

M3 Practical Challenge:

Preparing and Visualizing Data with

Alteryx

The objective is to find the correlation between different variables related to wealth and equality of different countries in relation to the interchange of materials between that country and the rest of the world, for that trade Imports and Exports are used. In order to obtain this information, the GDP per capita PPP (Current international \$) and the Gini Index are going to be used. As these variables represent the wealth and the equality of the countries.

The GDP per capita PPP (Current international \$) is used to measure the Wealth of the country and is a measure that can be used to compare different countries, as it takes into consideration the population of the economy as well as the different in prices index.

The Gini index is used to measure the equality of the different economies, a 0 represents perfect equality, while an index of 100 implies perfect inequality.

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1. Importing the data

First, we need to get the data. For that I'm going to use the [World Bank Database](#) and the [UN comtrade Database](#). That way 2 .csv files are obtained.

<https://databank.worldbank.org/source/world-development-indicators#>

<https://comtrade.un.org/data/>

The First, World_Development_Indicator_Data.csv file include 1,090 rows of data from 217 different countries. The data is obtained for the last 5 years. Includes different indicators of GDP from each country.

The Second, comtrade.csv file include 1,443 rows of data from 170 different countries. The data is obtained for the last 5 years. Include information such as the volume of Imports and Exports from the different economies.

The input World_Development_Indicator_Data.csv is:

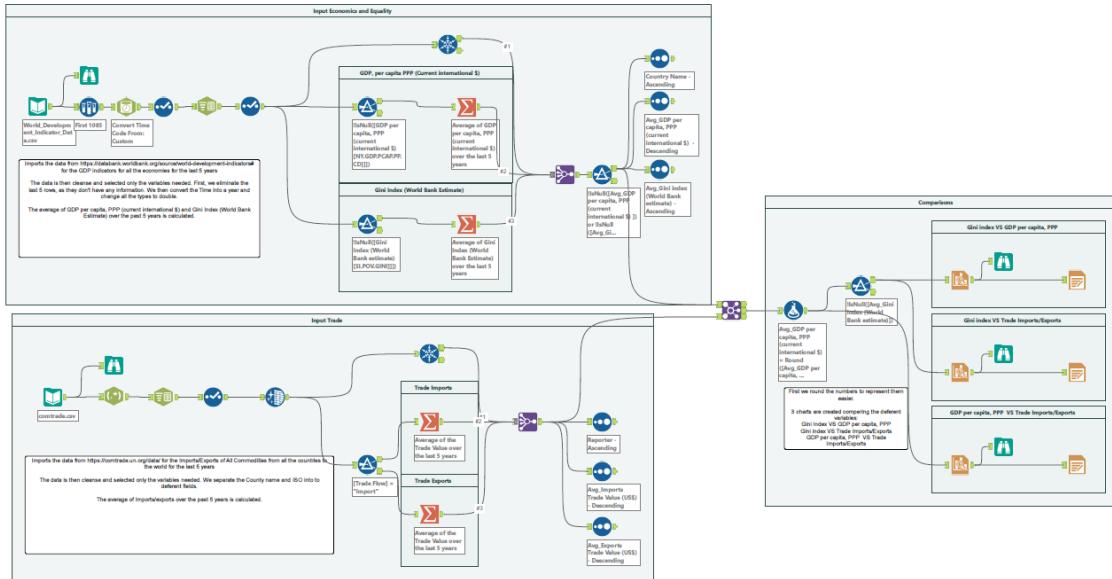
Results - Browse (34) - Input																	
Re	Time Code	Country Name	Cou...	GDP (constant 2010...)	GDP (current L...	GDP growth annual...	GDP per capita (constant...	GDP per capita (current...	GDP per capita. PPP (c...	GDP PPP Current L...	GDP (constant LCU)...	GDP current USD...	GDP per capi...	Actions	Metadata	Search	
1	YR2016	Afghanistan	AFG	20206278460.4766	1223916881100	2.86031420104542	34562.2449502325	509.220100495356	2057.6797755328	70097956093.2777	1223916881100	18017749073.0362	371.01538847	-			
2	YR2016	Albania	ALB	13454506599.4498	1474297120000	3.31480475341897	486613.260298	414240572595952	12291.8733779208	347398508537.7913	1399549871000	118612007974706	4861.0256229	-			
3	YR2016	Algeria	DZA	1958707417938	1751463490000	3.2000000006691	456473235097218	3946.4524245905	11626.1664161029	471383266569.55	18510633562700	160034162957.738	4830.1846835	-			
4	YR2016	American Sa...	ASM	551587443.946188	671000000	-1.6793891297709	11553.0491099747	12038.2469949023	-	644000000	671000000	9895.8977367	-				
5	YR2016	Andorra	AND	34094127051.704	261660000	3.70967806973986	33271.4923345624	37475.63150587526	-	2866679211.66628	44109.076719	-	-				
6	YR2016	Angola	AGO	101822392058.742	165459542.3600	-2.58024954469492	54851.7891219508	3506.0712818832	5678.99815818009	204874680066.819	1582062000000	10123851090455	3530.3109163	-			
7	YR2016	Antigua and...	ATG	131562161526.087	3878750000	5.49778845610642	33587.0715192552	15198.7429646112	19419.5807980	188286351.88954	3174650000	1436385105.18519	1391.89518558	-			
8	YR2016	Argentina	ARG	44634276008.163	8228159556500	-2.08032748377811	16207.200833909	12790.242744532447	23189.5274451329	895227528869.049	70647784860	557531376217.967	10239481347	-			
9	YR2016	Armenia	ARM	1151919865.0519	5067293500000	0.1999999995992599	1608042.1560296	3591.8285021639	11303.0673498177	31429192104.0402	4721448152300	10546135160.031	3917.3783414	-			
10	YR2016	Aruba	ABW	27509022365302	53407100000	2.0999995366985	34073.4906784914	28452.1706146796	38314.20635108881	3941353654.9151	3573111660	2983636871.5083	262327.77663	-			
11	YR2016	Australia	AUS	1348127369665.9	1660714000000	2.7706521973025	75022.6521064299	49971.13456129	11451967262039	1814666000000	120884699739.799	5572.6842255	-				
12	YR2016	Austria	AUT	42124622787.787	357607950000	1.89943716230463	40189.0343091987	45276.8314351693	53269.3062047537	351118250000	395568446431.038	4821.590528	-				
13	YR2016	Azerbaijan	AZE	56725409466.7867	40425200000	-0.06359845351251	2942.0734894257	3880.7387308955	14238.7841566188	140229738145492	28702800000	3786751095197.195	5813.3328933	-			
