Insights

Project name : ALCOHOLIC BEVERAGES ANALYSIS

1. Identify the top 5 countries which showed increase & decrease in revenue annually for all types of Alcoholic Beverages

a. at an aggregated level

Ans.

```
select * into aggregated_level from
(Select a.Country,((a.Last_Reported_Value-a.First_Reported_Value)/6) as beer_revenue,
((b.Last_Reported_Value-b.First_Reported_Value)/6) as Revenue_ethyl_alcohol,
((c.Last_Reported_Value-c.First_Reported_Value)/6) as Revenue_Intermediate_products,
((d.Last_Reported_Value-d.First_Reported_Value)/6) as Revenue_sparkling_wine,
((e.Last_Reported_Value-e.First_Reported_Value)/6) as Revenue_still_wine
from Revenue_beer as a inner join Revenue_ethyl_alcohol as b on a.Country=b.Country
inner join Revenue_Intermediate_products as c on b.Country=c.Country
inner join Revenue_sparkling_wine as d on c.Country=d.Country
inner join Revenue_still_wine as e on d.Country=e.Country)a
select*from aggregated_level
```

```
Select Country ,(beer_revenue + Revenue_ethyl_alcohol + Revenue_Intermediate_products + Revenue_sparkling_wine + Revenue_still_wine)
as Total_revenue from aggregated_level
order by Total_revenue desc
```

When I applied this query, I found top 5 countries at increase aggregate level

	Country	Total_revenue
1	United Kingdom of Great Britain and Northern Irel...	358.523363749186
2	France	129.589995702108
3	Netherlands	29.8083337148031
4	Belgium	23.181663831075
5	Denmark	11.7300020456314

I found top 5 countries at decrease aggregate level

Hungary	-1.99833277...
Latvia	0.69333322...
Ireland	11.6366631...
Denmark	11.7300020...
Belgium	23.1816638...

b. at individual level

here is showing increase in revenue annually

Ans. We have 5 types of alcohol.

i. Revenue of beer

```
Select * from
(Select *, Dense_rank() over (order by Avg_annual_revenue desc) As revenue_rank
from
(select Country,round ((((last_Reported_value - First_Reported_Value)/First_Reported_Value)/6)*100 ,3) as Avg_Annual_Revenue
from Revenue_Beer)a where Avg_Annual_Revenue is not null) c
where revenue_rank between 1 and 5;
```

Output countries

	Country	Avg_Annual_Revenue	revenue_rank
1	France	30.838	1
2	Malta	29.229	2
3	Greece	12.602	3
4	Latvia	11.934	4
5	Finland	6.901	5

ii. revenue of ethyl alcohol

```
Select * from
(Select *, Dense_rank() over (order by Avg_annual_revenue desc) As revenue_rank
from (select Country,round ((((last_Reported_value - First_Reported_Value)/First_Reported_Value)/6)*100 ,3) as Avg_Annual_Revenue
from Revenue_ethyl_alcohol)a where Avg_Annual_Revenue is not null) c
where revenue_rank between 1 and 5;
```

Output countries

	Country	Avg_Annual_Revenue	revenue_rank
1	Bulgaria	7.481	1
2	Slovenia	7.033	2
3	Austria	6.402	3
4	Croatia	5.74	4
5	Luxembourg	5.457	5

iii. revenue of intermediate product

```
Select * from
(Select *, Dense_rank() over (order by Avg_annual_revenue desc) As revenue_rank
from (select Country,round ((((last_Reported_value - First_Reported_Value)/First_Reported_Value)/6)*100,3) as Avg_Annual_Revenue
from Revenue_Intermediate_products)a  where Avg_Annual_Revenue is not null) c
where revenue_rank between 1 and 5;
```

