Design-report-in-power-bi-desktop, Part 3

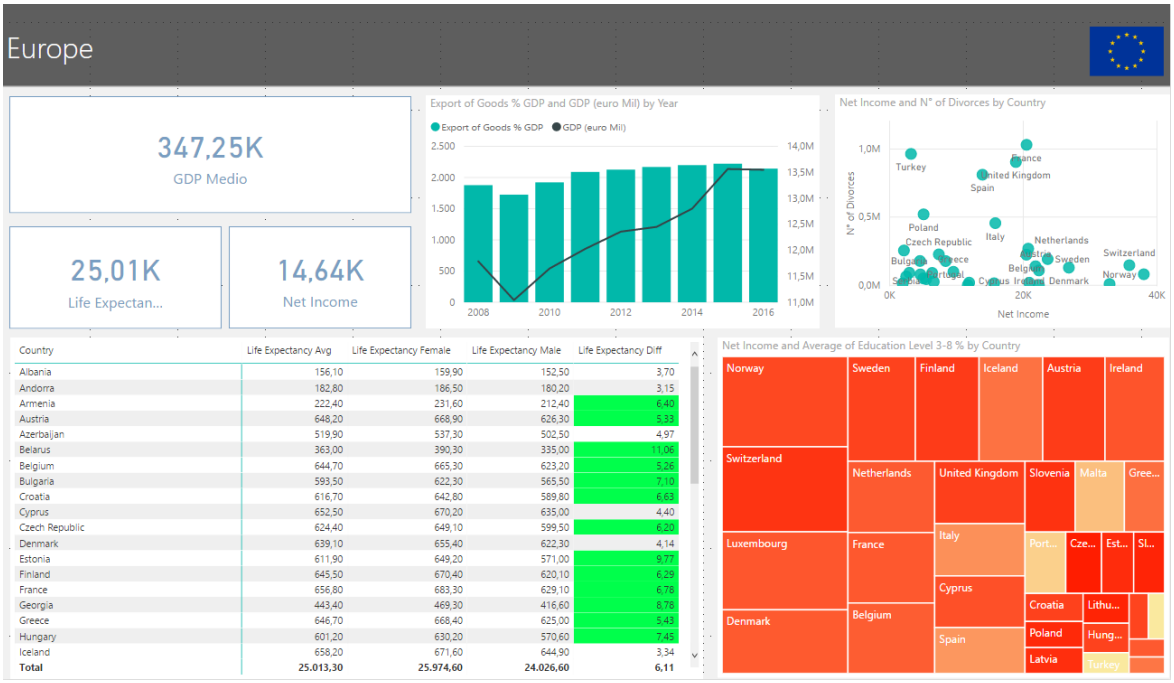
THE ESTIMATED TIME TO COMPLETE THE LAB IS 90 MINUTES

Sommario

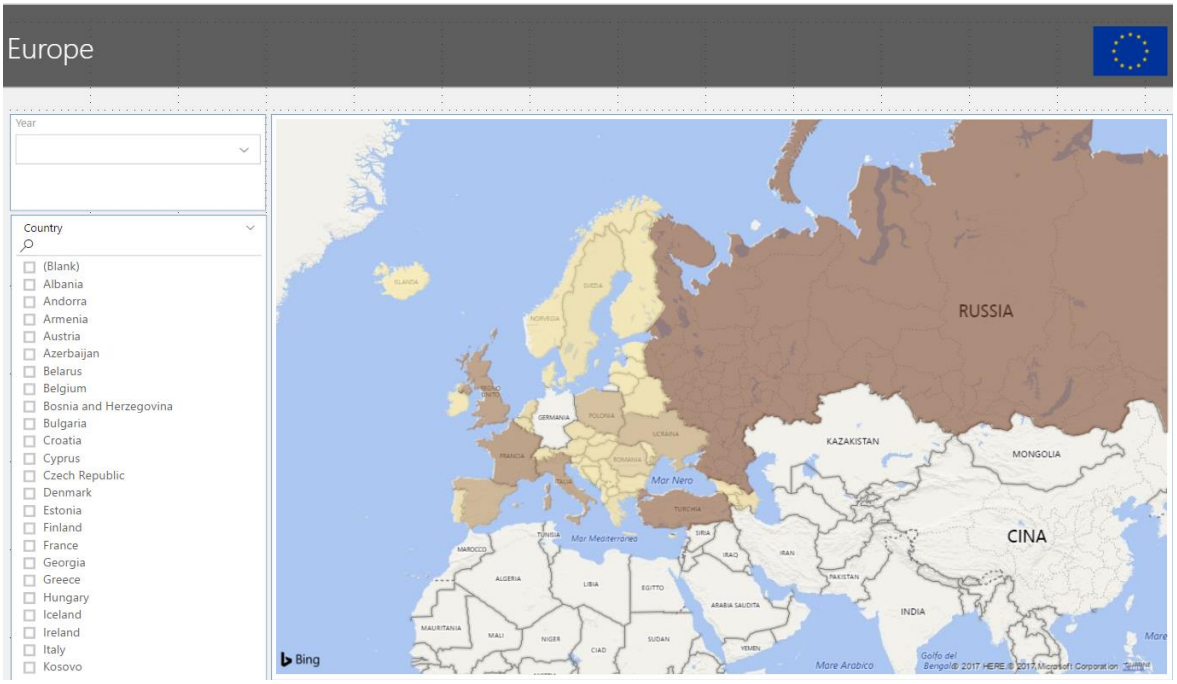
Overview

In questo hands-on avrete l'opportunità di lavorare con Power BI.
Per questo scopo analizzeremo i dati demografici ed economici degli stati dell'unione europea. Tali dati sono di dominio pubblico al seguente link http://ec.europa.eu/eurostat/data/database , verranno caricati in Power BI attraverso dei file Excel.

Il risultato sarà ottenere una dashboard con due fogli.



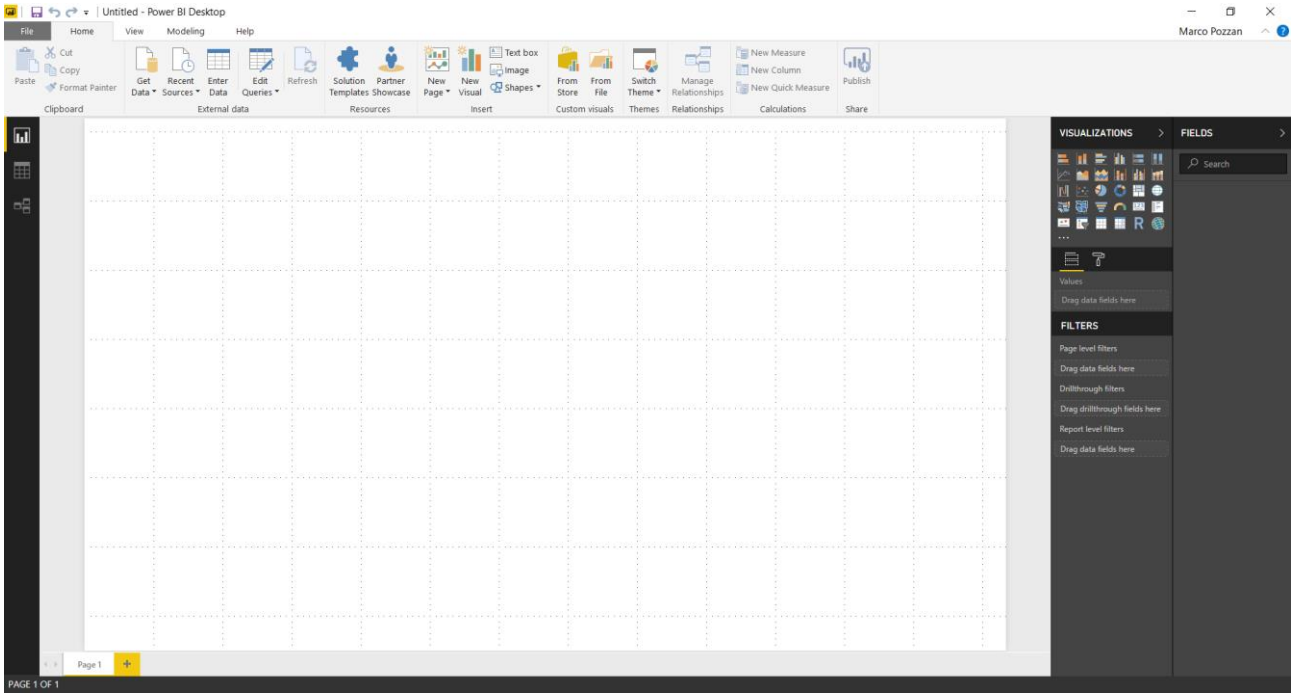
Country	Life Expectancy Avg	Life Expectancy Female	Life Expectancy Male	Life Expectancy Diff
Albania	156,10	159,90	152,50	3,70
Andorra	182,80	186,50	180,20	3,15
Armenia	222,40	231,60	212,40	6,40
Austria	648,20	668,90	626,30	5,33
Azerbaijan	519,90	537,30	502,50	4,97
Belarus	363,00	390,30	335,00	11,06
Belgium	644,70	665,30	623,20	5,26
Bulgaria	593,50	622,30	565,50	7,10
Croatia	616,70	642,80	589,80	6,63
Cyprus	652,50	670,20	635,00	4,40
Czech Republic	624,40	649,10	599,50	6,20
Denmark	639,10	655,40	622,30	4,14
Estonia	611,90	649,20	571,00	9,77
Finland	645,50	670,40	620,10	6,29
France	656,80	683,30	629,10	6,78
Georgia	443,40	469,30	416,60	8,78
Greece	646,70	668,40	625,00	5,43
Hungary	601,20	630,20	570,60	7,45
Iceland	658,20	671,60	644,90	3,34
Total	**25.013,30**	**25.974,60**	**24.026,60**	**6,11**



