

“Análisis de la Red Mundial de Comercio Exterior del Cemento”

Presenta: M.I. D. Abel Mendiola Rojas

Avance 4 de Marzo de 2022

Objetivo

- Analizar la red mundial de comercio de cemento, en los años 1988, 2002 y 2015, a través del grado de centralidad (centrality degree), el coeficiente de agrupamiento (clustering coefficient) y el Diámetro de la red.

Introducción

World Top Cement Companies List by Market Cap as on Jan 7th, 2022

ANHUI CONCH CEMENT COMPANY

World Rank (Jan-07-2022)

606

World Rank (Sep-01-2021)

639

World Rank (Jan-01-2021)

437

World Rank (Jan-2020)

330

Headquarters Country

[China](#)

Company Business

[Basic Materials](#)

[Cement](#)

[Construction Materials](#)

Number of Employees

47,486

Employee Count as on Date

As on 2019

Rank in Country (Jan-2021)

Company Rank in China in 2021 is 66

Annual Revenue in USD

23,554 Million USD

Annual Net Income in USD

5,039 Million USD

Annual Results for Year Ending

Dec-2019

About Company Business:

Cement Manufacturing Company with headquarters in Wuhu, China and they have employees around 47,486 as on 2019.

Market Value (Jan-07-2022)

34.358 Billion USD

Market Cap (Sep-01-2021)

33.387 Billion USD

Market Value (Jan-01-2021)

39.758 Billion USD

Market Value (Jan 1st 2020)

44.331 Billion USD

CEO:

[Bin Wu](#)

Stock Exchange

[Shanghai](#)

[HKEX](#)

Company Website:

[Anhui Conch Cement](#)

[Wikipedia](#)

[Yahoo @ Shanghai](#)

World Rank (Jan-07-2022)

651

World Rank (Sep-01-2021)

597

World Rank (Jan-01-2021)

524

World Rank (Jan-2020)

745

Headquarters Country

Switzerland

Company Business

Basic Materials

Cement

Construction Materials

Number of Employees

67,409

Employee Count as on Date

As on 2020

Stock Category

EURONEXT 100

S&P EUROPE 350

Rank in Country (Jan-2021)

Company Rank in Switzerland in 2021 is 15

Annual Revenue in USD

25,225 Million USD

Annual Net Income in USD

1,813 Million USD

Annual Results for Year Ending

Dec-2020

About Company Business:

LafargeHolcim manufactures cements, building materials and solutions. They have over 70,000 employees in around 70 countries. LafargeHolcim four business segments are Cement, Aggregates, Ready-Mix Concrete and Solutions & Products. Headquarters is in Switzerland.

Market Value (Jan-07-2022)

32.100 Billion USD

Market Cap (Sep-01-2021)

35.070 Billion USD

Market Value (Jan-01-2021)

33.813 Billion USD

Market Value (Jan 1st 2020)

21.645 Billion USD

Stock Exchange

Switzerland

EURONEXT

Company Website:

Lafarge Holcim

Wikipedia

Yahoo @ OTC

Twitter

ULTRATECH CEMENT

World Rank (Jan-07-2022)

718

World Rank (Sep-01-2021)

696

World Rank (Jan-01-2021)

884

World Rank (Jan-2020)

929

Headquarters Country

[India](#)

ISIN Code:

INE481G01011

Company Business

[Basic Materials](#)

[Cement](#)

[Construction Materials](#)

Number of Employees

22,000

Employee Count as on Date

As on 2021

Stock Category

[Nifty 50 Index](#)

[BSE-100 Index](#)

Rank in Country (Jan-2021)

Company Rank in India in 2021 is 24

Annual Revenue in USD

5,476 Million USD

Annual Net Income in USD

814 Million USD

Annual Results for Year Ending

Mar-2020

About Company Business:

Ultratech Cement is one of Biggest Cement Companies in India with **headquarters in Mumbai of India**. Apart from Cement, Concrete, Building Solutions, Bira White are couple of other products of Ultratech Cement. They do have around 22,000 employees as on 2021.

UltraTech's parent company is the Aditya Birla Group. It employs a diverse workforce comprising of 120,000 employees, belonging to 42 different nationalities across 36 countries.

Market Value (Jan-07-2022)

29.172 Billion USD

Market Cap (Sep-01-2021)

31.332 Billion USD

Market Value (Jan-01-2021)

20.864 Billion USD

Market Value (Jan 1st 2020)

17.136 Billion USD

Stock Exchange

[BSE](#)

[NSE](#)

Company Website:

[Ultratech Cement#](#)

[Wikipedia#](#)

[Yahoo @ BSE #](#)

[Twitter#](#)

[Facebook#](#)

PIB MUNDIAL

Crecimiento del PIB (% anual)

Datos sobre las cuentas nacionales del Banco Mundial y archivos de datos sobre cuentas nacionales de la OCDE.