The output countries

	Country	Avg_Annual_Revenue	revenue_rank
1	Bulgaria	2372.222	1
2	Austria	55.852	2
3	Slovenia	12.963	3
4	Latvia	6.844	4
5	Estonia	6.597	5

iv. revenue of sparkling vine

```
select * from
(select *,Dense_Rank()over(order by Avg_Annual_Revenue desc) as Revenue_Rank_ from
(select Country,round ((((last_Reported_value - First_Reported_Value)/First_Reported_Value)/6)*100,3) as Avg_Annual_Revenue
from Revenue_Sparkling_Wine )AA where Avg_Annual_Revenue is not null) BB where Revenue_Rank_ between 1 and 5 ;
```

The output countries

	Country	Avg_Annual_Revenue	Revenue_Rank_
1	United Kingdom of Great Britain and Northern Irel...	22.506	1
2	Belgium	17.011	2
3	Denmark	15.054	3
4	Romania	7.407	4
5	Slovakia	2.55	5

v. revenue of still vine

```
select * from
(select *,Dense_Rank()over(order by Avg_Annual_Revenue desc ) as Revenue_Rank_ from
(select Country,round ((((last_Reported_value - First_Reported_Value)/First_Reported_Value)/6)*100,3) as Avg_Annual_Revenue
from Revenue_Still_Wine )AA where Avg_Annual_Revenue is not null) BB where Revenue_Rank_ between 1 and 5 ;D
```

The output countries

	Country	Avg_Annual_Revenue	Revenue_Rank_
1	Hungary	59.42	1
2	Denmark	9.797	2
3	Ireland	9.342	3
4	Finland	7.913	4
5	Lithuania	7.152	5

Here top 5 decrease in revenue annually

```sql
---Revenue_beer
Select * from
(Select *, Dense_rank() over (order by Avg_annual_revenue ) As revenue_rank
from (select Country,round ((((last_Reported_value - First_Reported_Value)/First_Reported_Value)/6)*100 ,3) as Avg_Annual_Revenue
from Revenue_Beer)a where Avg_Annual_Revenue is not null) c
where revenue_rank between 1 and 5;
-----Revenue_ethyl_alcohol
Select * from
(Select *, Dense_rank() over (order by Avg_annual_revenue ) As revenue_rank
from (select Country,round ((((last_Reported_value - First_Reported_Value)/First_Reported_Value)/6)*100 ,3) as Avg_Annual_Revenue
from Revenue_ethyl_alcohol)a where Avg_Annual_Revenue is not null) c
where revenue_rank between 1 and 5;
-----Revenue_Intermediate_products
Select * from
(Select *, Dense_rank() over (order by Avg_annual_revenue) As revenue_rank
from (select Country,round ((((last_Reported_value - First_Reported_Value)/First_Reported_Value)/6)*100,3) as Avg_Annual_Revenue
from Revenue_Intermediate_products)a  where Avg_Annual_Revenue is not null) c
where revenue_rank between 1 and 5;
----Revenue_sparkling_wine;
select * from
(select *,Dense_Rank()over(order by Avg_Annual_Revenue ) as Revenue_Rank_ from
(select Country,round ((((last_Reported_value - First_Reported_Value)/First_Reported_Value)/6)*100,3) as Avg_Annual_Revenue
from Revenue_Sparkling_Wine )AA where Avg_Annual_Revenue is not null) BB where Revenue_Rank_ between 1 and 5 ;
---Revenue Still wine
select * from
(select *,Dense_Rank()over(order by Avg_Annual_Revenue ) as Revenue_Rank_ from
(select Country,round ((((last_Reported_value - First_Reported_Value)/First_Reported_Value)/6)*100,3) as Avg_Annual_Revenue
from Revenue_Still_Wine )AA where Avg_Annual_Revenue is not null) BB where Revenue_Rank_ between 1 and 5 ;
```

