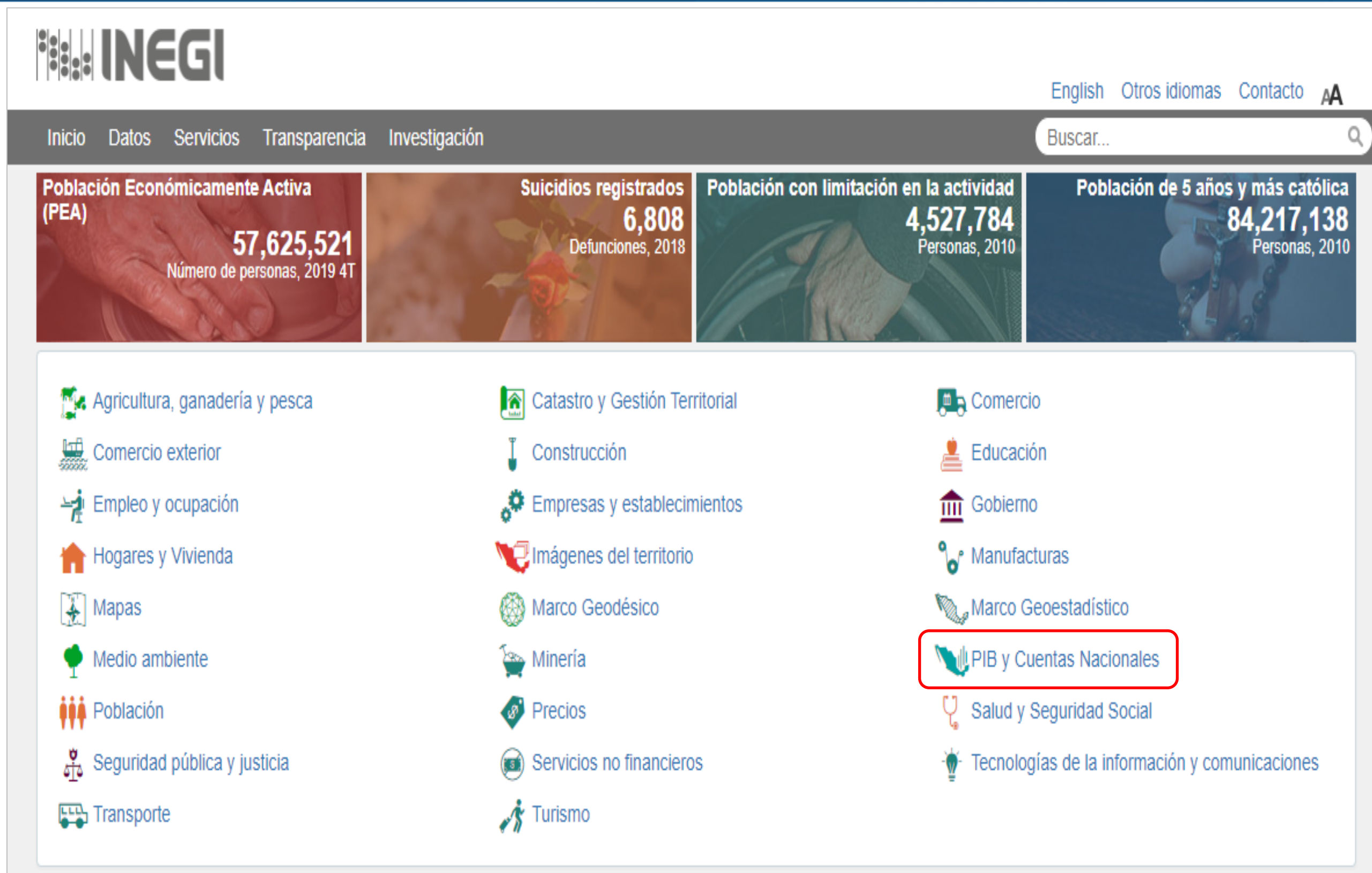
II. Evolution of Productivity in Mexico

Graphic 8. Total Factor Productivity by periods. Third sector
(annual percentage growth rates)



- In the average 1991-1995 TFP falls **(-) 0.78%**, the economic activities that influence the fall of TFP are “Commerce” and “Professional, scientific and technical services”. **Particularly** in the Non-ICT capital service in the “Non-residential investment” asset.
- In the 1996-2001 average, TFP grows **0.40%**, the economic activities that influence TFP growth are “Commerce” and “Information in mass media”. Particularly in the Non-ICT capital service in the assets “Transportation equipment” and “Non-residential investment”.
- In the 2002-2009 average TFP falls **(-) 1.06%**, the economic activities that influence the TFP fall are “Commerce” and “Professional, scientific and technical services”. Particularly in the Non-ICT capital service in the “Non-residential investment” asset.
- In the 2010-2019 average, TFP grows **0.23%**, the economic activities that influence TFP growth are “Commerce” and “Information in mass media”. **Particularly** in the Non-ICT capital service in the assets “Transportation equipment” and “Non-residential investment”.