14	YR2016	Bahamas, The	BHS	10470928720909	11928500000	1.44403648889057	28366.0738695925	31563.3078695925	35558.0724973971	1297953054.1602	10720000000	11928500000	27706.513551	-			
15	YR2016	Bahrain	BHR	31756595744.8089	12120350000	3.55812811897778	87347623058399	22608.4525623673	47937.7090620549	63831285346.2079	11940480000	3234973404.2553	2227.835653	-			
16	YR2016	Bangladesh	BGD	16777136025571	17328619000000	7.11347821327269	55926.258891059	3920.1445072358	140156463513179	883538700000	22141518000.475	1061.997319	-				
17	YR2016	Barbados	BRB	4630500000	9660000000	2.4786988319133	320404056203515	16900.0428285822	15738.0786618241	455903785.70882	926100000	483000000	16202.020813	-			
18	YR2016	Belarus	BLR	59058702608.5201	9494900000	-2.52644643532364	7949.83210079551	5022.6264304091	17822.6065945418	168421397005.779	75531560000	47722567820.6675	615.7018659	-			
19	YR2016	Belgium	BEL	519566272160.416	43008530000	1.26668446092099	37238.7833211048	41984.103035656	49628.9629137518	550677647302.891	42197970000	47575958764.759	4585.033030	-			
20	YR2016	Belize	BZL	1554440096070.123	3576801757123	-0.0320105570477551	7348.58702677386	1087.28730538453	286607128128.51442	7207.0519379997	1072071211172	178930407.8561	4219.4470996	-			
21	YR2016	Benin	BEN	1233976539.6788	70523000000	3.33967342629693	639957.8665705209	1087.28730538453	2961.040419762	326848686002226	6957668000000	11821065852.1271	11349241009	-			
22	YR2016	Bermuda	BMU	5813872706263	6899911000	-0.85720630459205	106865.6297836448	78149.3523513514	492947386699118	623304000	6899911000	9006.161306	-				
23	YR2016	Bhutan	BTN	104042233057	145072799000	8.17000000000000	8527.733197947	2930.57492227006	10775.1903107625	6370.333000000	21970.292000000	2970.360641	-				
24	YR2016	Bolivia	BOL	20750301940299	23453310000	4.4290208303113	400.00000000000	3078436133721	8261240000000	6273617930732	44074300100	3394172193.5219	2425.593942	-			
25	YR2016	Bolivia and H...	BOL	18934602268.5509	29904460000	3.1498369156182	8708.55347376766	4994.6904038619	13194.325400999	44236770019169	2949554000	16913230693.9653	5591.5823430	-			
26	YR2016	Bolivia	BWA	16841399749.4829	170540435200	4.3037644002675	41569.8815081662	2743.93397430839	17117.27278833	3728.12915974263	89787394500	1564635089.458	7797.2105659	-			
27	YR2016	Brazil	BRA	2360773877887.59	62693280000000	-3.2759160732192	19291.3421078702	871039674430858	14451.1528421912	2939542130371368	3977162434300	1757500168991.49	10965.434367	-			
28	YR2016	British Virgin Is...	VGB	-	-	-	-	-	-	-	-	-	-	-	-		
29	YR2016	Brunel, Daruss...	BHR	13301457645.7646	157480000000	-2.477917183324	4320.7311424018	271540846535724	60867.291665747147	23613069085308	1813657500	11400854267.7108	3168.504761	-			
30	YR2016	Bulgaria	BGR	57117136565.4351	95130900000	3.82043543021177	13016097047049	7548.85500737534	20513.1009542	92776370000	5306694796.3801	3012.5112082	-				
31	YR2016	Burkina Faso	BFN	1394559235.061	760512300000	5.57597670574024	397508.95542803	608.209692501897	1981.129813531	35340351553.567	741209000000	12333631370.174	747.88661182	-			
32	YR2016	Burundi	BDI	230695568.07925	489710100000	-0.6002000054493	163213.062754946	282.193028464612	70460427137057	835351140.30498	1711778292660	299641046.32291	219.96140709	-			
33	YR2016	Cabo Verde	CPV	187608144.38247	165782176300	4.7057195027118	2765724.18947923	3130.9985246036	6482.7154971014	146898674600	166298674600	216298674600	3532.1601114	-			
34	YR2016	Cambodia	KHM	17019083925.375	8124861601783.9	6.8390606440585	2919388.16138021	1269.591489521	3733.2462620965	57917424641.1124	466027903748872	200167745.0153	1079.5059574	-			
35	YR2016	Cameroon	CMR	3515269406.3937	193448300000	4.6484615059476	630816.20899537	1364.32954020397	3524.43030412566	81741243200.7112	1509331255100	32643987595.3371	1469.1520220	-			
36	YR2016	Canada	CAN	18168279511.197	202553000000	1.00139441390405	55674042005117	4231.6037056606	4745.5853457244	167093666607.54	2010374175000	15279947190743	50314421667	-			
37	YR2016	Cayman Islan...	CYM	4091085500	32399768772937	64742.9208450506	74781.627315261	6848.507432413	4169238721351	4050576100	499489979.592	7510.711420	-				
38	YR2016	Central Africa...	CAF	163175255.63553	1081516000000	4.7503168412324	150452.55475096	402.191634097492	884495196541199	3861897992.35142	682706000000	18250418144.46194	359.60038474	-			