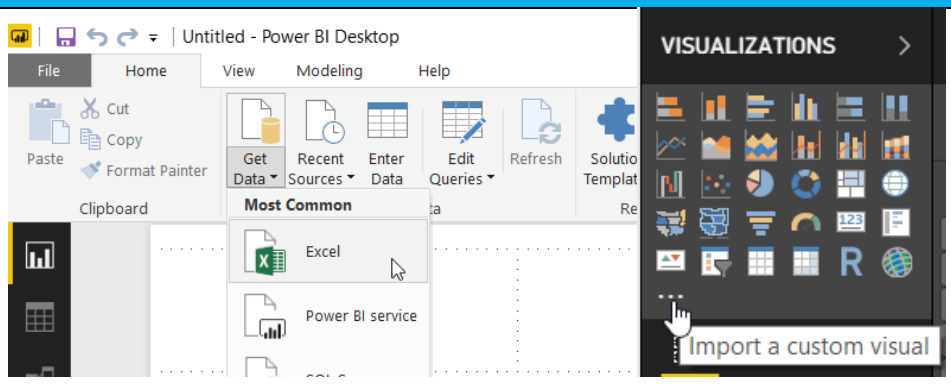
Power BI

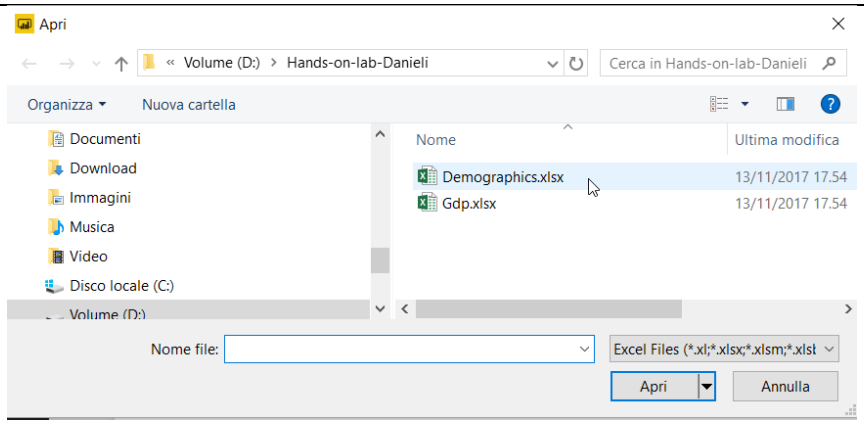
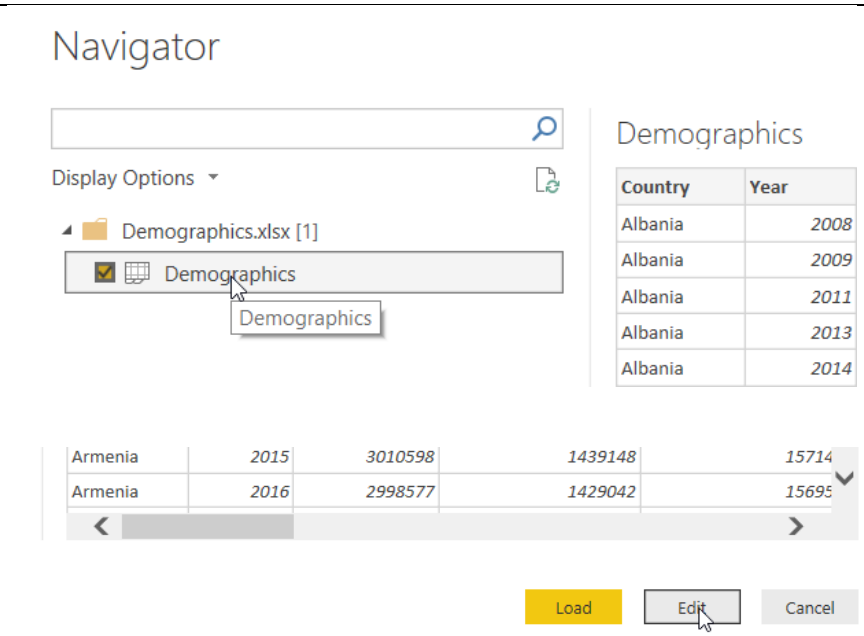
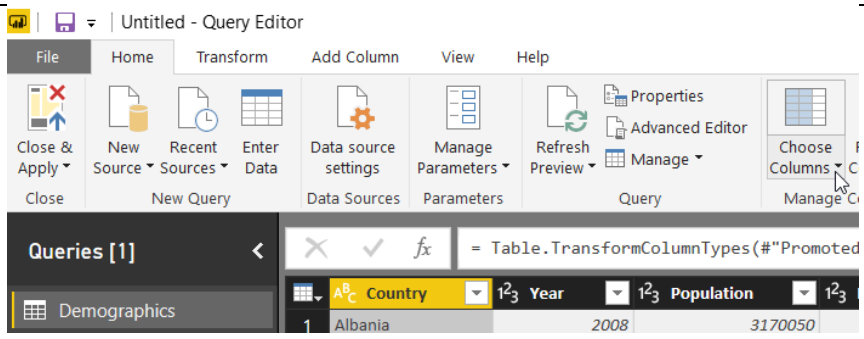
Scaricare dall'indirizzo https://www.microsoft.com/en-us/download/details.aspx?id=45331 l'ultima versione di Power BI Desktop ed installare l'applicazione.

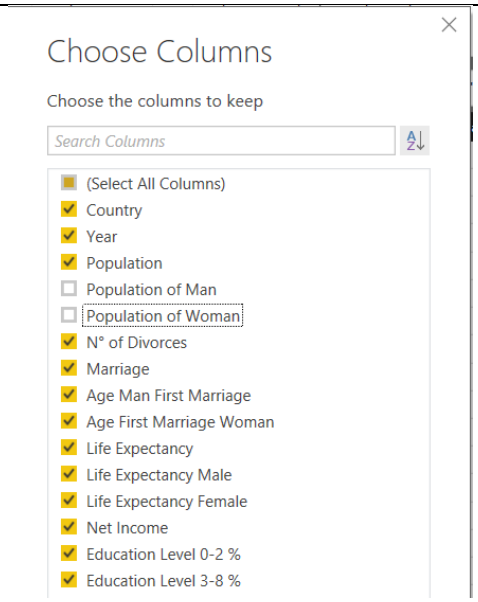
Successivamente aprire l'applicazione e salvare subito il progetto con il nome Hands + il numero della postazione nella cartella fornita con all'interno i vari file per completare l'esercitazione.



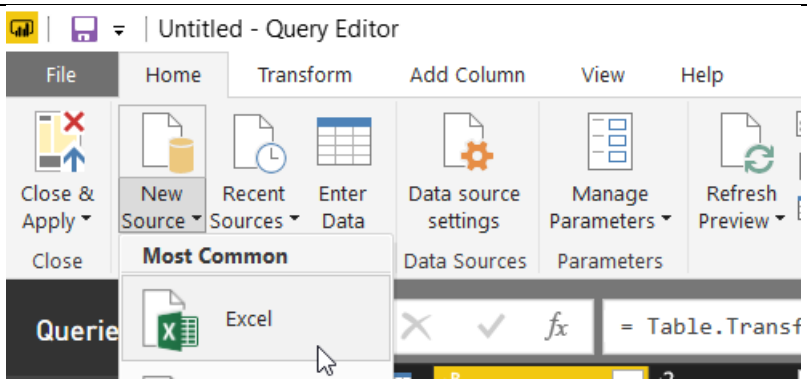
Data manipulation

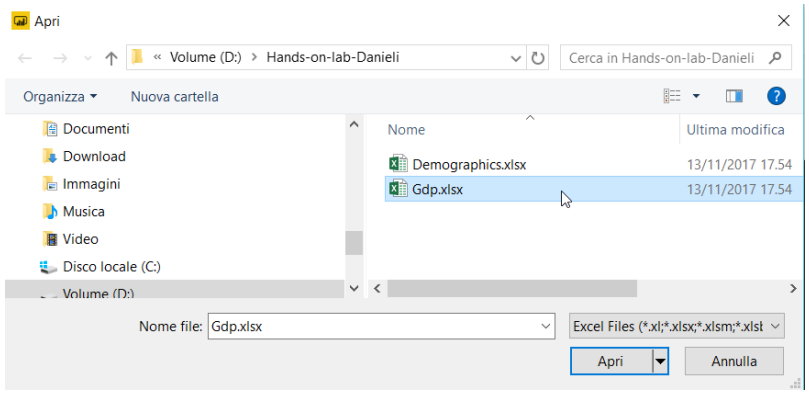
Azione	Screenshot
Aggiungere i due file excel. Possiamo caricare solo un file alla volta. Quindi incominciamo con scegliere il file Demographincs.xlsx	

	
Selezionare il tab "demographics" del file e premere il tasto "edit" per applicare le modifiche al file prima di caricarlo nel modello.	
Selezionare l'icona "Choose Columns" e Deselezionare le due colonne Population of Man/Woman	

