

SQL script

Services Sheet

```
CREATE TABLE Services_enterprise_eu (country TEXT,Year Integer,enterprise_value integer);
INSERT INTO services_enterpirse (country,year,enterprise_value) VALUES
('Country','Year','Enterprise_Value'),
('Germany','2013','90871'),
('Germany','2014','1,03,727'),
('Germany','2015','1,01,415'),
('Germany','2016','1,06,559'),
('Germany','2017','1,09,660'),
('Germany','2018','1,08,834'),
('Germany','2019','1,05,903'),
('Germany','2020','98486'),
('Spain','2013','1,93,638'),
('Spain','2014','1,90,480'),
('Spain','2015','1,87,397'),
('Spain','2016','1,96,166'),
('Spain','2017','1,97,093'),
('Spain','2018','1,96,645'),
('Spain','2019','2,04,434'),
('Spain','2020','2,18,298'),
('France','2013','1,03,315'),
('France','2014','1,06,036'),
('France','2015','1,06,298'),
('France','2016','1,15,627'),
('France','2017','1,13,151'),
('France','2018','1,34,457'),
('France','2019','1,45,696'),
('France','2020','1,63,436'),
('Italy','2013','1,29,865'),
('Italy','2014','1,25,688'),
('Italy','2015','1,23,625'),
('Italy','2016','1,23,442'),
('Italy','2017','1,22,099'),
('Italy','2018','1,20,158'),
('Italy','2019','1,17,529'),
('Italy','2020','1,15,293'),
('Netherlands','2013','37689'),
('Netherlands','2014','38351'),
('Netherlands','2015','39318'),
('Netherlands','2016','42081'),
('Netherlands','2017',':'),
```

```
('Netherlands','2018','48397'),  
('Netherlands','2019','52476'),  
('Netherlands','2020','55622'),  
('Sweden','2013','29486'),  
('Sweden','2014','29529'),  
('Sweden','2015','29336'),  
('Sweden','2016','29652'),  
('Sweden','2017','30019'),  
('Sweden','2018','28166'),  
('Sweden','2019','28743'),  
('Sweden','2020','29134');
```

```
Select * FROM services_enterprise  
LIMIT 40;
```

```
Select country,  
SUM(enterprise_value) AS total_enterprises  
FROM services_enterprise  
GROUP BY country  
ORDER BY total_enterprises DESC  
LIMIT 3;
```

```
with growth AS (  
  SELECT country, CAST (year AS INTEGER) AS YR,  
    enterprise_value,((enterprise_value - LAG(enterprise_value) OVER (PARTITION BY country  
ORDER BY CAST (year AS INTEGER)))  
      /NULLIF(LAG(enterprise_value) OVER (PARTITION BY country ORDER BY  
CAST(year AS INTEGER),0))*100.0 AS yoy_percent  
  FROM services_enterprise  
  WHERE enterprise_value IS NOT NULL)  
  SELECT country,  
    ROUND(AVG(yoy_percent),2) AS avg_growth_percent  
  FROM growth  
  WHERE yoy_percent is not NULL  
  GROUP BY country  
  ORDER BY avg_growth_percent DESC;
```

```
with enterprise_calculated AS(SELECT country, year, enterprise_value  
FROM services_enterprise  
WHERE enterprise_value IS NOT NULL  
AND TRIM(country) <> 'Country')  
SELECT country,  
  ROUND(AVG(enterprise_value),2) AS avg_enterprise_value,
```

```

ROUND(MAX(enterprise_value)-MIN(enterprise_value),2) AS volatility_range
FROM enterprise_calculated
GROUP BY country
ORDER BY avg_enterprise_value DESC;

```

```

SELECT country,
ROUND((((MAX (enterprise_value) - MIN (enterprise_value))/ MIN(enterprise_value))*100,2)
AS overall_growth_percentage
FROM services_enterprise
WHERE enterprise_value IS NOT NULL
GROUP BY country
ORDER BY overall_growth_percentage DESC;

```

```

INSERT INTO Services_turnover (country,year,turnover_value) VALUES

```

```

('Country','Year','Turnover_value'),
('Germany','2013','2,68,368.40'),
('Germany','2014','2,84,080.90'),
('Germany','2015','2,98,516.60'),
('Germany','2016','3,15,076.00'),
('Germany','2017','3,30,676.40'),
('Germany','2018','3,40,661.60'),
('Germany','2019','3,38,909.10'),
('Germany','2020','3,11,077.30'),
('Spain','2013','94770.2'),
('Spain','2014','99135'),
('Spain','2015','1,04,293.40'),
('Spain','2016','1,06,712.30'),
('Spain','2017','1,11,009.30'),
('Spain','2018','1,16,285.10'),
('Spain','2019','1,22,381.30'),
('Spain','2020','1,00,798.90'),
('France','2013','2,05,925.90'),
('France','2014','2,02,383.90'),
('France','2015','2,10,235.50'),
('France','2016','2,06,789.30'),
('France','2017','2,14,854.00'),
('France','2018','2,16,824.90'),
('France','2019','2,24,469.00'),
('France','2020','1,97,130.90'),
('Italy','2013','1,47,723.20'),