Results - Browse (34) - Input		Cell Viewer - 1,090 records displayed, 204 KB																		
Time Code	Country Na...	Cou...	GDP ...	GDP ...	GDP p...	GDP ...	GD...	GD...	GD...	GD...	GD...	GD...	GD...	GD...	GDP per capita (cu...	GDP per capita gro...	GDP per capita. PPP...	GDP. PPP (constant 20...	Gini index (World Bank estimate)...	
1 YR2016	Afghanistan	AFG	20206...	1222...	2,260...	34962...	5092...	205...	70097...	122...	1801...	571,07...	34562...	2449582325	-0,54141619595264	1981,11806850969	727552935476716	-		
2 YR2016	Albania	ALB	13465...	1472...	3,314...	486661...	4124...	122...	34739...	139...	1186...	4681,8...	511970,5879959105	3,48011700478816	12078,8007284137	3552646912,5920	33,7			
3 YR2016	Algeria	DZA	19587...	1751...	3,200...	456474...	3946...	118...	47138...	185...	1600...	4830,1...	431191,96734996	1,104571051569865	11624,3407087852	479567581153,623				
4 YR2016	American Sa...	ASM	55158...	6710...	-1,67...	11553...	1203...	-	-	-	-	644...	6710...	9895,8...	12038,2496994923	-1,561249491041551	-			
5 YR2016	Andorra	AND	34094...	2616...	3,709...	33271...	3747...	-	-	-	-	257...	2896...	44109...	33854,4887120771	4,4862156492207	-			
6 YR2016	Angola	AGO	10182...	1654...	-2,58...	54951...	3506...	756...	20437...	158...	1011...	35303...	577191,306296039	-5,1617654999985	7105,22643061091	21930669423,998				
7 YR2016	Antigua and...	ATG	13156...	3878...	5,497...	33587...	1519...	194...	18826...	317...	1436...	13918...	41036,600093102	4,43856923007127	1992,02657938504	1835538777,0446	-			
8 YR2016	Argentina	ARG	44634...	8228...	-2,08...	16207...	1279...	231...	88522...	706...	5575...	10239...	188760,95646864	-3,106838921464	2030,870052142	10108,0050570944	42			
9 YR2016	Armenia	ARM	11501...	5067...	0,199...	160804...	3591...	113...	31429...	472...	1054...	39173...	172530,95551896	-0,61329865496954	107042,297624792	31748,6875286513	32,5			
10 YR2016	Aruba	AWB	27509...	5340...	2,099...	34073...	2845...	383...	39413...	357...	2983...	26232...	50923,3854002765	1,58786785286513	37585,025792115	401788213433394				
11 YR2016	Australia	AUS	13481...	1660...	2,770...	75022...	497...	481...	11451...	181...	1208...	55728...	68560,34039443	1,1779070697076	47339,699213264	11659397553621	-			
12 YR2016	Austria	AUT	42124...	3576...	0,869...	40189...	523...	46026...	351...	3955...	12049...	40931,84640998601	0,89246919632097	526640177130768	465396242901901	273	30,8			
13 YR2016	Azerbaijan	AZE	56725...	6042...	-3,06...	28049...	3880...	142...	14022...	287...	3786...	58133...	61924974299000	-4,111749032482	14371,0227410902	138939773173,09				
14 YR2016	Bahamas, The	BHS	10470...	1192...	-1,444...	28066...	3156...	355...	20476...	158...	1011...	35303...	577191,306296039	-5,1617654999985	7105,22643061091	21930669423,998				
15 YR2016	Bahrain	BHR	31756...	1212...	5,359...	8747...	2260...	270...	631...	119...	3223...	22727...	478,000000000000	0,44468966996778	341548614490258	13482,13432,392				
16 YR2016	Bangladesh	BGD	16777...	8228...	-2,08...	16207...	1279...	231...	88522...	706...	5575...	10239...	188760,95646864	-3,106838921464	2030,870052142	10108,0050570944	42			
17 YR2016	Barbados	BRB	46305...	9660...	2,478...	3240...	1690...	157...	45990...	926...	4330...	16202...	33000,0965717040	1,59119586760888	44979114053,9199					
18 YR2016	Belarus	BEL	59058...	9494...	-0,27...	79498...	5022...	178...	16842...	126...	1901...	22727...	59930,1796951945	-2,4870981312483	17225,521791512	169342,102526663	25,3			
19 YR2016	Belgium	BEL	51955...	4300...	-1,266...	37239...	4198...	498...	55067...	421...	4757...	48580...	3795,105978263	0,75526891910284	48597,999962201	564633006598,071	27,6			
20 YR2016	Belize	BLZ	15544...	3756...	-0,03...	73485...	4955...	720...	26650...	270...	1789...	42194...	973134649706223	736,9395940656	2655035920,20673					
21 YR2016	Benin	BEN	12338...	7005...	-3,339...	639957...	1087...	296...	32686...	695...	1182...	11349...	64432,561447739	0,5251107314870	3004,80780499066	32196934262032				
22 YR2016	Bermuda	BMI	58138...	6899...	-0,65...	96562...	1068...	781...	49294...	623...	6899...	90062...	106855,87849327	0,39386919987983	763620,514142141	504853303,53627				
23 YR2016	Bhutan	BTN	21885...	1450...	8,127...	85627...	2930...	107...	7039...	630...	2158...	29707...	19692,861100344	6,83236705790798	10457244384538	79314735308061				
24 YR2016	Bolivia	BOL	26758...	2345...	-0,263...	40223...	3076...	820...	82736...	443...	3994...	24255...	21259,6959958201	2,7319737334468	7499,7727954141	90490079106099	45,3			
25 YR2016	Bosnia and H...	BH	18934...	2990...	3,149...	37065...	4994...	131...	44255...	294...	1691...	55915...	881,109629106325	4,46265363890475	130721323201285	44679455912,3048				
26 YR2016	Botswana	BWA	16841...	1705...	-4,303...	41569...	7243...	171...	37281...	897...	1564...	77972...	78976,5730470306	2,0134688116926	172604565424384	36972025427,1675				
27 YR2016	Brazil	BRA	22607...	6269...	-3,27...	19291...	8710...	144...	23930...	397...	1795...	10965...	30495,5608672002	-0,6941092530269	14256,1633954521	29792938326693	53,3			
28 YR2016	British Virgin...	VGB	19619...	4091...	-0,27...	3239...	64742...	7847...	841...	41692...	405...	4909...	75108...	65390,4062219807	1,849905164606	666395,510604135	4284664748,70455			
29 YR2016	Brunei Daruss...	BRN	13301...	1574...	-2,47...	43203...	2715...	608...	23631...	181...	1140...	31685...	37513,905279279	-3,6108986285825	56297,2267116869	25551541319,6116				
30 YR2016	Bulgaria	BGR	57111...	9513...	-0,65...	13016...	5028...	205...	42629...	927...	5380...	90062...	106855,87849327	0,39386919987983	7363620,514142141	504853303,53627	40,6			
31 YR2016	Burkina Faso	BFA	13945...	7605...	5,957...	397508...	6882...	198...	35340...	741...	1287...	747,88...	40761,216065050	2,91366558534006	189,295066063366	3694644338035338				
32 YR2016	Burundi	BDI	23069...	4897...	-0,60...	40233...	3076...	820...	82736...	443...	3994...	24255...	21259,6959958201	2,7319737334468	7499,7727954141	90490079106099	45,3			
33 YR2016	Cabo Verde	CPV	18760...	1657...	4,705...	27657...	3130...	648...	33538...	146...	1662...	35321...	312125,1952478701	3,4441334423975	6322,132449340400	344323272391304				
34 YR2016	Cambodia	KHM	17019...	8124...	6,939...	291938...	1269...	373...	57941...	460...	2001...	17075...	515284,16100325	2,572826363021196	3675,036916908925	5086339178,963				
35 YR2016	Cameroun	CMR	35152...	1934...	4,648...	63081...	1364...	352...	81471...	150...	3264...	14981...	308053,52977028	1,90101677443914	3405,051655813	4327759128,3801				
36 YR2016	Canada	CAN	18168...	2025...	1,001...	55674...	4231...	474...	16780...	201...	50214...	50940...	5104,592025954097	1,035842621231913	4674723402486315	17136690610928	32,7			
37 YR2016	Cayman Island...	CYM	46991...	4091...	-0,329...	3239...	64742...	7847...	841...	41692...	405...	4909...	75108...	65390,4062219807	1,849905164606	666395,510604135	4284664748,70455			
38 YR2016	Central African...	CAF	16317...	1081...	4,750...	150452...	4021...	884...	38616...	682...	1825...	35960...	23841,02117548	3,7227787403763	851,027671306351	40135588162666	-			