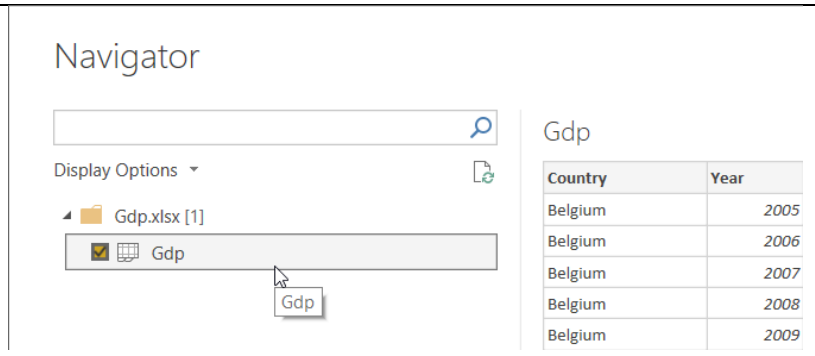


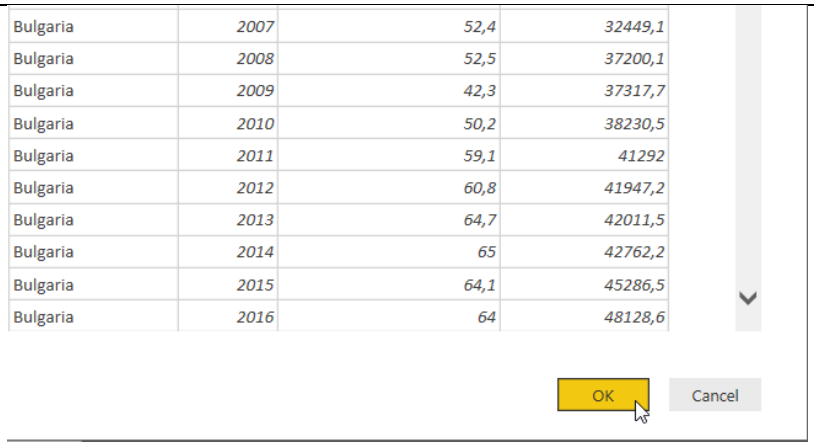
Ora ci si trova nell'ambiente di Power Query e senza uscire cliccare sull'icona "New Source" e aggiungere il file excel rimanente. Quindi carichiamo il file Gdp.xlsx





Selezionare il tab "Gdp" del file e premere il tasto "Ok" per applicare le modifiche al file prima di caricarlo nel modello.

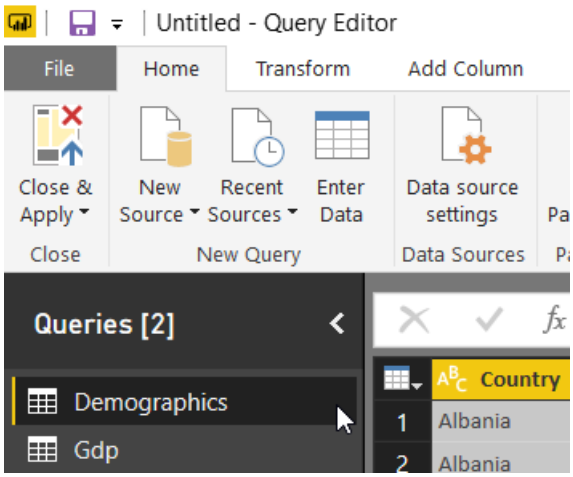


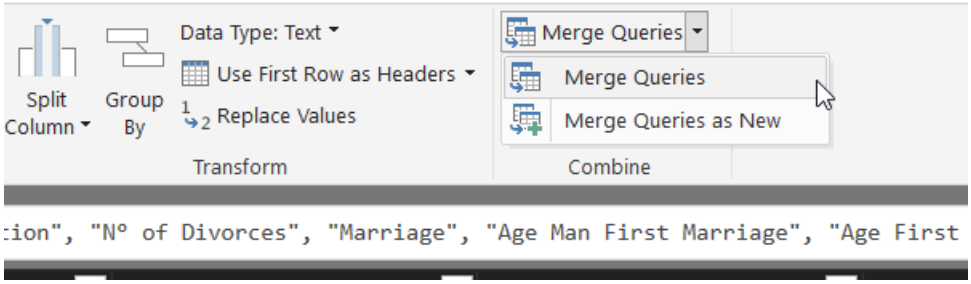


Bulgaria	2007	52,4	32449,1
Bulgaria	2008	52,5	37200,1
Bulgaria	2009	42,3	37317,7
Bulgaria	2010	50,2	38230,5
Bulgaria	2011	59,1	41292
Bulgaria	2012	60,8	41947,2
Bulgaria	2013	64,7	42011,5
Bulgaria	2014	65	42762,2
Bulgaria	2015	64,1	45286,5
Bulgaria	2016	64	48128,6

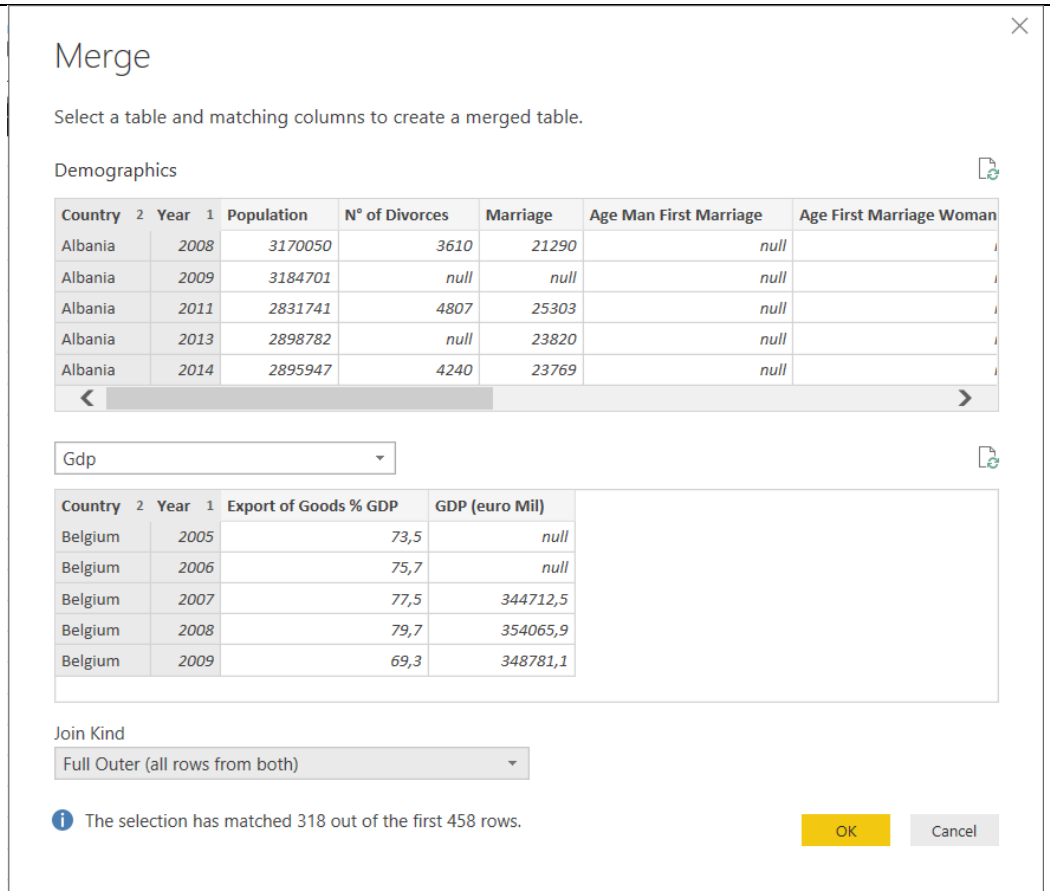
OK Cancel

Creare una relazione tra le due sorgenti dati caricate. Selezionare la query Demographics e cliccare sull'opzione "Merge query" in alto a destra

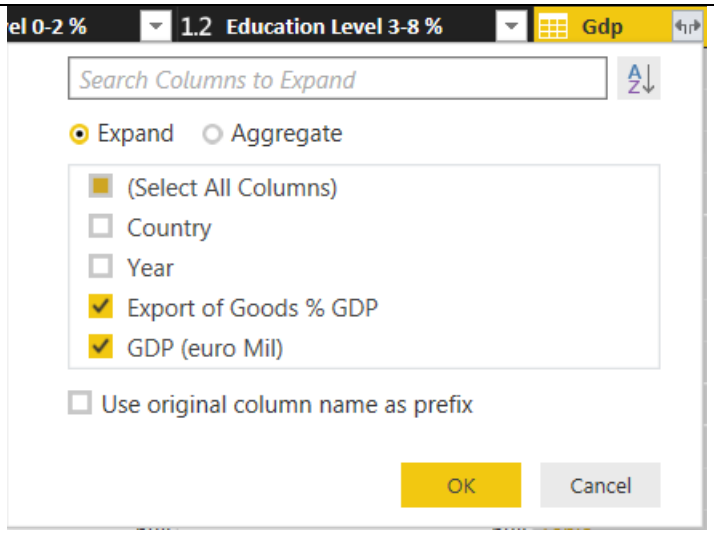




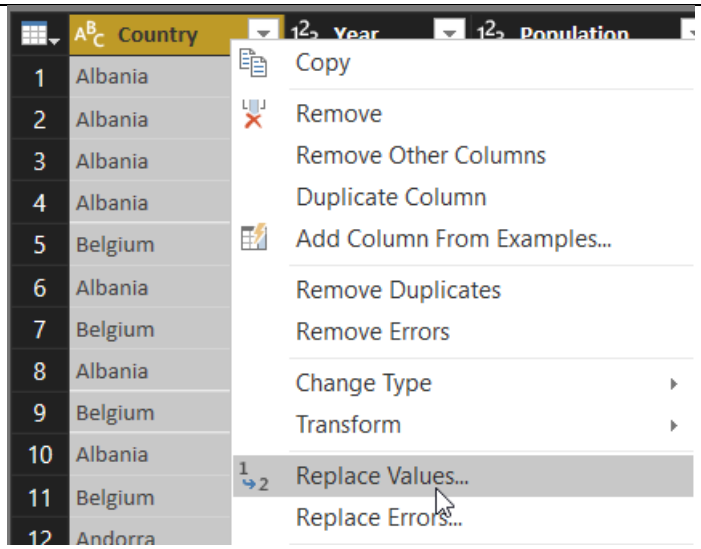
Selezionare “Year” e “Country” da entrambi i data source. Attraverso il tasto CTRL premuto e l’utilizzo del mouse si selezionano i cambi da entrambe le tabelle in modo tale che l’ordine dei campi sia lo stesso. Infine scegliere il tipo di associazione che deve essere “Full Outer”.