```

```

('Italy','2014','1,51,896.80'),
('Italy','2015','1,54,080.60'),
('Italy','2016','1,52,995.50'),
('Italy','2017','1,57,566.60'),
('Italy','2018','1,61,547.10'),
('Italy','2019','1,65,675.40'),
('Italy','2020','1,39,235.10'),
('Netherlands','2013','75578.6'),
('Netherlands','2014','77995.5'),
('Netherlands','2015','80861'),
('Netherlands','2016','80927.9'),
('Netherlands','2017','.'),
('Netherlands','2018','91212.9'),
('Netherlands','2019','95486.1'),
('Netherlands','2020','87875'),
('Sweden','2013','49090.1'),
('Sweden','2014','46982.3'),
('Sweden','2015','47406.6'),
('Sweden','2016','47507.4'),
('Sweden','2017','48988.1'),
('Sweden','2018','45445.8'),
('Sweden','2019','45974'),
('Sweden','2020','43185.5');

```

```

SELECT * FROM Services_turnover
LIMIT 40;

```

```

Select country,
SUM(turnover_value) AS total_turnover
FROM Services_turnover
GROUP BY country
ORDER BY total_turnover DESC
LIMIT 3;

```

```

with growth AS (
  SELECT country, CAST (year AS INTEGER) AS YR,
  turnover_value,((turnover_value - LAG(turnover_value) OVER (PARTITION BY country
ORDER BY CAST (year AS INTEGER))))
  /NULLIF(LAG(turnover_value) OVER (PARTITION BY country ORDER BY
CAST(year AS INTEGER)),0))*100.0 AS yoy_percent
  FROM Services_turnover
  WHERE turnover_value IS NOT NULL)
SELECT country,
ROUND(AVG(yoy_percent),2) AS avg_growth_percent

```

```

FROM growth
WHERE yoy_percent is not NULL
GROUP BY country
ORDER BY avg_growth_percent DESC;

```

```

with turnover_calculated AS(SELECT country, year, turnover_value
FROM Services_turnover
WHERE turnover_value IS NOT NULL
AND TRIM(country) <> 'Country')
SELECT country,
ROUND(AVG(turnover_value),2) AS avg_turnover_value,
ROUND(MAX(turnover_value)-MIN(turnover_value),2) AS volatility_range
FROM turnover_calculated
GROUP BY country
ORDER BY avg_turnover_value DESC;

```

```

SELECT country,
ROUND(((MAX (turnover_value) - MIN (turnover_value))/ MIN(turnover_value))*100,2)
AS overall_growth_percentage
FROM Services_turnover
WHERE turnover_value IS NOT NULL
GROUP BY country
ORDER BY overall_growth_percentage DESC;

```

```

CREATE TABLE services_production_value (country TEXT,Year Integer,enterprise_value
integer);

```

```

INSERT INTO Services_production_value (country,year,production_value) VALUES
('Country','Year','Production_value'),
('Germany','2013','2,06,396.40'),
('Germany','2014','2,12,743.90'),
('Germany','2015','2,25,807.10'),
('Germany','2016','2,22,613.90'),
('Germany','2017','2,32,667.90'),
('Germany','2018','2,34,326.30'),
('Germany','2019','2,39,769.10'),
('Germany','2020','2,16,562.80'),
('Spain','2013','72251.6'),
('Spain','2014','74361.9'),
('Spain','2015','80173'),
('Spain','2016','81762.2'),
('Spain','2017','85592.6'),
('Spain','2018','88583.2'),

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('Spain','2019','93997.3'),
('Spain','2020','73450.2'),
('France','2013','2,07,927.80'),
('France','2014','2,05,090.00'),
('France','2015','2,15,751.50'),
('France','2016','2,14,086.50'),
('France','2017','2,20,866.00'),
('France','2018','2,25,318.10'),
('France','2019','2,31,342.70'),
('France','2020','2,04,735.20'),
('Italy','2013','1,58,794.20'),
('Italy','2014','1,62,976.60'),
('Italy','2015','1,64,346.40'),
('Italy','2016','1,64,272.70'),
('Italy','2017','1,69,250.50'),
('Italy','2018','1,71,762.90'),
('Italy','2019','1,76,253.70'),
('Italy','2020','1,49,826.00'),
('Netherlands','2013','74041'),
('Netherlands','2014','76939.6'),
('Netherlands','2015','79943'),
('Netherlands','2016','79927.3'),
('Netherlands','2017',''),
('Netherlands','2018','89532.9'),
('Netherlands','2019','92551.2'),
('Netherlands','2020','64975.8'),
('Sweden','2013','49599.7'),
('Sweden','2014','47701'),
('Sweden','2015','48266.4'),
('Sweden','2016','48418.5'),
('Sweden','2017','50201.7'),
('Sweden','2018','46472.5'),
('Sweden','2019','46683.2'),
('Sweden','2020','44035.5');