Línea

Columna

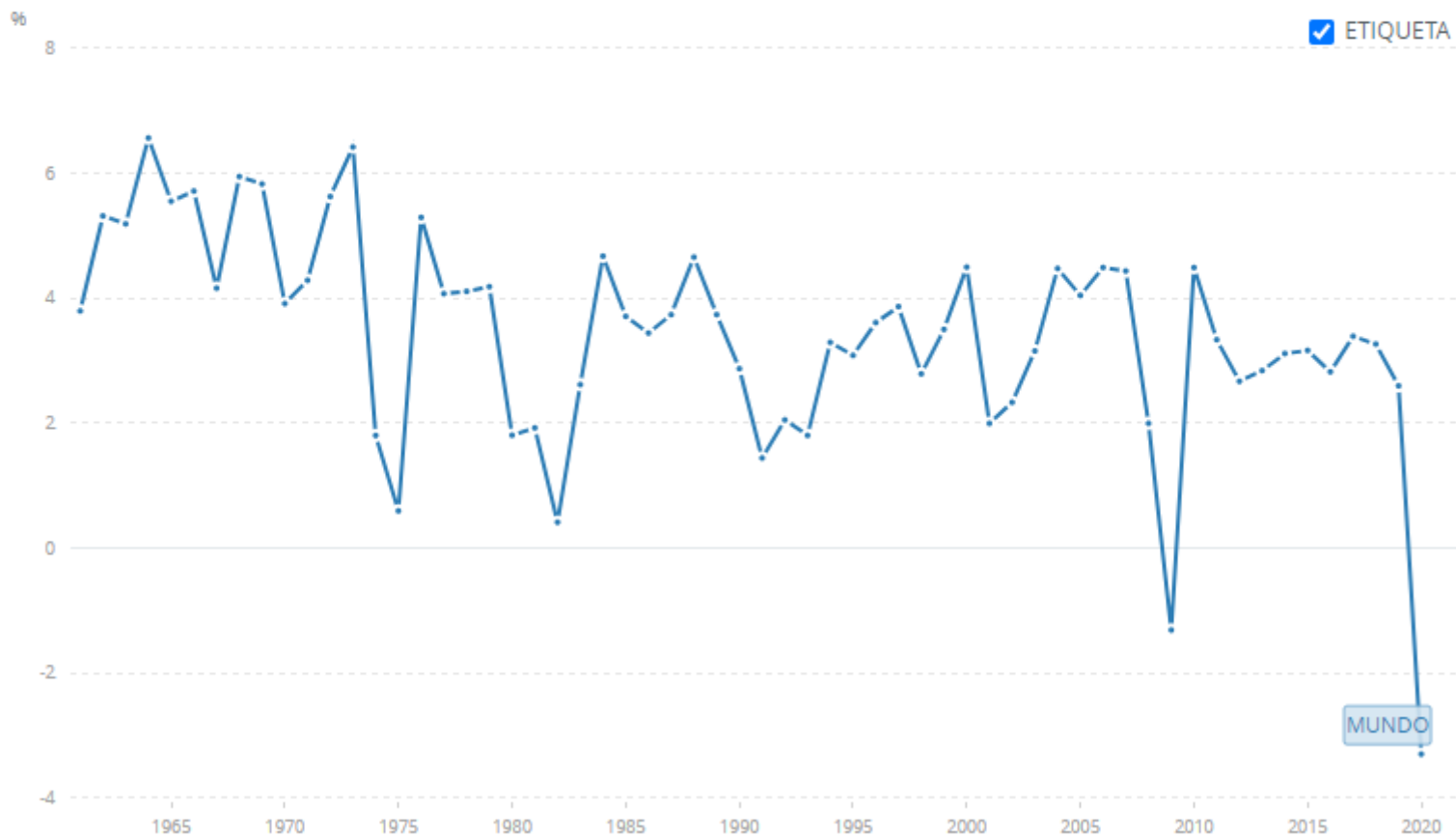
Mapa

Compartir

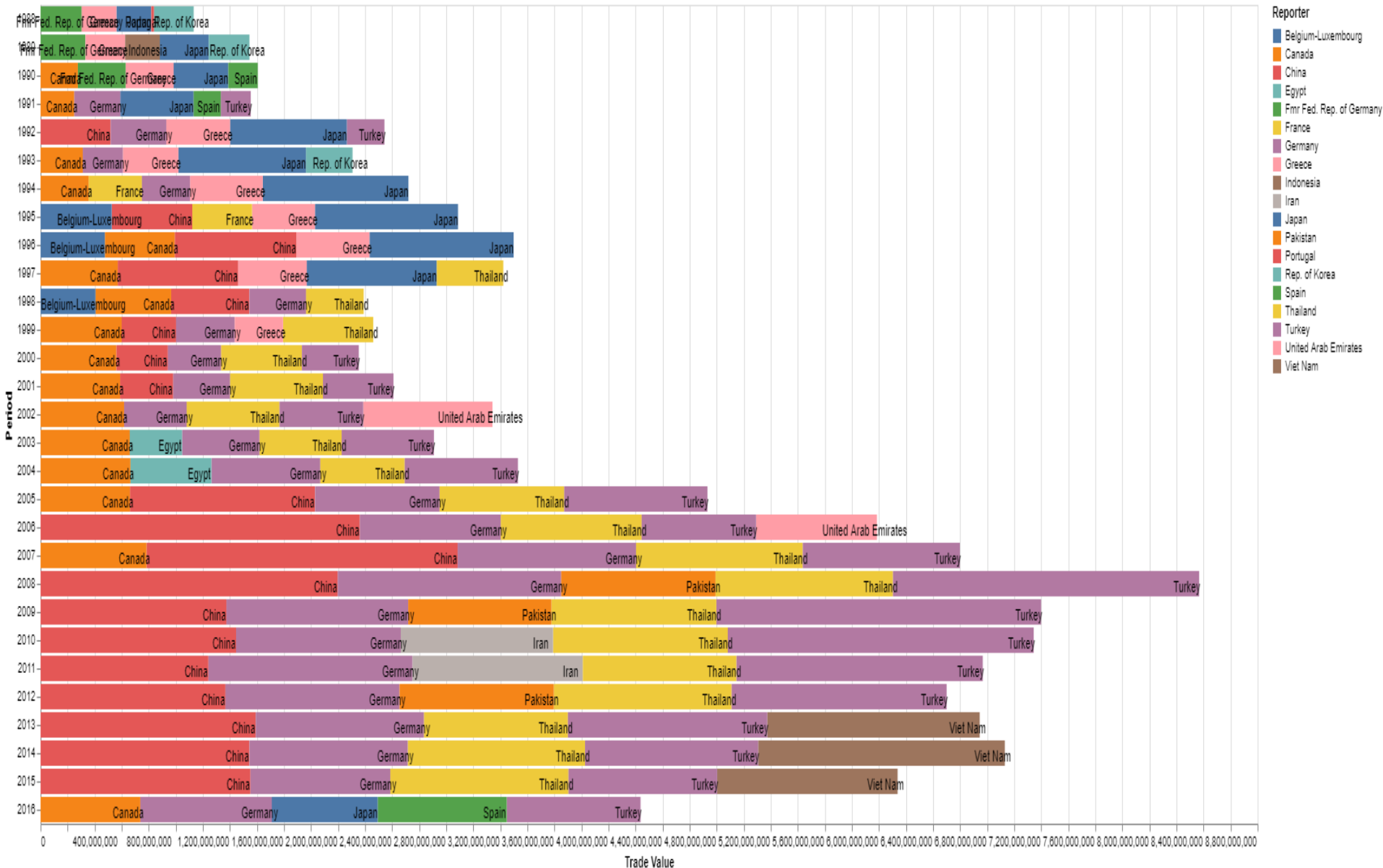
Detalles

☒ ETIQUETA

MUNDO

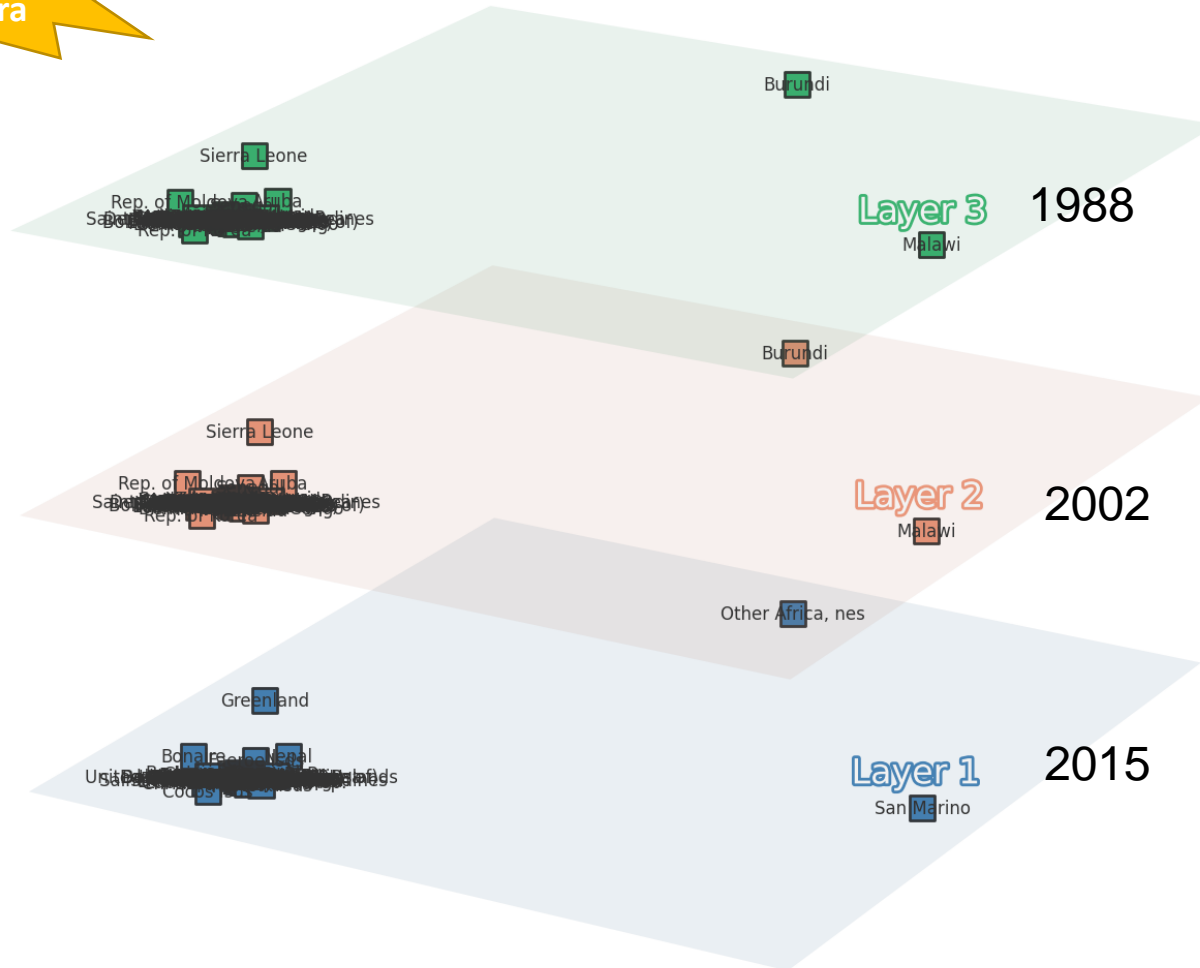


5 principales exportadores por año



Grafos Multicapa

Pendiente de mejora



Exportaciones

Grado de centralidad

1988

	country	centrality degree
25	Fmr Fed. Rep. of Germany	0.562500
92	Japan	0.330357
65	Rep. of Korea	0.312500
45	Greece	0.223214
0	Australia	0.178571
101	Portugal	0.151786
72	Switzerland	0.116071