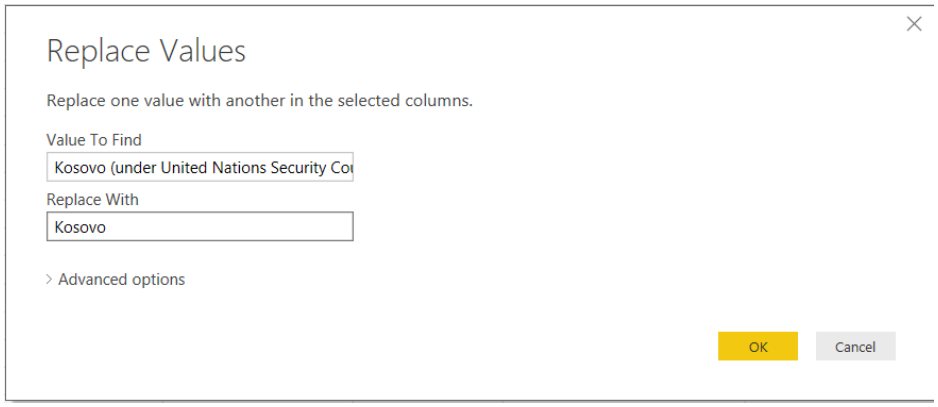
Nella tabella “demographics” compare una colonna Gdp con due frecce di espansione  . Scegliere tutti i campi tranne “Country” e “Year”. Deselezionare la spunta “use originale column name as prefix”



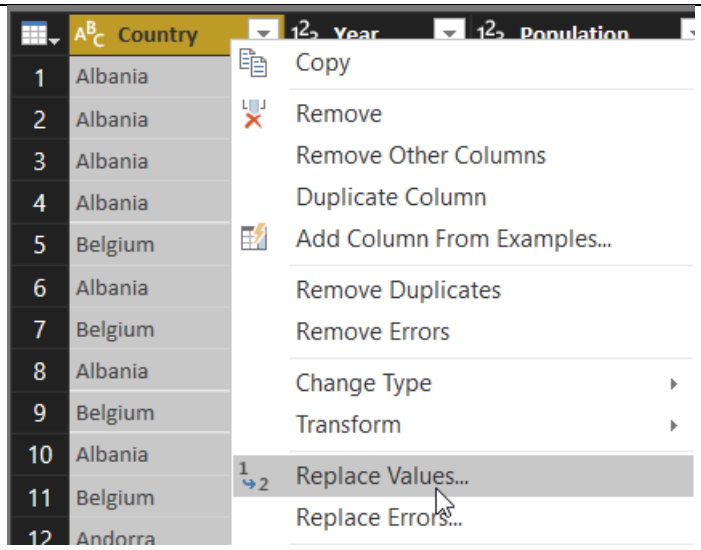
Cliccare con il tasto destro sulla testata della colonna “Country” e scegliere la voce “Replace Values”

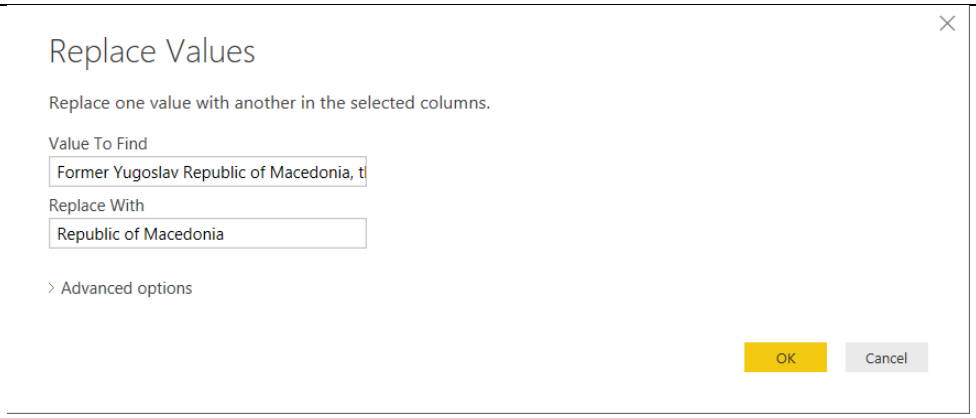
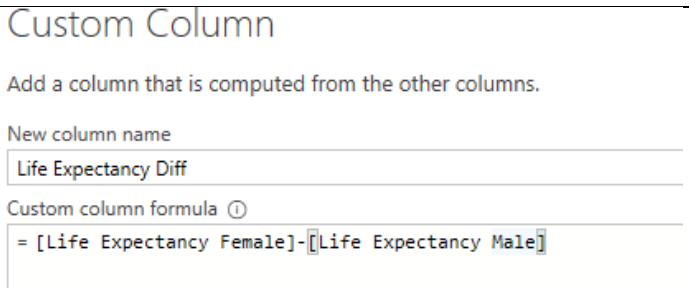
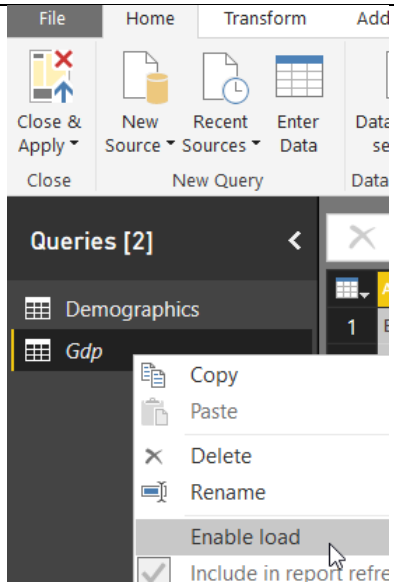
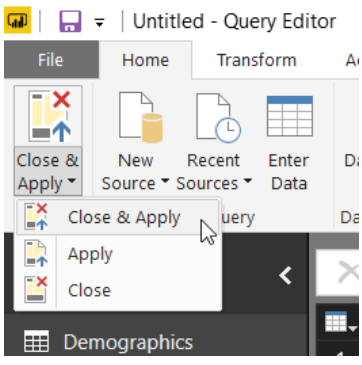


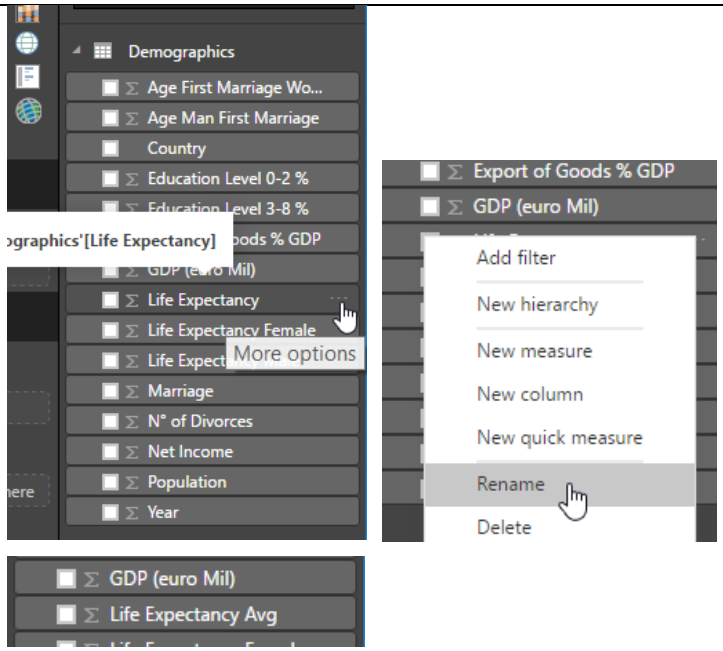
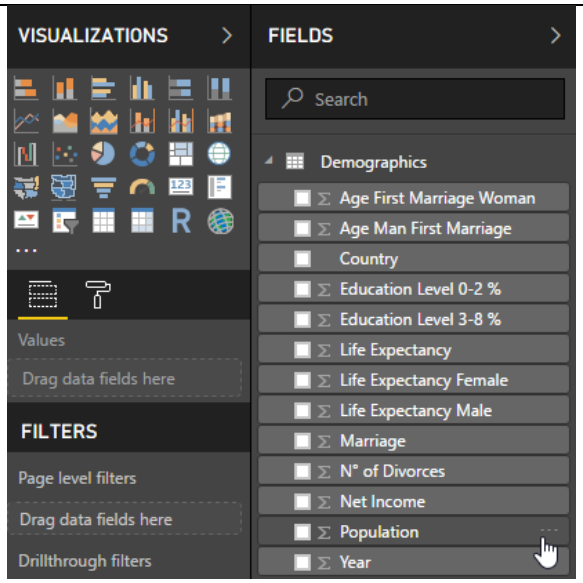
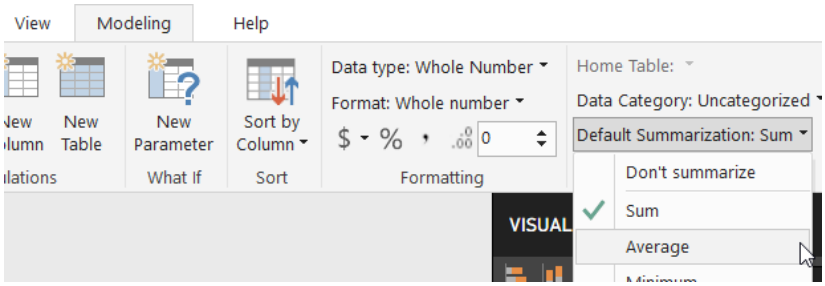
Rimpiazzare il valore di “Kosovo (under United Nations Security Council Resolution 1244/99)” con “Kosovo”