The input comtrade.csv is:

Results - Browse (12) - Input		Cell Viewer - 1,443 records displayed, 73 KB																			Actions									
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Re...	Cl...	Year	Per...	Pet...	A...	Is...	Trade...	Report...	Reporter...	Parth...	Z...	2n...	2n...	C...	M...	M...	Comm...	Commodity	Qty_U...	Qty_Unt...	Qty...	A...	Alt...	Alt...	Net...	Gross...	Trade Value (US\$)	CF...	FO...	W...
1 H5	2017	2017	0	0	1	Import	Albania - ALB	0	World-WLD	N...[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	TOTAL	All Commodities	1	No Quant.	0	N...[redacted]	[redacted]	[redacted]	[redacted]	5239013131	[redacted]	[redacted]	[redacted]	
2 H5	2017	2017	0	0	2	Export	8	Albania - ALB	0	World-WLD	N...[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	TOTAL	All Commodities	1	No Quant.	0	N...[redacted]	[redacted]	[redacted]	[redacted]	230134965	[redacted]	[redacted]	[redacted]	
3 H5	2017	2017	0	0	1	Import	12	Algeria - DZA	0	World-WLD	N...[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	TOTAL	All Commodities	1	No Quant.	0	N...[redacted]	[redacted]	[redacted]	[redacted]	46053015989	[redacted]	[redacted]	[redacted]	
4 H5	2017	2017	0	0	2	Export	12	Algeria - DZA	0	World-WLD	N...[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	TOTAL	All Commodities	1	No Quant.	0	N...[redacted]	[redacted]	[redacted]	[redacted]	46053015989	[redacted]	[redacted]	[redacted]	
5 H5	2017	2017	0	0	1	Import	40	Angola - AGO	0	World-WLD	N...[redacted]	[redacted]																		

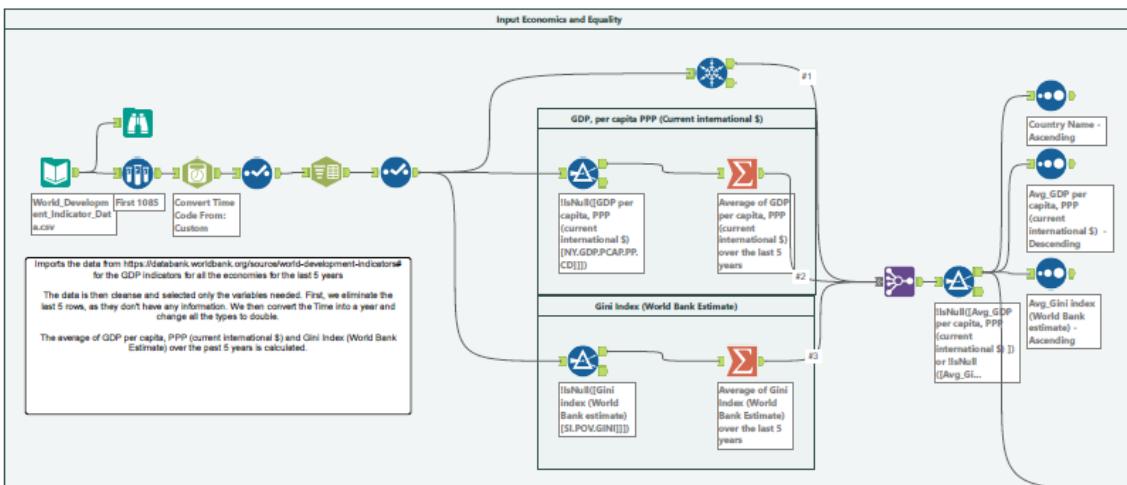
2. Create the WorkFlow



2.1. Organizing the imports

First, we need to get the imports and treat the data to prepare it.

2.1.1. Economics and Equality



Import the `World_Development_Indicator_Data.csv`, the first thing we need to do is to eliminate the last 5 rows, as they don't give any information, for that the Sample tool is used to get the first 1085 rows:

Record	Time Code	Country Name	Country Code	GDP (constant 2010 US\$) [NY.GDP.MKTP.KD]	GDP (current LCU) [NY.GDP.MKTP.CN]	GDP growth (annual %) [NY.GDP.MKTP.KD.ZG]	GDP per capita (constant LCU) [NY.GDP.PCAP.KD...]
1,053	YR2020	St. Vincent and the Grenadines	VCT	738257382.451724	2106140000	-2.7281243323491	16004.3083634528
1,054	YR2020	Sudan	SDN	85064646217.8212	406600290000	-1.5621617994276	812.60904750922
1,055	YR2020	Suriname	SUR	4146483053.22661	35449530000	-14.5	26157.695469407
1,056	YR2020	Sweden	SWE	580499441330262	495155300000	-2.81781957242536	432680.938177788
1,057	YR2020	Switzerland	CHE	692095426032.167	70224121000	-2.8702191142793	82027.60111196615
1,058	YR2020	Syrian Arab Republic	SYR	-	-	-	-
1,059	YR2020	Tajikistan	TJK	10940424055.7279	84579200000	4.4999951669761	793.458792015888
1,060	YR2020	Tanzania	TZA	56593929840.2031	143177087195800	2.0385826927847	2113188.41084664
1,061	YR2020	Thailand	THA	425391280429.981	1570302100000	-6.08722028505679	147096.12055020
1,062	YR2020	Timor-Leste	TLS	1154318177.28984	182100000	-8.70254848621823	1285.60331648264
1,063	YR2020	Togo	TGO	5733079524.08335	435985400000	1.7520074920752	507509.65987891
1,064	YR2020	Tonga	TON	-	-	-	-
1,065	YR2020	Trinidad and Tobago	TTO	19183685986.9933	14535000000	-7.83187649658342	101488.326827397
1,066	YR2020	Tunisia	TUN	47084697907.185	110295400000	-8.60031028272616	5702.6445155635
1,067	YR2020	Turkey	TUR	1284114130203.71	5047909498882.74	1.7566507625293	21382.3070827002
1,068	YR2020	Turkmenistan	TKM	-	-	-	-
1,069	YR2020	Turks and Caicos Islands	TCA	9248583000	-26.8000042915066	19560.1115760112	-
1,070	YR2020	Tuvalu	TUV	47944999.0311424	70992000	4.40000000000001	3984.05698778833
1,071	YR2020	Uganda	UGA	438269209.545	138840755718600	2.6759127391374	2766871.5802912
1,072	YR2020	Ukraine	UKR	130072807270.765	4194102000000	-4.02031711396206	5998.1711405867
1,073	YR2020	United Arab Emirates	AES	-	-	-	-
1,074	YR2020	United Kingdom	GBR	262812650645.44	2112039000000	-9.79024036173693	27367.41652966
1,075	YR2020	United States	USA	17709432714644.8	2091660000000	-3.4861395571143	5851.02371381944
1,076	YR2020	Uruguay	URY	46654650902.3328	225124015900	-5.85872124345026	47943.803455148
1,077	YR2020	Uzbekistan	UZB	84121862780.9361	58020316660000	1.64779170168759	389745.1532133
1,078	YR2020	Vanuatu	VUT	780029840.649562	9862690200	-9.23532846095011	208633.154484779
1,079	YR2020	Venezuela, RB	VEN	-	-	-	-
1,080	YR2020	Vietnam	VNM	20669420392.451	6293145E+15	2.9058355842084	39523710.7571208
1,081	YR2020	Virgin Islands (U.S.)	VIR	-	-	-	-
1,082	YR2020	West Bank and Gaza	PSE	12243746399.6968	15561300000	-11.4574515130457	2917.8877968317
1,083	YR2020	Yemen, Rep.	YEM	-	-	-	-
1,084	YR2020	Zambia	ZMB	28648141585.5413	354409000000	-3.01618890347348	7475.43129454836
1,085	YR2020	Zimbabwe	ZWE	15737548231.719	1074880263015.11	-7.99999999999999	1129.62553338249
1,086	[null]	[null]	[null]	[null]	[null]	[null]	[null]
1,087	[null]	[null]	[null]	[null]	[null]	[null]	[null]
1,088	[null]	[null]	[null]	[null]	[null]	[null]	[null]
1,089	[null]	[null]	[null]	[null]	[null]	[null]	[null]
1,090	[null]	[null]	[null]	[null]	[null]	[null]	[null]