III. Dissemination of TFP - KLEMS México



The screenshot shows the INEGI homepage with a navigation bar at the top containing 'Inicio', 'Datos', 'Servicios', 'Transparencia', and 'Investigación'. Below the navigation bar, there are four large tiles displaying key statistics: 'Población Económicamente Activa (PEA)' with 57,625,521 people, 'Suicidios registrados' with 6,808 deaths, 'Población con limitación en la actividad' with 4,527,784 people, and 'Población de 5 años y más católica' with 84,217,138 people. A large green arrow points from the top right of the homepage towards the 'Programas' section of the 'Sistema de Cuentas Nacionales'.

INEGI

English Otros idiomas Contacto AA

Inicio Datos Servicios Transparencia Investigación

Buscar...

Población Económicamente Activa (PEA)
57,625,521
Número de personas, 2019 4T

Suicidios registrados
6,808
Defunciones, 2018

Población con limitación en la actividad
4,527,784
Personas, 2010

Población de 5 años y más católica
84,217,138
Personas, 2010

Agricultura, ganadería y pesca
Comercio exterior
Empleo y ocupación
Hogares y Vivienda
Mapas
Medio ambiente
Población
Seguridad pública y justicia
Transporte

Catastro y Gestión Territorial
Construcción
Empresas y establecimientos
Imágenes del territorio
Marco Geodésico
Minería
Precios
Servicios no financieros
Turismo

Comercio
Educación
Gobierno
Manufacturas
Marco Geoestadístico
PIB y Cuentas Nacionales
Salud y Seguridad Social
Tecnologías de la información y comunicaciones

Consultation site
on the WEB:

<https://www.inegi.org.mx/programas/ptf/2013/>



The screenshot shows the 'Programas' section of the INEGI website. The 'Programas' tab is highlighted in the top navigation bar. Below the navigation bar, there are several categories of programs: 'Censos y Conteos', 'Encuestas Agropecuarias', 'Encuestas en Establecimientos', 'Encuestas en Hogares', 'Índices de Precios', 'Otros Programas', 'Registros Administrativos - Estadísticas', and 'Sistema de Cuentas Nacionales'. The 'Sistema de Cuentas Nacionales' is highlighted with a red box. To the right of the 'Sistema de Cuentas Nacionales' list, there is a detailed view of the 'Sistema de Cuentas Nacionales' showing various indicators and data series. The 'Productividad Total de los Factores' is highlighted with a red box in this list.

INEGI

Inicio Datos Servicios Transparencia Investigación

Inicio / Programas

Temas Áreas geográficas **Programas** Microdatos Sistemas de indicadores Datos primarios

Censos y Conteos
Encuestas Agropecuarias
Encuestas en Establecimientos
Encuestas en Hogares
Índices de Precios
Otros Programas
Registros Administrativos - Estadísticas
Sistema de Cuentas Nacionales

Sistema de Cuentas Nacionales

- ▼ Producto Interno Bruto (PIB)
- ▼ Indicadores de Corto Plazo
 - Cuadros de Oferta y Utilización
 - Cuadros de Oferta y Utilización Extendidos
 - Matriz de Insumo Producto
 - Acervos de Capital por Entidad Federativa
 - Tablas Origen – Destino de la Formación Bruta de Capital Fijo
 - Productividad Total de los Factores**
 - Sectores Institucionales
- ▼ Cuentas Satélite
- ▼ Históricos

IV. Conclusions and steps to follow.

Conclusions:

In the first periods, a protectionist stage of the Mexican economy is observed and later the commercial opening, from NAFTA.

Steps to follow:

1. Update the results of the TFP. The TFP - KLEMS Mexico, derived from the Change of Base Year (CAB by its acronym spanish) 2018 of the Mexican System of National Accounts (SCNM by its acronym spanish).
2. In the CAB 2018 process, rethink the impact of informality on economic growth and Total Factor Productivity.
3. In the SCNM 2018 CAB process, identify mixed-income to evaluate the impact on the contribution to growth and TFP.
4. Evaluate foreign trade and global value chains in the manufacturing industry and their impact on production and total factor productivity.

Thanks



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INEGI Informa