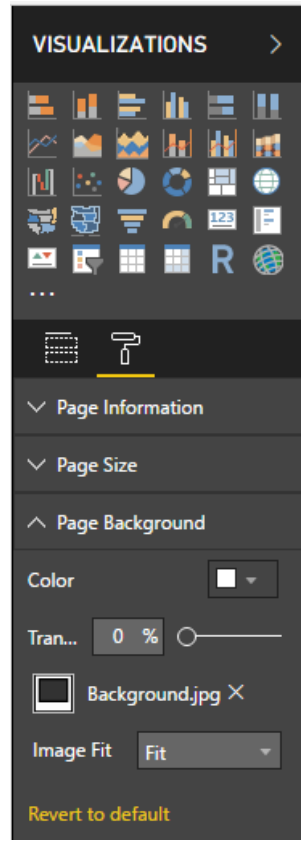
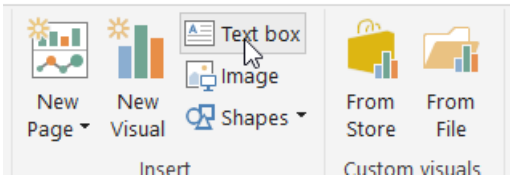
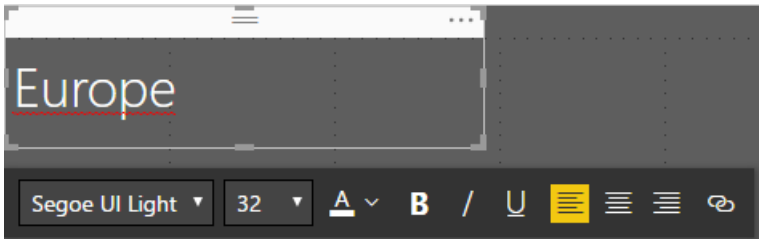
Cliccare con il tasto destro sulla testata della colonna “Country” e scegliere la voce “Replace Values”

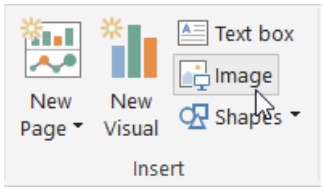
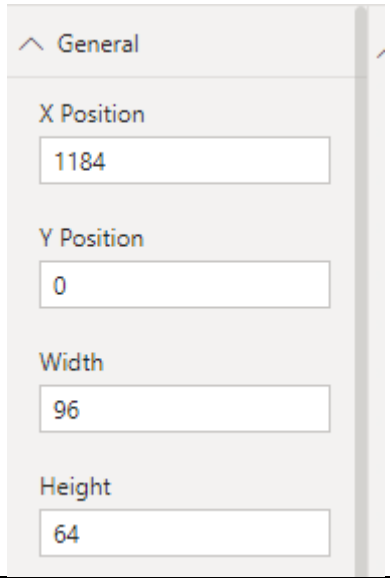
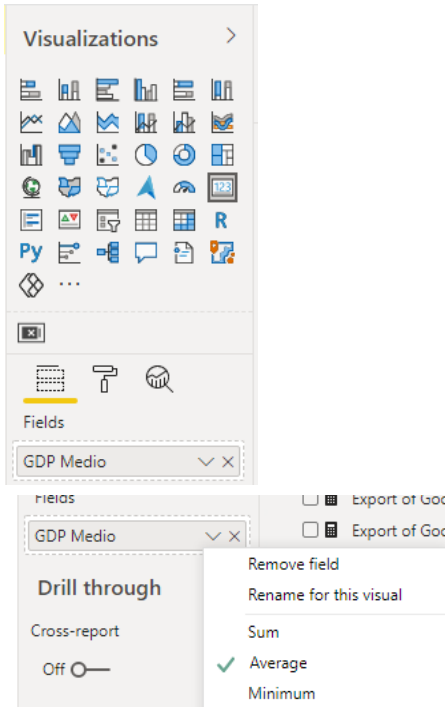


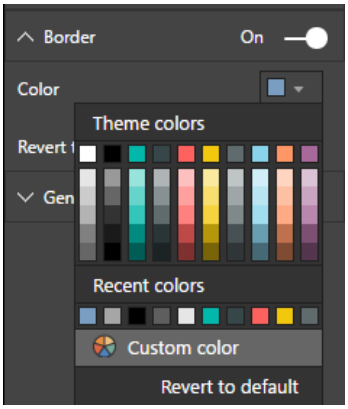
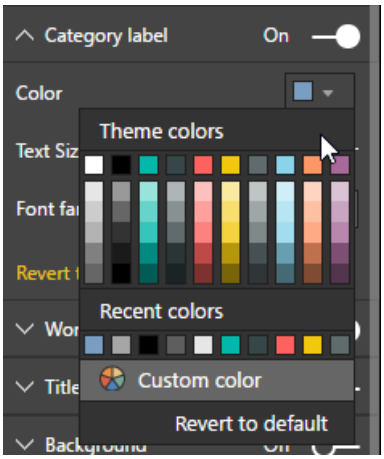
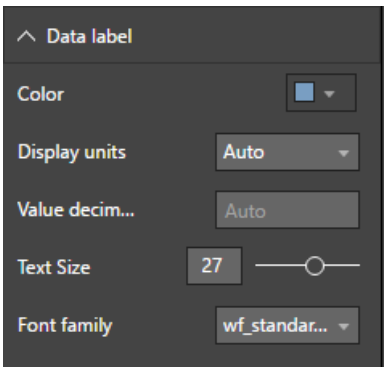
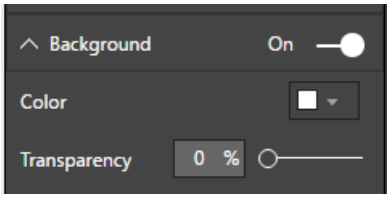
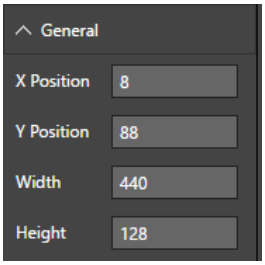
Rimpiazzare il valore di “Former Yugoslav Republic of Macedonia, the” con “Republic of Macedonia”	
Creare una colonna custom per la Life Expectancy Diff che è la differenza tra Life Expectancy Female e Life Expectancy Male. Assicurarsi che il tipo di colonna sia di tipo decimal.	
Cliccare sulla query della “Gdp” e selezionare “Enabled load” per non caricare le query nel modello. Selezionare l’icona “Close & Apply” che permette di applicare le trasformazioni impostate e caricare i dati nel modello. In automatico ci troveremo nella schermata iniziale di Power BI Desktop da dove procederemo ad inserire le misure.	 

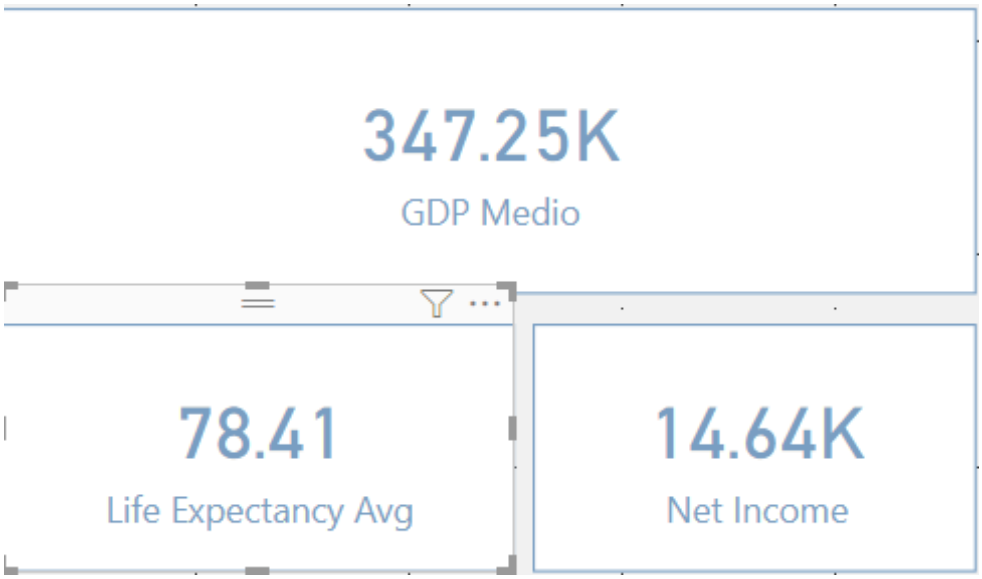
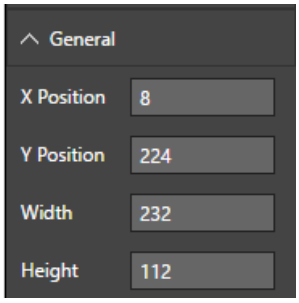
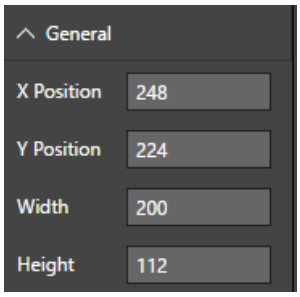
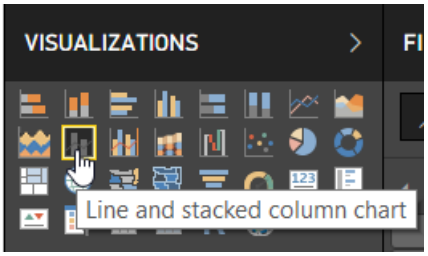
Rinominare il campo “Life Expectancy” in “Life Expectancy Avg” cliccando sui tre punti accanto al nome originale e sezionando “Rename” e scrivendo il nuovo nome del campo.	
Cambiare la funzione di aggregazione mettendo invece che la “sum” la “average” per le seguenti misure: **-Population** **-Life Expectancy Avg** **-Life Expectancy Female** **-Life Expectancy Male** **-Life Expectancy Diff** **-Net Income**	 