Sample (38) - Configuration

Select Sample Type

- First N rows
- Last N rows
- Skip 1st N rows
- 1 of every N rows
- 1 in N chance to include each row
- First N% of rows

N = 1065

Group by column (optional)

Select all

Time Code

Country Name

Country Code

GDP (constant 2010 US\$) [NY.GDP.MKTP.KD]

GDP (current LCU) [NY.GDP.MKTP.CN]

GDP growth (annual %) [NY.GDP.MKTP.KD.ZG]

GDP per capita (constant LCU) [NY.GDP.PCAP.KD]

GDP per capita (current US\$) [NY.GDP.PCAP.CD]

GDP per capita, PPP (constant 2017 international \$)...

GDP, PPP (current international \$) [NY.GDP.MKTP.P...

GDP (constant LCU) [NY.GDP.MKTP.KN]

GDP (current US\$) [NY.GDP.MKTP.CD]

Once that's done, we used the DateTime tool to treat the Time Code field, the new created field is change into a string in order to split it. After that the Text to Column tool is used to split the field by the – to get only the year.

The image shows three separate windows from the Dataedo ETL tool:

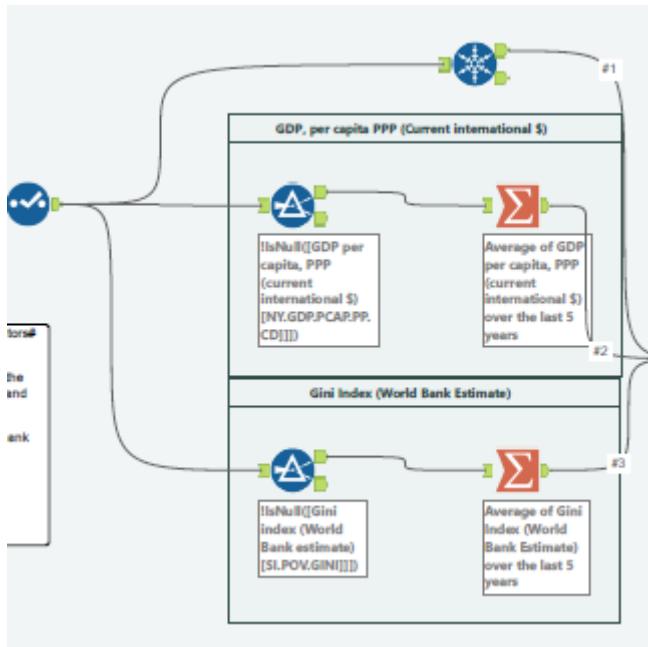
- DateTime (59) - Configuration**: A dialog for converting strings to dates. It shows options for selecting the format to convert (String to Date/Time format), specifying the new column name (DateTime_Out), and choosing the date format (e.g., dd/MM/yyyy). A preview section shows an example of 'YR2000' being converted to '2000-01-01'.
- Select (60) - Configuration**: A table editor showing a list of fields. The 'Time Code' field is selected and has its type changed to V_String. Other visible fields include Country Name, Country Code, GDP (constant 2010 US\$), and various GDP per capita metrics.
- Text To Columns (58) - Configuration**: A dialog for splitting columns. It shows the 'DateTime_Out' column selected for splitting into two columns. The 'Delimiters' dropdown is set to a dash ('-'). Advanced options like 'Leave extra in last column' and 'Output root name' (DateTime_Out) are also visible.

The Select tool is used to change the type of the variables into Double and to select the correct time.

This screenshot shows the 'Select (63) - Configuration' table editor. The 'Time' column (Field: DateTime_Out1) has its Type changed to Double. The 'Time' column is highlighted in yellow, indicating it is currently selected.

Field	Type	Size	Rename
DateTime_Out1	V_WString	10	Time
Country Name	V_String	254	
Country Code	V_String	254	
GDP (constant 2010 US\$)	Double	8	
GDP (current LCU)	Double	8	
GDP growth (annual %)	Double	8	
GDP per capita (constant 2010 US\$)	Double	8	
GDP per capita (current LCU)	Double	8	
GDP per capita growth (annual %)	Double	8	
GDP per capita, PPP (current international \$)	Double	8	
GDP per capita, PPP (constant 2010 US\$)	Double	8	
Gini index (World Bank estimate)	Double	8	
DateTime_Out	V_WString	10	
DateTime_Out2	V_WString	10	
Unknown	Unknown	0	

Now we calculate the average of the GDP per capita PPP (Current international \$) and the Gini Index (World Bank Estimate), for that the Summarize tool is used.



First, we use the Unique tool and use the Country Code field as key, that way we can get a list of all the different countries.