```

```

SELECT * FROM services_production_value
LIMIT 40;

```

```

Select country,
SUM(production_value) AS total_production_value
FROM services_production_value
GROUP BY country
ORDER BY total_production_value DESC
LIMIT 3;

```

```

with growth AS (
  SELECT country, CAST (year AS INTEGER) AS YR,
    production_value,((production_value - LAG(production_value) OVER (PARTITION BY country
ORDER BY CAST (year AS INTEGER)))
      /NULLIF(LAG(production_value) OVER (PARTITION BY country ORDER BY
CAST(year AS INTEGER)),0))*100.0 AS yoy_percent
  FROM services_production_value
  WHERE production_value IS NOT NULL)
SELECT country,
  ROUND(AVG(yoy_percent),2) AS avg_growth_percent
FROM growth
WHERE yoy_percent is not NULL
GROUP BY country
ORDER BY avg_growth_percent DESC;

```

```

  with productionvalue_calculated AS(SELECT country, year, production_value
FROM services_production_value
WHERE production_value IS NOT NULL
AND TRIM(country) <> 'Country')
SELECT country,
  ROUND(AVG(production_value),2) AS avg_production_value,
  ROUND(MAX(production_value)-MIN(production_value),2) AS volatility_range
FROM productionvalue_calculated
GROUP BY country
ORDER BY avg_production_value DESC;

```

```

SELECT country,
  ROUND(((MAX (production_value) - MIN (production_value))/ MIN(production_value))*100,2)
  AS overall_growth_percentage
FROM      services_production_value
WHERE production_value IS NOT NULL
GROUP BY country
ORDER BY overall_growth_percentage DESC;

```

Enterprises sheet:

```

CREATE TABLE manufacturing_enterprises(country TEXT, year INTEGER, enterprise
INTEGER);
INSERT INTO manufacturing_enterprises(country,year,enterprise) VALUES
('Country','Year','Enterprise'),

```

('European Union - 27 countries ','2013','17700'),
('European Union - 27 countries ','2014','18000'),
('European Union - 27 countries ','2015','18761'),
('European Union - 27 countries ','2016','18038'),
('European Union - 27 countries ','2017','17507'),
('European Union - 27 countries ','2018','17333'),
('European Union - 27 countries ','2019','16932'),
('European Union - 27 countries ','2020','17052'),
('Germany','2013','1706'),
('Germany','2014','1916'),
('Germany','2015','1813'),
('Germany','2016','1753'),
('Germany','2017','1615'),
('Germany','2018','1540'),
('Germany','2019','1561'),
('Germany','2020','1663'),
('Spain','2013','1967'),
('Spain','2014','1911'),
('Spain','2015','2219'),
('Spain','2016','2046'),
('Spain','2017','2105'),
('Spain','2018','2034'),
('Spain','2019','1815'),
('Spain','2020','1869'),
('France','2013','1861'),
('France','2014','1888'),
('France','2015','2095'),
('France','2016','1675'),
('France','2017','1306'),
('France','2018','1116'),
('France','2019','1040'),
('France','2020','1002'),
('Italy','2013','2336'),
('Italy','2014','2257'),
('Italy','2015','2186'),
('Italy','2016','2140'),
('Italy','2017','1928'),
('Italy','2018','1842'),
('Italy','2019','1811'),
('Italy','2020','1745'),
('Netherlands','2013','417'),
('Netherlands','2014','437'),
('Netherlands','2015','464'),
('Netherlands','2016','467'),


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('Netherlands','2017','480'),
('Netherlands','2018','523'),
('Netherlands','2019','549'),
('Netherlands','2020','583'),
('Sweden','2013','749'),
('Sweden','2014','740'),
('Sweden','2015','732'),
('Sweden','2016','721'),
('Sweden','2017','736'),
('Sweden','2018','603'),
('Sweden','2019','597'),
('Sweden','2020','587');

```