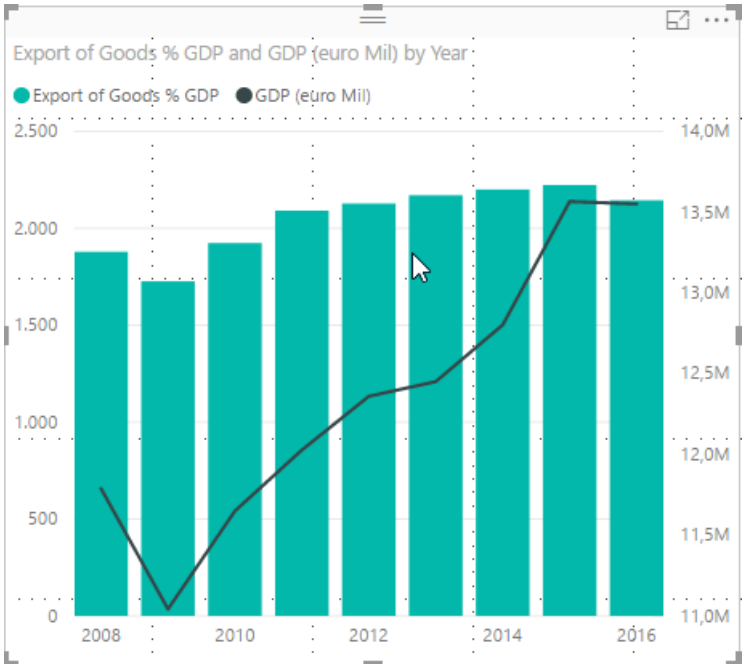
Data visualization : Europe

Azione	Screenshot
Caricare un immagine di sfondo per caricare la barra del titolo Background.jpg e impostare a Fit la proprietà “image Fit” Sotto rinominare la tab “Page1” con “Europe”	
Inserire una TextBox in cui scrivaimo “Europe” con carattere 32 di colore bianco. Nelle impostazioni generali inserire 184 come “width” e “height” 56 e come “Xposition” 0 e “Yposition” 0	 

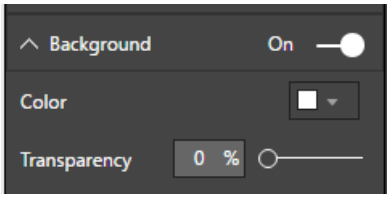
Inserire un'immagine. Es. europe-flag.png	 
Nelle impostazioni generali inserire 96 come "width" e "height" 64 e come "Xposition" 1184 e "Yposition" 0	
Inserire un chart di tipo "Card" e selezionare il campo GDP (euro Mil) e cambiare in media la funzione di aggregazione. Rinominare con Gdp Medio che finirà sul Fields.	

Nella parte del colore del “border” inserire il seguente colore 799EC2 su “Custom color”	
nella parte del colore del “category label” inserire il seguente colore 799EC2	
Nella parte del colore del “data label” inserire il seguente colore 799EC2	
E selezionare come background il bianco con livello di trasparenza 0%	
Seguire queste impostazioni per il posizionamento del riquadro	

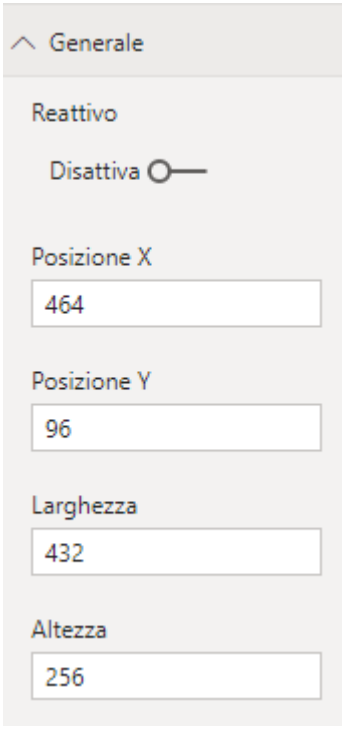
Ripetere la stessa operazione per Life Expectancy Avg e Net Income e disporli nel seguente modo Posizione Life espectancy Posizione Net Income	  
Inserire un grafico combinato con Year, GDP (euro Mil) e Export of Goods %.	



Nella parte di formatting selezionare come background il bianco con livello di trasparenza 0%



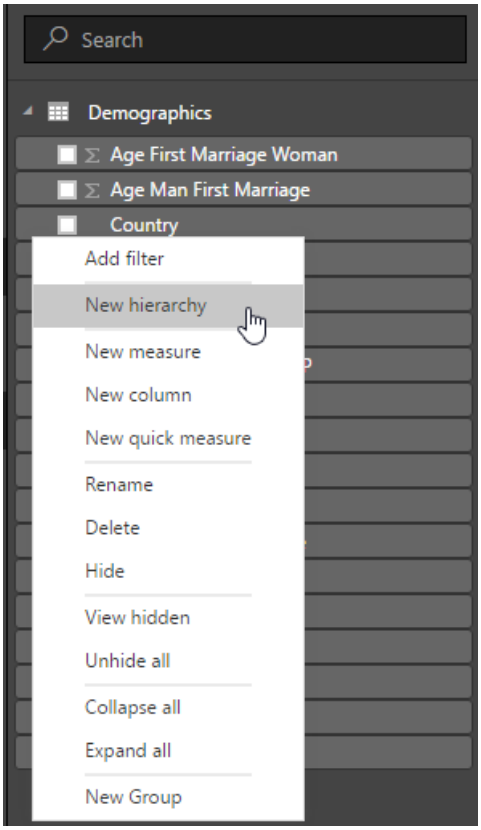
Seguire queste impostazioni per il posizionamento del riquadro



Creare una dimensione di drill.

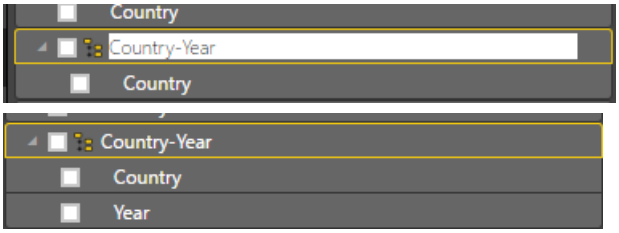
Country-Year

Per fare questo cliccare con il tasto destro sul campo “Country” e scegliere New Hierarchy

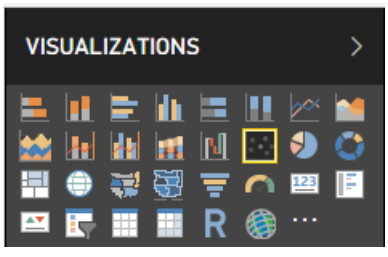


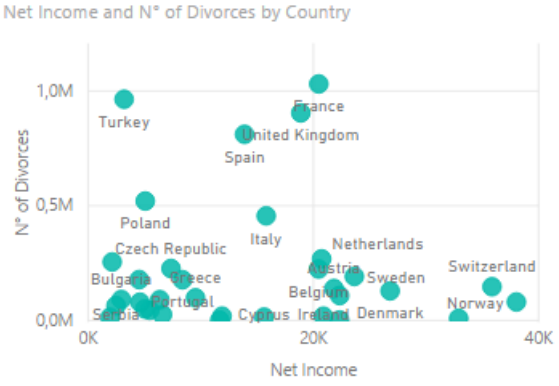
Rinominiamo facendo doppio click sul nome della gerarchia in “Country-Year”

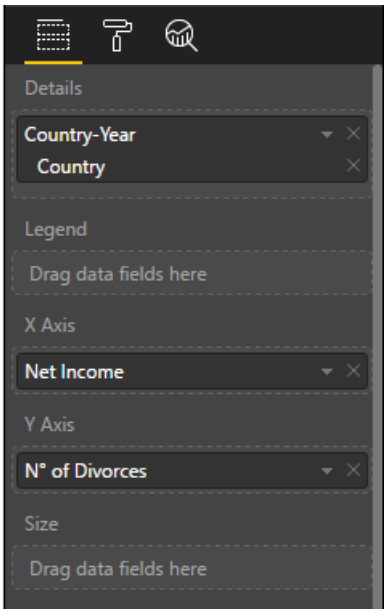
Trascinare il campo “year” sopra la gerarchia appena creata