Record	Time	Country Name	Country Code	GDP (constant 2010 US\$) [NY.GDP.MKTP.KD]	GDP (current LCU) [NY.GDP.MKTP.CN]	GDP growth (annual %) [NY.GDP.MKTP.KD.ZG]	GDP per capita (constant LCU) [NY.GDP.PCAP.LC]	GDP per capita (current US\$) [NY.GDP.PCAP.CD]
1	2016	Aruba	ABW	275900283.63302	5340710000	2.1	34073409876	1245
2	2016	Afghanistan	AFG	20263716404766	1222916891100	-2.58034	24582244958	509
3	2016	Angola	AGO	10182829585742	16549565423600	-3.58005	54851798122	3501
4	2016	Albania	ALB	134540605364498	1472479120000	3.314805	48661160293	4124
5	2016	Andorra	AND	3409412705.51704	26169600000	3.709678	33271492335	3747
6	2016	United Arab Emirates	ARE	384223454261402	1311246800000	2.060964	15073825109	3814
7	2016	Argentina	ARG	446342760088.163	822819556500	-2.080328	16207200310	1271
8	2016	Armenia	ARM	11501996645019	506729350000	0.2	160094215603	3591
9	2016	American Samoa	ASM	551587443.94618	6710000000	-1.679189	1155384919	1201
10	2016	Antigua and Barbuda	ATG	1315622165.26087	3878780000	5.479788	33587071519	1515
11	2016	Australia	AUS	1348127369665.9	166071400000	2.770652	75022652106	4997
12	2016	Austria	AUT	421246227873.787	357607950000	1.989437	40189034309	4527
13	2016	Azerbaijan	AZE	56725409465.767	60425200000	-3.063598	2942073489	3888
14	2016	Burundi	BDI	2306955686.07925	489710100000	-0.60002	163213062755	282
15	2016	Belgium	BEL	51956271260416	430085300000	1.266686	37239783321	4198
16	2016	Benin	BEN	123389765396788	700523000000	3.339673	639957866357	1087
17	2016	Burkina Faso	BFA	13945359253.0061	760512300000	5.957977	397508895843	688
18	2016	Bangladesh	BGD	167711360258.571	1732863900000	7.113478	55628258891	1401
19	2016	Bulgaria	BGR	57117536545.351	9513059000	3.820435	1301609075	7541
20	2016	Bahrain	BHR	31756595744.6809	12120350000	3.558128	8374623806	2262
21	2016	Bahamas, The	BHS	10470928720.8009	11928500000	1.444036	28366.095739	3151
22	2016	Bosnia and Herzegovina	BH	18934602269.6059	29904460000	3.149807	8708583474	4994
23	2016	Belarus	BLR	59058702605.9201	94949000000	-2.526446	794932101	5022
24	2016	Belize	BLZ	1554440909.60123	3578609175.57123	-0.032011	7348587027	4856
25	2016	Bermuda	BMU	581387276.96263	689991100	-0.657206	96562629736	1066
26	2016	Bolivia	BOL	267583416940299	234533182000	4.263921	4022391415	3076
27	2016	Brazil	BRA	284200000000.08759	626000000000	-3.275917	1921342106	8711
28	2016	Barbados	BRD	4637500000	9652000000	2.476939	73404426562	1666
29	2016	Brunei Darussalam	BRN	13301457645.7648	1514000000	-3.477916	43203731142	2711
30	2016	Butan	BTN	2105959422.33004	145072779900	8.127034	6562783322	2630
31	2016	Bolivian	BVA	18411399749.4329	170564035200	4.307367	41669.681586	7241
32	2016	Central African Republic	CAF	16173532.63553	108151600000	4.750317	150423554751	402
33	2016	Canada	CAN	181682795111.97	202553300000	1.001394	55674404209	4231
34	2016	Switzerland	CHE	673624122427.837	655440984000	2.045186	82351351397	8301
35	2016	Channel Islands	CHI	[null]	[null]	[null]	[null]	8141
36	2016	Chile	CHL	269670710162.781	169537387722400	1.711089	8018023360411	1377
37	2016	China	CHN	952396327955.64	74639520548400	6.848762	53387623486	8141
38	2016	Cote d'Ivoire	CIV	36417018631.0283	2842387400000	7.179208	1218614569997	2012

2.1.1.1. Average GDP, per capita PPP (Current International \$)

Here we use the Filter tool, to eliminate all the rows that don't contain a value in the GDP, per capita PPP (Current International \$) field.

The screenshot shows the 'Filter (44) - Configuration' dialog. It has a 'Basic filter' section selected, with the condition 'GDP per capita, PPP (c... Is not null'. Below it is a 'Custom filter' section containing the expression '!IsNull([GDP per capita, PPP (current international \$) [NY.GDP.PCAP.PP.CD]])'.

Then we use the Summarize tool to calculate the Average of the GDP, per capita PPP (Current International \$) field by country getting the next result:

The screenshot shows the 'Summarize (42) - Configuration' dialog. In the 'Fields' section, the 'Time' field is selected. In the 'Actions' section, 'Country Name' is grouped by 'Group By', 'GDP per capita, PPP (current int...' is averaged, and 'Time' is counted.

Field	Action	Output Field Name
Country Name	Group By	Country Name
GDP per capita, PPP (current int...	Average	Avg_GDP per capita, PPP (current internatio...
Time	Count	#Years Averaged GDP per capita

Results - Summarize (42) - Output

3 of 3 Fields | Cell Viewer | 194 records displayed | ↑ ↓ |

Record	Country Name	Avg_GDP per capita, PPP (current internation...)	#Years Averaged GDP per capita
1	Afghanistan	2072.431364	5
2	Albania	13289.001185	5
3	Algeria	11709.816901	5
4	Angola	7000.993279	5
5	Antigua and Barbuda	20539.657605	5
6	Argentina	22195.086249	5
7	Armenia	12671.021278	5
8	Aruba	38241.073873	2
9	Australia	50159.38278	5
10	Austria	55530.2924	5
11	Azerbaijan	14509.034469	5
12	Bahamas, The	35897.026435	5
13	Bahrain	45987.139076	5
14	Bangladesh	4518.916542	5
15	Barbados	15533.895932	5
16	Belarus	19128.583001	5
17	Belgium	51675.972476	5
18	Belize	7176.27162	5
19	Benin	3243.592039	5
20	Bermuda	81709.458741	4
21	Bhutan	11412.269725	5
22	Bolivia	84495.151659	5
23	Bosnia and Herzegovina	14640.336802	5
24	Botswana	17604.328021	5
25	Brazil	14805.151433	5
26	Brunei Darussalam	61903.340431	5
27	Bulgaria	22652.941349	5
28	Burkina Faso	2132.104248	5
29	Burundi	780.997344	5
30	Cabo Verde	6769.446914	5
31	Cambodia	4171.812888	5
32	Cameroon	3643.739878	5
33	Canada	48752.517884	5
34	Cayman Islands	71661.969151	4
35	Central African Republic	936.816914	5
36	Chad	1623.10401	5
37	Chile	24738.243108	5
38	China	15522.169877	5

2.1.1.2. Average Gini Index (World Bank Estimate)

For the Average Gini Index, we do the same steps as above, just changing the Field from GDP, per capita PPP (Current International \$) to Gini Index (World Bank Estimate)

Filter (39) - Configuration

Select Basic or Custom Filter

Basic filter

Gini index (World Bank...) Is not null

Custom filter

```
fx !IsNull([Gini index (World Bank estimate) [SI.POVT.GINI]])
```

Summarize (47) - Configuration

Fields:

	Field	Type
▶	Time	V_WString
	Country Name	V_String
	Country Code	V_String
	GDP (constant 2010 US\$) [NY.GDP.MKTP.KD]	Double
	GDP (current LCU) [NY.GDP.MKTP.CN]	Double
	GDP growth (annual %) [NY.GDP.MKTP.KD.ZG]	Double
	GDP per capita (constant LCU) [NY.GDP.PCAP....]	Double
	GDP per capita (current US\$) [NY.GDP.PCAP.CD]	Double
	GDP per capita, PPP (constant 2017 internati...)	Double
	GDP PPP (current international \$) [NY.GDP.M...	Double

Select

Actions:

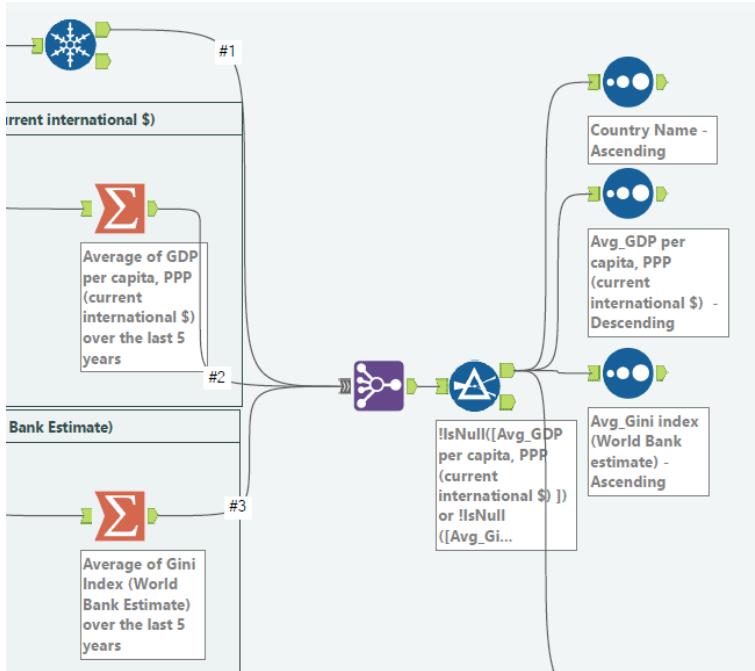
	Field	Action	Output Field Name
▶	Country Name	Group By	Country Name
	Gini index (World Bank e...	Average	Avg_Gini index (World Bank esti...
	Time	Count	#Years Averaged Gini

Results - Summarize (47) - Output

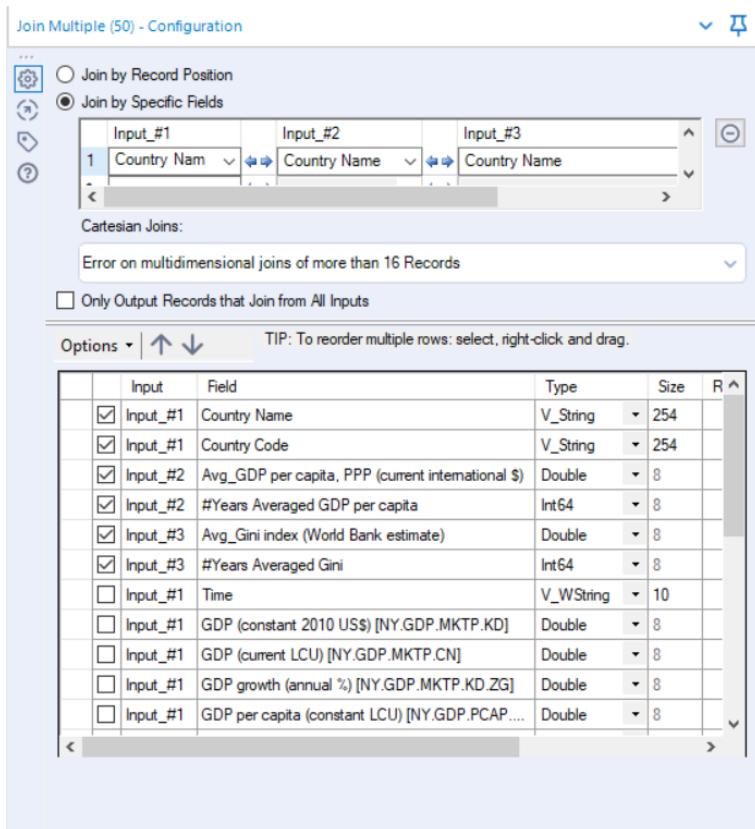
Messages | [Sort Fields](#) | Cell Viewer | 101 records displayed | [↑](#) [↓](#)

Record	Country Name	Avg_Gini index (World Bank estimate)	#Years Averaged Gini
1	Albania	33.45	2
2	Angola	51.3	1
3	Argentina	41.825	4
4	Armenia	32.6	4
5	Austria	30.433333	3
6	Bangladesh	32.4	1
7	Belarus	25.3	4
8	Belgium	27.4	3
9	Bhutan	37.4	1
10	Bolivia	43.525	4
11	Brazil	53.475	4
12	Bulgaria	40.766667	3
13	Canada	33	2
14	Chile	44.4	1
15	China	38.5	1
16	Colombia	50.5	4
17	Costa Rica	48.3	4
18	Croatia	30.333333	3
19	Cyprus	32.333333	3
20	Czech Republic	25.1	3
21	Denmark	28.366667	3
22	Djibouti	41.6	1
23	Dominican Republic	43.375	4
24	Ecuador	45.2	4
25	Egypt, Arab Rep.	31.5	1
26	El Salvador	38.85	4
27	Estonia	30.633333	3
28	Eswatini	54.6	1
29	Finland	27.266667	3
30	France	31.966667	3
31	Gabon	38	1
32	Georgia	36.7	4
33	Germany	31.9	1
34	Ghana	43.5	1
35	Greece	34.1	3
36	Honduras	49.075	4
37	Hungary	30.166667	3
38	Iceland	26.65	2

2.1.1.3. Joining the Results



Using the Join Multiple tool, we combine the 3 previous result, so that we get the average GDP and Gini for every country.



After joining all the data, we get the next result:

Results - Join Multiple (50) - Output

6 of 6 Fields | Cell Viewer | 217 records displayed | ↑ ↓ | Search | ?

Record	Country Name	Country Code	Avg_GDP per capita, PPP (current international \$)	#Years Averaged GDP per capita	Avg_Gini index (World Bank estimate)	#Years Averaged Gini
1	Afghanistan	AFG	2072.431364	5	[Null]	[Null]
2	Albania	ALB	13289.001185	5	33.45	2
3	Algeria	DZA	11709.816901	5	[Null]	[Null]
4	American Samoa	ASM	[Null]	[Null]	[Null]	[Null]
5	Andorra	AND	[Null]	[Null]	[Null]	[Null]
6	Angola	AGO	70039.993279	5	51.3	1
7	Antigua and Barbuda	ATG	20539.657605	5	[Null]	[Null]
8	Argentina	ARG	22195.086249	5	41.825	4
9	Armenia	ARM	12671.021278	5	32.6	4
10	Aruba	ABW	38241.073873	2	[Null]	[Null]
11	Australia	AUS	50159.38278	5	[Null]	[Null]
12	Austria	AUT	55530.2924	5	30.433333	3
13	Azerbaijan	AZE	14509.034469	5	[Null]	[Null]
14	Bahamas, The	BHS	35897.026435	5	[Null]	[Null]
15	Bahrain	BHR	45987.139076	5	[Null]	[Null]
16	Bangladesh	BGD	4518.916542	5	32.4	1
17	Barbados	BRB	15533.895932	5	[Null]	[Null]
18	Belarus	BLR	19128.583001	5	25.3	4
19	Belgium	BEL	51675.972476	5	27.4	3
20	Belize	BLZ	7176.271762	5	[Null]	[Null]
21	Benin	BEN	3243.592039	5	[Null]	[Null]
22	Bermuda	BMU	81709.458741	4	[Null]	[Null]
23	Bhutan	BTN	11412.269725	5	37.4	1
24	Bolivia	BOL	8449.515659	5	43.525	4
25	Bosnia and Herzegovina	BIH	14640.336802	5	[Null]	[Null]
26	Botswana	BWA	17604.328021	5	[Null]	[Null]
27	Brazil	BRA	14805.151433	5	53.475	4
28	British Virgin Islands	VGB	[Null]	[Null]	[Null]	[Null]
29	Brunei Darussalam	BRN	61903.340431	5	[Null]	[Null]
30	Bulgaria	BGR	22652.941349	5	40.766667	3
31	Burkina Faso	BFA	2132.104248	5	[Null]	[Null]
32	Burundi	BDI	780.997344	5	[Null]	[Null]
33	Cabo Verde	CPV	6769.446914	5	[Null]	[Null]
34	Cambodia	KHM	4171.812888	5	[Null]	[Null]
35	Cameroun	CMR	3643.739878	5	[Null]	[Null]
36	Canada	CAN	48752.517884	5	33	2
37	Cayman Islands	CYM	71661.969151	4	[Null]	[Null]
38	Central African Republic	CAF	936.816914	5	[Null]	[Null]