And output of 5 different alcohol product

i.beer

	Country	Avg_Annual_Revenue	revenue_rank
1	Portugal	-3.007	1
2	Bulgaria	-2.041	2
3	Denm...	-1.554	3
4	Germa...	-1.292	4
5	Roma...	-0.671	5

ii. Ethyle alcohol

	Country	Avg_Annual_Revenue	revenue_rank
1	Lithuania	-3.481	1
2	Spain	-2.63	2
3	Ireland	-2.334	3
4	Romania	-1.634	4
5	Czech Republic	-1.444	5

iii. intermediate products

	Country	Avg_Annual_Revenue	revenue_rank
1	Romania	-16.453	1
2	Czech Republic	-10.148	2
3	Hungary	-8.889	3
4	Germany	-7.648	4
5	Netherlands	-4.775	5

iv. Sparkling vine

	Country	Avg_Annual_Revenue	Revenue_Rank_
1	Hungary	-1.877	1
2	Germany	-0.7	2
3	Czech Republic	-0.631	3
4	Netherlands	0.216	4
5	Latvia	0.647	5

v.still vine

	Country	Avg_Annual_Revenue	Revenue_Rank_
1	Poland	-5.288	1
2	France	1.055	2
3	Belgium	3.719	3
4	Estonia	3.777	4
5	Sweden	4.759	5

2. Analyze the expenditure of different countries on alcohol and see

a. if it has any correlation with the alcohol related health causes

```
create view [expenditure] as
Select *, Dense_rank() over (order by change_in_expenditure ) As expenditure_wise_rank
from
(select Country,round ((last_Reported_value - First_Reported_Value)/(First_Reported_Value)/(last_reported_value_year-First_Reported_Value_Year)*100,3) as change_in_expenditure
from Alcohol_expenditure_WHO)b  where change_in_expenditure is not null
select * from [expenditure]

create view [alcohol_related_causes] as
Select *, Dense_rank() over (order by change_in_alcohol_related_causes ) As alcoholCauses_rank
from
(select Country,round ((last_Reported_value - First_Reported_Value)/(First_Reported_Value)/(last_reported_value_year-First_Reported_Value_Year)*100,3) as change_in_alcohol_related_causes
from SDR_alcohol_related_causes)a  where change_in_alcohol_related_causes is not null
select * from alcohol_related_causes

select a.country,change_in_expenditure,change_in_alcohol_related_causes from expenditure as a join alcohol_related_causes as b on a.country=b.country;
```

The correlation between expenditure and alcohol related health cases

	country	change_in_expenditure	change_in_alcohol_related_causes
1	Ireland	2.361	-1.681
2	Estonia	4.779	-0.6
3	Turkmenistan	4.412	-5.026
4	Greece	0	-1.91
5	Hungary	-1.515	-1.568
6	Croatia	-1.042	-1.426
7	The former Yugoslav Republic of Macedonia	-1.538	-1.062
8	Georgia	-15.385	-2.05
9	Austria	-0.98	-1.935
10	Italy	-1.818	-2.131
11	Iceland	-0.865	-2.422
12	Republic of Moldova	-5.385	-1.765
13	Azerbaijan	-2.797	-3.087
14	Sweden	-1.216	-1.714
15	Republic of Uzbekistan	-6.897	-0.843
16	Denmark	-3.009	-1.767
17	Tajikistan	-4.497	0.648
18	Norway	-2.07	-1.78
19	Kyrgyzstan	-10.256	-0.534
20	Ukraine	-2.703	2.514
21	Armenia	-2.841	-0.035
22	Kazakhstan	-10	3.116
23	Finland	-1.769	-1.611
24	Lithuania	-2.757	-0.634
25	Belarus	-2.879	5.124
26	United Kingdom of Great Britain and North...	-3.427	-1.067
27	Poland	-4.118	-0.853
28	Romania	-4.38	-0.549

b. if it has any correlation with the road accidents

```
create view [road_accident] as
Select *, Dense_rank() over (order by change_in_road_accident ) As RoadAccident_rank
from
(select Country,round ((last_Reported_value - First_Reported_Value)/(First_Reported_Value)/(last_reported_value_year-First_Reported_Value_Year)*100,3) as change_in_road_accident
from road_traffic_accidents)a  where change_in_road_accident  is not null
select * from road_accident

select a.country,change_in_expenditure,change_in_road_accident from expenditure as a join road_accident as b on a.country=b.country
```