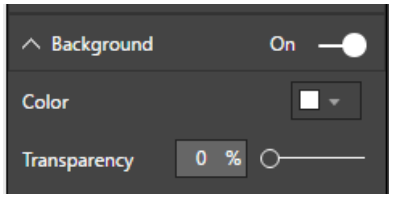
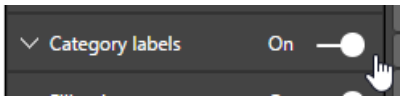
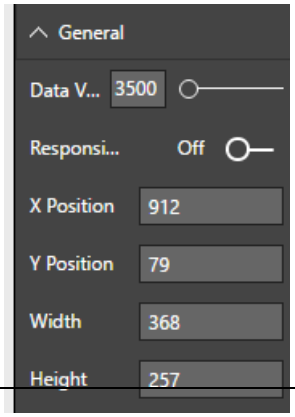
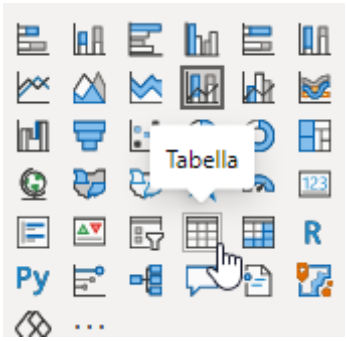
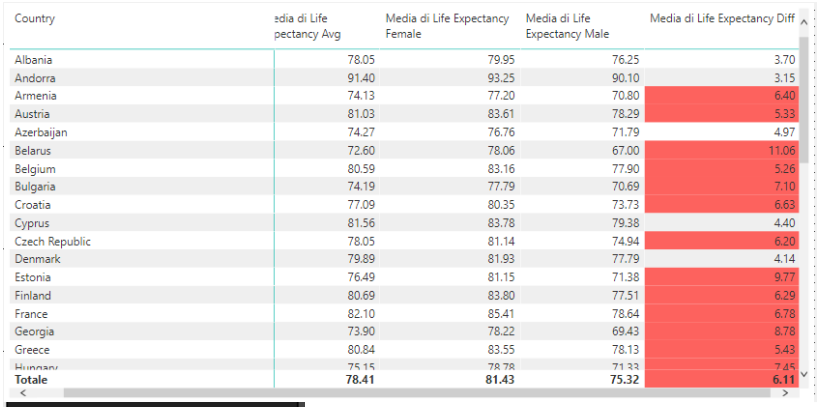
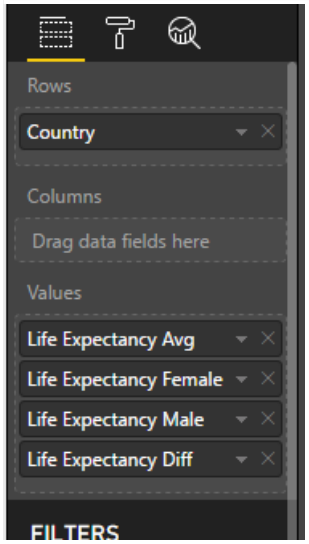
Inserire un grafico a dispersione con la dimensione di drill appena creata, l’avg del “N° of Divorce” e il net income



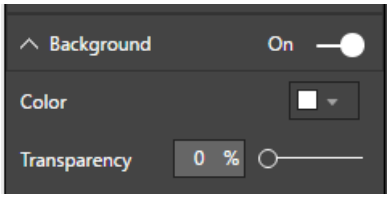




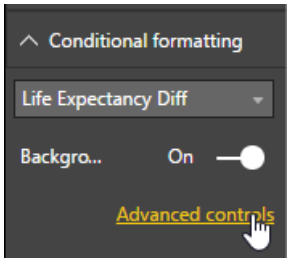
Nella parte di formatting

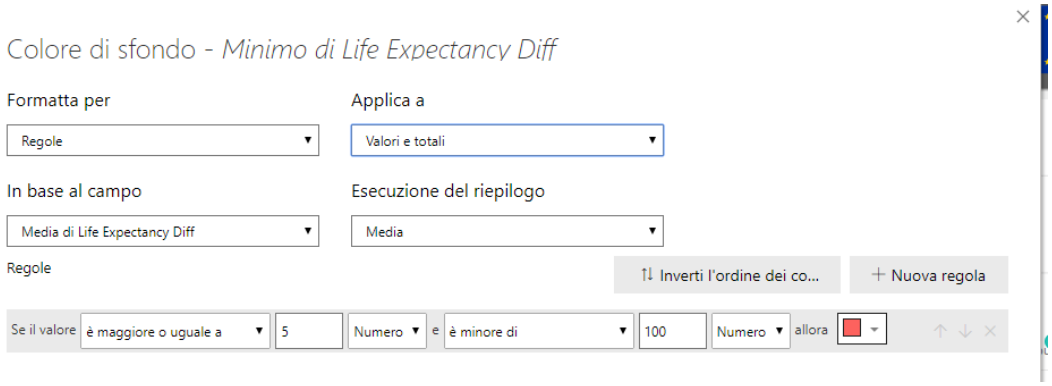
selezionare come background il bianco con livello di trasparenza 0% E abilitiamo il "category label"	  
Inserire una tabella con la dimensione country, life expectancy Female, life expectancy Male e la Life expectancy Diff appena creata. La tabella deve essere posizionata con coordinate Posizione X = 8 ,Posizione Y = 360, Larghezza = 760 e Altezza = 360 Nella parte di formatting selezionare come background il bianco	  Country / Media di Life Expectancy Avg / Media di Life Expectancy Female / Media di Life Expectancy Male / Media di Life Expectancy Diff Albania 78.05 79.95 76.25 3.70 Andorra 91.40 93.25 90.10 3.15 Armenia 74.13 77.20 70.80 6.40 Austria 81.03 83.61 78.29 5.33 Azerbaijan 74.27 76.76 71.79 4.97 Belarus 72.60 78.06 67.00 11.06 Belgium 80.59 83.16 77.90 5.26 Bulgaria 74.19 77.79 70.69 7.10 Croatia 77.09 80.35 73.73 6.63 Cyprus 81.56 83.78 79.38 4.40 Czech Republic 78.05 81.14 74.94 6.20 Denmark 79.89 81.93 77.79 4.14 Estonia 76.49 81.15 71.38 9.77 Finland 80.69 83.80 77.51 6.29 France 82.10 85.41 78.64 6.78 Georgia 73.90 78.22 69.43 8.78 Greece 80.84 83.55 78.13 5.43 Totale 78.41 81.43 75.32 6.11 

con livello di trasparenza 0%



Entrare nelle propietà della Life Expectancy Diff e modificare l'espressione del colore di sfondo.

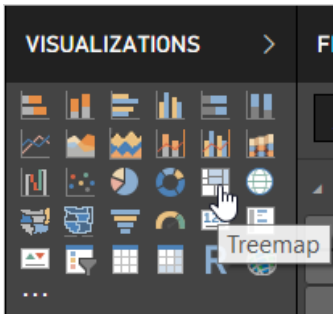
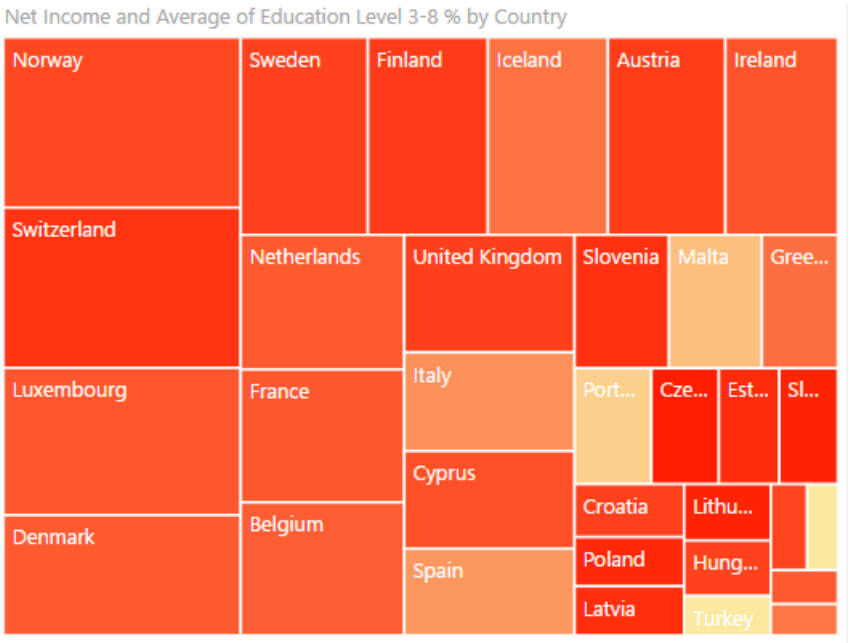
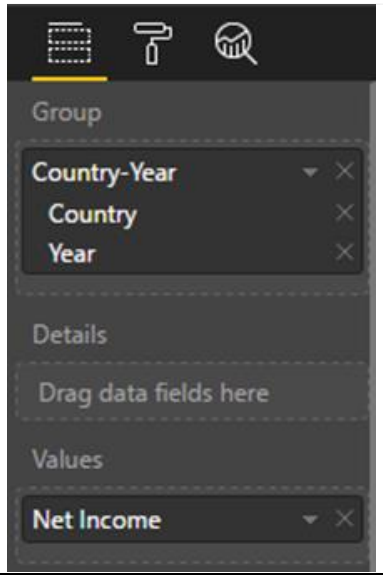


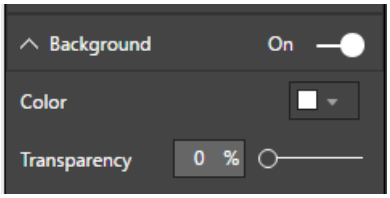


Es.