17	World	0.098214
18	Finland	0.080357
48	India	0.080357

2002

	country	centrality degree
2	World	0.587719
7	Spain	0.451754
35	Italy	0.390351
16	USA	0.381579
4	France	0.372807
59	United Kingdom	0.368421
5	Germany	0.342105
23	China	0.320175
151	Turkey	0.293860
117	South Africa	0.267544

2015

	country	centrality degree
22	Netherlands	0.741379
78	China	0.568966
7	World	0.543103
34	Spain	0.491379
70	Turkey	0.461207
35	USA	0.439655
81	Germany	0.413793
41	Italy	0.366379
15	France	0.357759
36	United Arab Emirates	0.344828

Exportaciones

Diámetro

```
1 D1988 = nx.diameter(G3)
2 D1988
```

✓ 0.2s

4

```
1 D2002 = nx.diameter(G2)
2 D2002
```

✓ 0.3s

4

```
1 D2015 = nx.diameter(G1)
2 D2015
```

✓ 0.2s

4

```
1 avSPL1988 = nx.average_shortest_path_length(G3)
2 avSPL1988
```

✓ 0.1s

2.59134007585335

```
1 avSPL2002 = nx.average_shortest_path_length(G2)
2 avSPL2002
```

✓ 0.3s

2.2839577108710643

```
1 avSPL2015 = nx.average_shortest_path_length(G1)
2 avSPL2015
```