```

SELECT * FROM manufacturing_enterprises
LIMIT 40;

```

```

with growth AS (SELECT country,
    ROUND(((enterprise - LAG(enterprise) over (Partition BY country order BY CAST(year AS Integer))))
    /LAG(enterprise) over(partition BY country ORDER BY CAST(year AS Integer)))*100,2) AS
yoy_growth_percent
FROM manufacturing_enterprises
WHERE TRIM (country) not LIKE '%European Union%'
AND enterprise IS NOT NULL)
SELECT country,
ROUND(AVG(yoy_growth_percent),2) AS avg_growth_percecnt
FROM growth
GROUP BY country
ORDER BY avg_growth_percecnt DESC;

```

```

with enterprise_calculated AS(SELECT country, year, enterprise
FROM manufacturing_enterprises
WHERE TRIM(country) NOT like '%European Union%'
AND TRIM(country) <> 'Country')
SELECT country,
ROUND(AVG(enterprise),2) AS avg_enterprise_value,
ROUND(MAX(enterprise)-MIN(enterprise),2) AS volatility_range
FROM enterprise_calculated
GROUP BY country
ORDER BY avg_enterprise_value DESC;

```

```

SELECT country,
ROUND(((MAX (enterprise) - MIN (enterprise))/ MIN(enterprise))*100,2)
AS overall_growth_percentage

```

```

FROM      manufacturing_enterprises
WHERE TRIM(country) NOT LIKE '%EUROPEAN union%'
GROUP BY country
ORDER BY overall_growth_percentage DESC;

```

```

SELECT country,
SUM(turnover) AS Total_turnover
FROM Turnover
WHERE TRIM (country) not LIKE '%European Union%'
GROUP BY country
ORDER BY Total_turnover DESC
LIMIT 3;
SELECT country,
SUM(turnover) AS Total_turnover
FROM Turnover
WHERE TRIM (country) not LIKE '%European Union%'
GROUP BY country
ORDER BY Total_turnover DESC
LIMIT 3;

```

```

with growth AS (SELECT country,
ROUND(((turnover - LAG(turnover) over (Partition BY country order BY CAST(year AS
Integer))))
/ LAG(turnover) over(partition BY country ORDER BY CAST(year AS Integer))) * 100, 2) AS
yoy_growth_percent
FROM Turnover
WHERE TRIM (country) not LIKE '%European Union%')
SELECT country,
ROUND(AVG(yoy_growth_percent), 2) AS avg_growth_percent
FROM growth
GROUP BY country
ORDER BY avg_growth_percent DESC;

```

```

with turnover_calculated AS (SELECT country, year, turnover
FROM Turnover
WHERE TRIM(country) NOT like '%European Union%'
AND TRIM(country) <> 'Country')
SELECT country,
ROUND(AVG(turnover), 2) AS avg_turnover,
ROUND(MAX(turnover) - MIN(turnover), 2) AS volatility_range
FROM turnover_calculated
GROUP BY country
ORDER BY avg_turnover DESC;

```

```

SELECT country,
ROUND(((MAX (turnover) - MIN (turnover))/ MIN(turnover))*100,2)
AS overall_growth_percentage
FROM Turnover
WHERE TRIM(country) NOT LIKE '%EURPOEAN union%'
GROUP BY country
ORDER BY overall_growth_percentage DESC;

```

```

SELECT country,
SUM(production_value) AS Total_production_value
FROM Productionvalue
GROUP BY country
ORDER BY Total_production_value DESC
LIMIT 3;

```

```

WITH growth_calc AS(SELECT country, year, production_value,
ROUND(((production_value - LAG(production_value) over( Partition BY country Order BY year))
/ LAG(production_value) OVER (Partition BY country ORDER BY year))*100,2)
AS yoy_growth_percent
FROM Productionvalue)
SELECT country,
ROUND(AVG(yoy_growth_percent),2) AS Avg_growth_percent
FROM growth_calc
WHERE yoy_growth_percent IS NOT NULL
GROUP BY country
ORDER BY Avg_growth_percent DESC;

```

```

SELECT country,
ROUND(AVG(production_value),2) AS Avg_production,
ROUND(MAX(production_value)- MIN(production_value),2) AS volatility
FROM Productionvalue
GROUP BY country
ORDER BY volatility DESC;

```

```

With bounds AS(SELECT country,
MAX(year)AS Max_year,
MIN(year)AS Min_year
FROM Productionvalue
GROUP BY country),
First_last AS (SELECT p.country,
MAX(CASE WHEN p.year = b.Min_year THEN p.production_value END)AS first_year_value,
MAX(CASE WHEN p.year= b.Max_year THEN p.production_value END) AS last_year_value
FROM Productionvalue p
JOIN bounds b ON p.country = b.country

```

```
GROUP BY p.country)
SELECT country,
ROUND(((last_year_value - first_year_value)/first_year_value)*100,2) AS
overall_growth_percent
FROM First_last
ORDER BY overall_growth_percent DESC;
```