The correlation between expenditure and road accident

	country	change_in_expenditure	change_in_road_accident
1	Estonia	4.779	0.363
2	Turkmenistan	4.412	-1.622
3	Greece	0	-8.089
4	Hungary	-1.515	-0.337
5	Croatia	-1.042	3.512
6	The former Yugoslav Republic of Macedonia	-1.538	-2
7	Georgia	-15.385	52.635
8	Austria	-0.98	-1.455
9	Italy	-1.818	91.667
10	Iceland	-0.865	-3.337
11	Republic of Moldova	-5.385	-1.15
12	Azerbaijan	-2.797	-2.264
13	Sweden	-1.216	-0.87
14	Republic of Uzbekistan	-6.897	-24.172
15	Denmark	-3.009	-2.531
16	Tajikistan	-4.497	-8.824
17	Kyrgyzstan	-10.256	-1.757
18	Ukraine	-2.703	-2.871
19	Armenia	-2.841	6.469
20	Kazakhstan	-10	-3.635
21	Finland	-1.769	0.533
22	Russian Federation	-3	-4.018
23	Lithuania	-2.757	0.594
24	Belarus	-2.879	-3.614
25	United Kingdom of Great Britain and North...	-3.427	-1.797
26	Poland	-4.118	-1.872
27	Romania	-4.38	-2.392

3. Analyze how the change in tax percentage through the years affected the expenditure, the number of alcohol related health causes

and number of road traffic accidents amongst the countries.

Change in tax affects on expenditure

```
create view [tax] as
Select *, Dense_rank() over (order by change_in_tax) as tax_rank
from
(select Country,round ((last_Reported_value - First_Reported_Value)/(First_Reported_Value)/(last_reported_value_year-First_Reported_Value_Year)*100,3) as change_in_tax
from Alcoholic_beverage_tax_WHO)a where  change_in_tax is not null

select*from [tax]

select a.country,change_in_expenditure,change_in_tax from expenditure as a join tax as b  on a.country=b.country;
```

Change in tax affects on expenditure in some countries

	country	change_in_expenditure	change_in_tax
1	Ireland	2.361	-4.714
2	Estonia	4.779	-4.118
3	Austria	-0.98	-5
4	Iceland	-0.865	-0.926
5	Sweden	-1.216	-0.694
6	Denmark	-3.009	-4.911
7	Norway	-2.07	-3.274
8	Finland	-1.769	-1.84
9	United Kingdom of Great Britain and Northern Irel...	-3.427	-0.932

Change in tax affects on alcohol related health cases

```
select a.country,change_in_alcohol_related_causes,change_in_tax from
alcohol_related_causes as a join tax as b on a.country=b.country;
```

	country	change_in_alcohol_related_causes	change_in_tax
1	Estonia	-0.6	-4.118
2	United Kingdom of Great Britain and Northern Irel...	-1.067	-0.932
3	Denmark	-1.767	-4.911
4	Iceland	-2.422	-0.926
5	Sweden	-1.714	-0.694
6	Norway	-1.78	-3.274
7	Germany	-2.12	-3.806
8	Finland	-1.611	-1.84
9	Ireland	-1.681	-4.714
10	Austria	-1.935	-5
11	France	-2.058	-0.98

Change in tax affects on road accidents

```
select a.country,change_in_road_accident,change_in_tax from road_accident as a join
tax as b on a.country=b.country
```

	country	change_in_road_accident	change_in_tax
1	Estonia	0.363	-4.118
2	Finland	0.533	-1.84
3	Sweden	-0.87	-0.694
4	United Kingdom of Great Britain and Northern Irel...	-1.797	-0.932
5	Germany	-2.723	-3.806
6	Austria	-1.455	-5
7	Denmark	-2.531	-4.911
8	Iceland	-3.337	-0.926

4.Using the above analysis, provide insights why some countries had an increase in road accidents & alcohol related causes while few had a decline?

Ans. Here during this analysis I found that change in expenditure is affecting on increase in road accidents on some countries like Estonia, Croatia and hungary.

Also change in tax is also affecting on accident and create health issues.

In dashboard we can see the directly affect.