✓ 0.2s

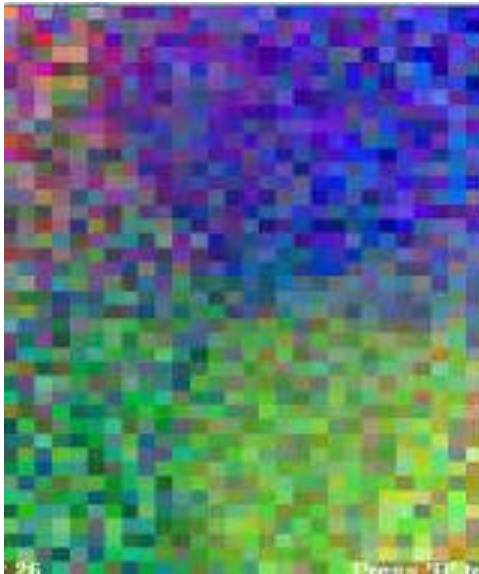
2.1278673967737163

Conclusiones

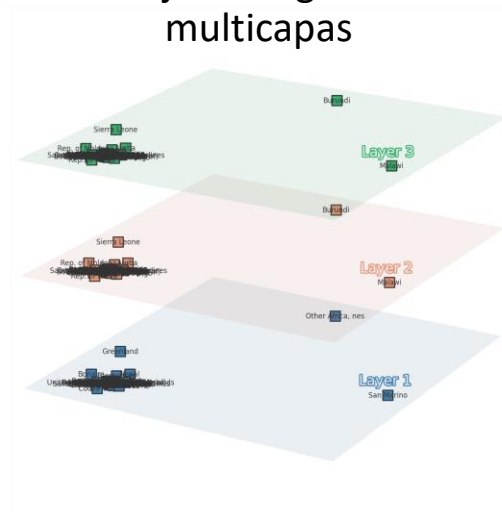
- Alemania es uno de los principales jugadores en el mercado mundial de cemento.
 - Su grado de centralidad confirma que está entre los 10 principales participantes.
 - Desde 1998, hasta 2015 se ha encontrado entre los 5 principales exportadores de cemento.
 - Heidelberg Cement (empresa alemana) se encuentra entre las principales empresas cementeras del mundo.
- Los países que tienen pocas relaciones de comercio no comercian entre ellos pero están conectados a los países que tienen más relaciones comerciales.
- El diámetro de la red de comercio es de 4 para los tres años analizados. Queda pendiente la causa de este resultado.
- La longitud promedio del camino más corto entre nodos muestra una tendencia a la baja. También queda pendiente la causa.

Trabajos Futuros

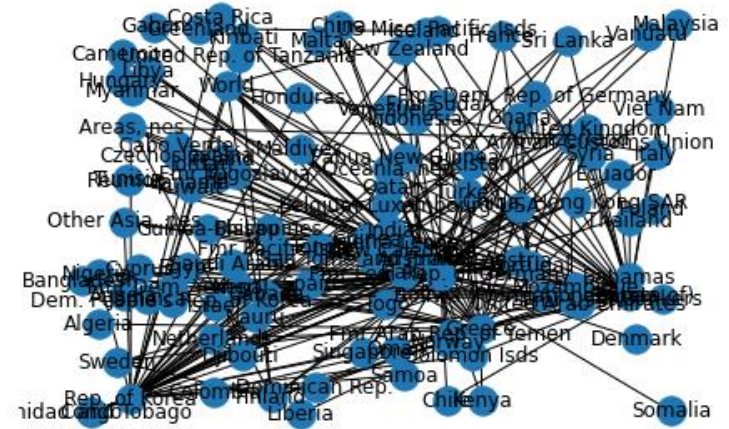
Elaborar un mapeo auto-organizado



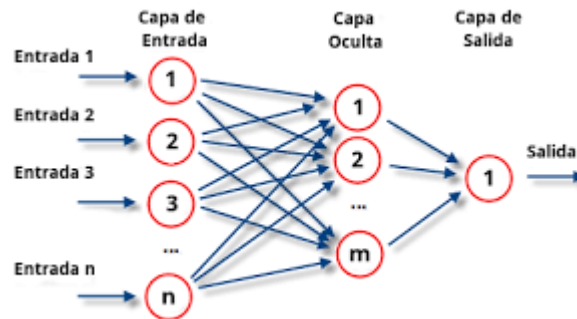
Mejorar el grafico multicapas



Mejorar la visualización de los grafos de cada año



Analizar con redes



Análisis de Series de Tiempo: Pronósticos de Tendencias, Series Económicas y Financieras, y otras series de tiempo.