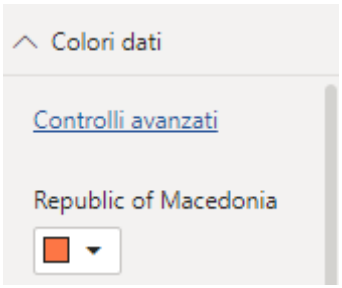
Se la avg([Life Expectancy Female])-avg([Life Expectancy è maggiore di >5 e minore di 100 allora metti Green

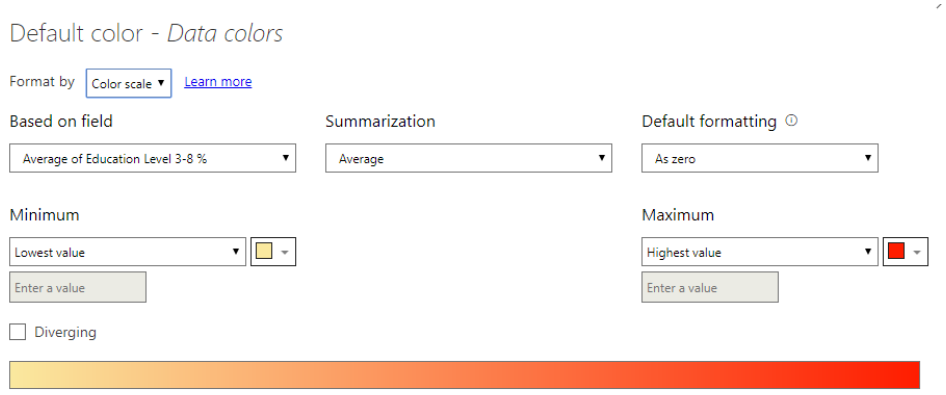
Country	Life Expectancy Avg	Life Expectancy Female	Life Expectancy Male	Life Expectancy Diff
Albania	156,10	159,90	152,50	3,70
Andorra	182,80	186,50	180,20	3,15
Armenia	222,40	231,60	212,40	6,40
Austria	648,20	668,90	626,30	5,33
Azerbaijan	519,90	537,30	502,50	4,97
Belarus	363,00	390,30	335,00	11,06
Belgium	644,70	665,30	623,20	5,26
Bulgaria	593,50	622,30	565,50	7,10
Croatia	616,70	642,80	589,80	6,63
Cyprus	652,50	670,20	635,00	4,40
Czech Republic	624,40	649,10	599,50	6,20
Denmark	639,10	655,40	622,30	4,14
Estonia	611,90	649,20	571,00	9,77
Finland	645,50	670,40	620,10	6,29
Former Yugoslav Republic of Macedonia, the	600,30	616,90	584,10	4,10
France	656,80	683,30	629,10	6,78
Total	**25.013,30**	**25.974,60**	**24.026,60**	**6,11**

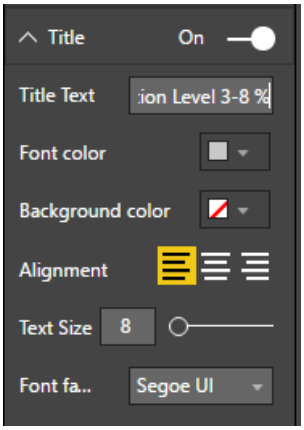
Inserire una “Tree Map” con la dimensione “Country-Year” Nella parte di formatting selezionare come background il bianco con livello di trasparenza 0%	  

<table>
<tr>
<td></td>
<td> 
</td>
</tr>
<tr>
<td>Nelle proprietà del chart andare su “Data colors” e modificare la misura con cui viene colorata la mappa in Avg([Education Level 3-8 %])

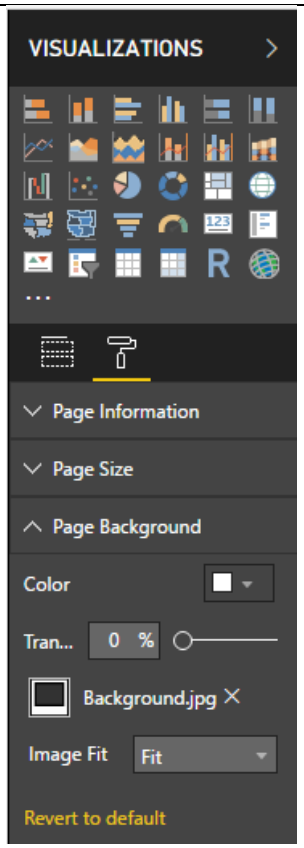
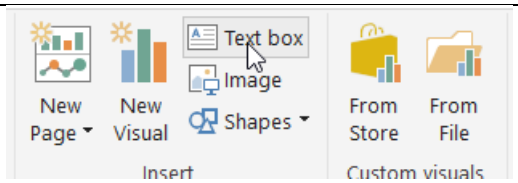
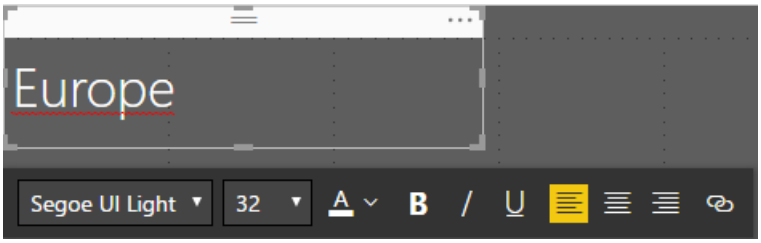
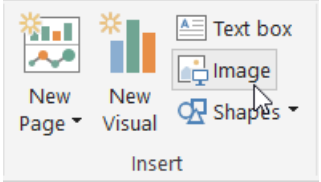
Nella parte di Data colors andare nel link “controlli avanzati” così si apre la finestra della formattazione condizionale. Poi selezionare come titolo “Life Expectancy by Education Level 3-8 %”

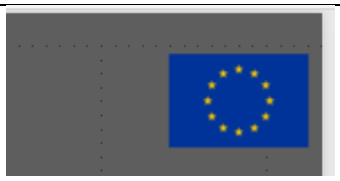
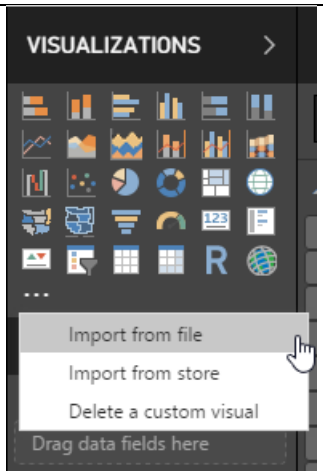
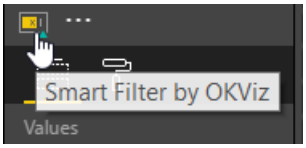
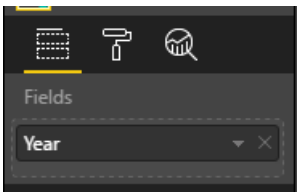
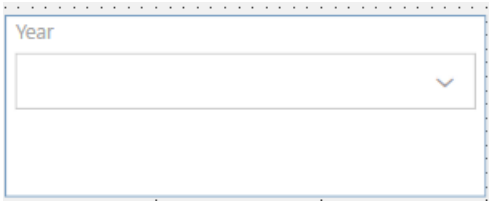
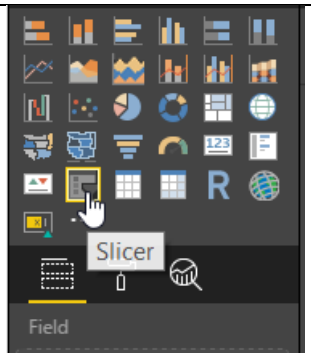
Impostare come colore minimio il seguente valore e come valore massimo # FAE99F il seguente valore #FF1D00</td>
<td> 

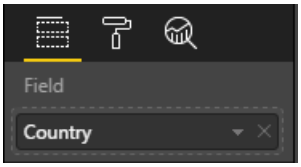


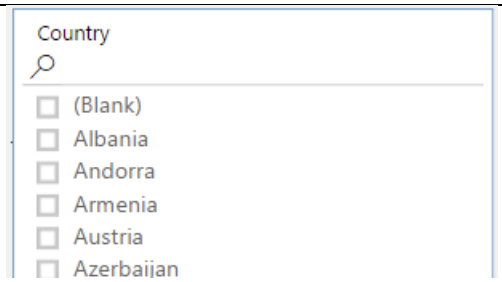

</td>
</tr>
</table>

Data visualization : Europe Geo

Azione	Screenshot
Creare un nuovo foglio cliccando sul + e rinominandolo in “Europe Geo”	
Caricare un immagine di sfondo per caricare la barra del titolo Background.jpg e impostare a Fit la proprietà “image Fit”	
Inserire una TextBox in cui scriviamo “Europe” con carattere 32 di colore bianco. Nelle impostazioni generali inserire 184 come “width” e “height” 56 e come “Xposition” 0 e “Yposition” 0	 
Inserire un’immagine. Es. europe-flag.png	

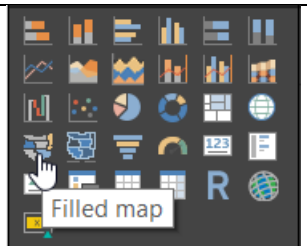
Nelle impostazioni generali inserire 96 come “width” e “height” 64 e come “Xposition” 1184 e “Yposition” 0	
Selezionare i puntini nella parte dei visual per caricare un filtro custom per l’anno. Scegliere importa da file e selezionare dalla cartella locale il file “smartFilter.pbiviz” Usare il nuovo oggetto visual per inserirlo nella pagina che stiamo costruendo Come campo per filtrare selezionare “Year” e impostare 2014	   
Inserire uno slicer e selezionare il campo “Country”	

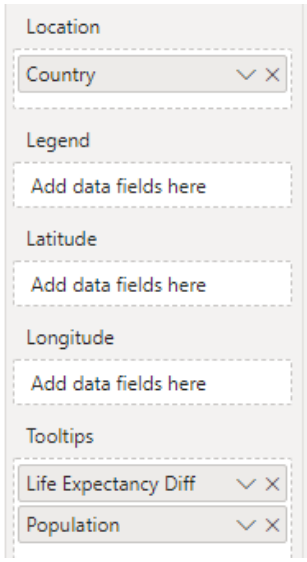


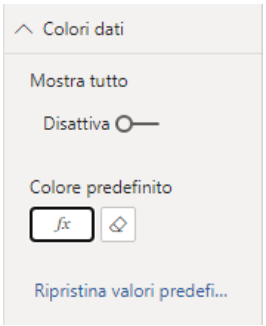


Inserire una “Filled Map” dagli oggetti visual

Inserire la “country” nella location e la “Population” e la “Life Expectancy Diff” nella sezione Tooltips







Nella parte “data colors” selezionare dai puntini a lato la “conditional formatting”. Successivamente scegliere “color scale” e il campo population con summarization “sum”