As we can see there are some countries with no information, so the filter tool is used to get rid of those. That way we guarantee that at least one of the fields is going to have information

Filter (56) - Configuration

Select Basic or Custom Filter

Basic filter

Select column... =

Custom filter

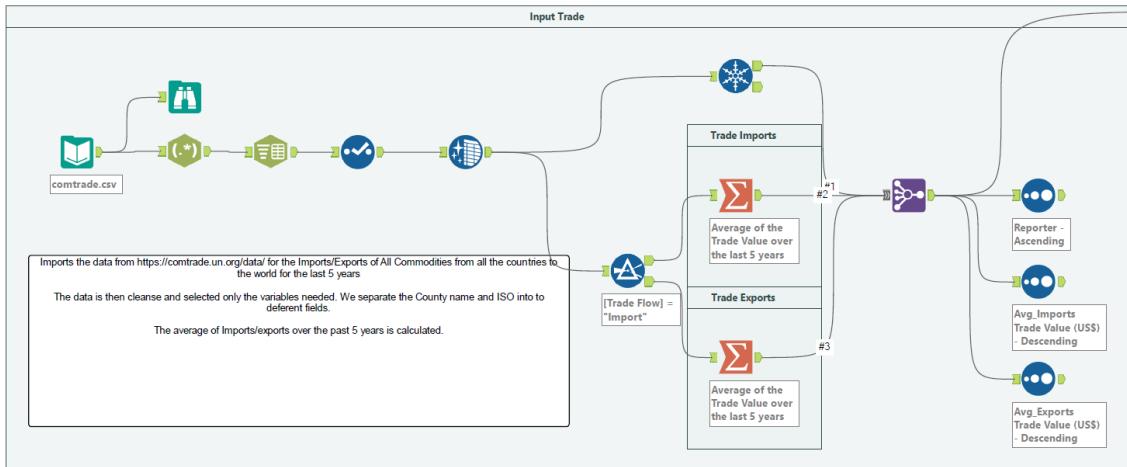
```
fx !IsNull([Avg_GDP per capita, PPP (current international $)]) or !IsNull([Avg_Gini index (World Bank estimate)])
```

Results - Filter (56) - Out - True

Messages | Cell Viewer | 195 records displayed | ↑ ↓ | Search

Record	Country Name	Country Code	Avg_GDP_per_capita, PPP (current internation... al prices)	#Years Averaged	GDP per capita	Avg_Gini index (World Bank estimate)	#Years Averaged Gini
1	Afghanistan	AFG	2072431364	5	[Null]	[Null]	
2	Albania	ALB	13289.001185	5	3345	2	
3	Algeria	DZA	11709.816901	5	[Null]	[Null]	
4	Angola	AGO	7000.993279	5	51.3	1	
5	Antigua and Barbuda	ATG	20539.657605	5	[Null]	[Null]	
6	Argentina	ARG	22195.086249	5	41.825	4	
7	Armenia	ARM	12671.021278	5	32.6	4	
8	Aruba	ABW	38241.073873	2	[Null]	[Null]	
9	Australia	AUS	50159.38278	5	[Null]	[Null]	
10	Austria	AUT	55530.2924	5	30.433333	3	
11	Azerbaijan	AZE	14509.034469	5	[Null]	[Null]	
12	Bahamas, The	BHS	35897.026435	5	[Null]	[Null]	
13	Bahrain	BHR	45987.139076	5	[Null]	[Null]	
14	Bangladesh	BGD	45189.16542	5	32.4	1	
15	Barbados	BRB	15533.895932	5	[Null]	[Null]	
16	Belarus	BLR	19128.583001	5	25.3	4	
17	Belgium	BEL	51675.972476	5	27.4	3	
18	Belize	BLZ	7176.27162	5	[Null]	[Null]	
19	Benin	BEN	3243.592039	5	[Null]	[Null]	
20	Bermuda	BMU	81709.458741	4	[Null]	[Null]	
21	Bhutan	BTN	11412.269725	5	37.4	1	
22	Bolivia	BOL	84495.15659	5	43.525	4	
23	Bosnia and Herzegovina	BIH	14640.336802	5	[Null]	[Null]	
24	Botswana	BWA	17604.328021	5	[Null]	[Null]	
25	Brazil	BRA	14805.151433	5	53.475	4	
26	Brunei Darussalam	BRN	61903.340431	5	[Null]	[Null]	
27	Bulgaria	BGR	22652.941349	5	40.766667	3	
28	Burkina Faso	BFA	21321.04248	5	[Null]	[Null]	
29	Burundi	BDI	780.997344	5	[Null]	[Null]	
30	Cabo Verde	CPV	67694.46914	5	[Null]	[Null]	
31	Cambodia	KHM	4171.812888	5	[Null]	[Null]	
32	Cameroun	CMR	3643.39878	5	[Null]	[Null]	
33	Canada	CAN	48752.517884	5	33	2	
34	Cayman Islands	CYM	71661.969151	4	[Null]	[Null]	
35	Central African Republic	CAF	936.816914	5	[Null]	[Null]	
36	Chad	TCD	1623.10401	5	[Null]	[Null]	
37	Chile	CHL	24738.243108	5	44.4	1	
38	China	CHN	15522.169877	5	38.5	1	

2.1.2. Trade Flows



Import the comtrade.csv, the first thing we need to do separate the Reporter field into the country name and code. The first thing that we could do is use a Text to Columns tool to split it by the '-' by since there is a country called Timor-Leste. It isn't going to work. First we change the '-' to '|' using the RegEx tool, and then the Text to Columns to split the field. Once that is done the select tool is used to reorder the columns, change the name of the new columns and eliminate non useful columns.

Then the Data Cleansing tool is used to eliminate nulls and to modify the case of the commodity field in order to Unify the results.

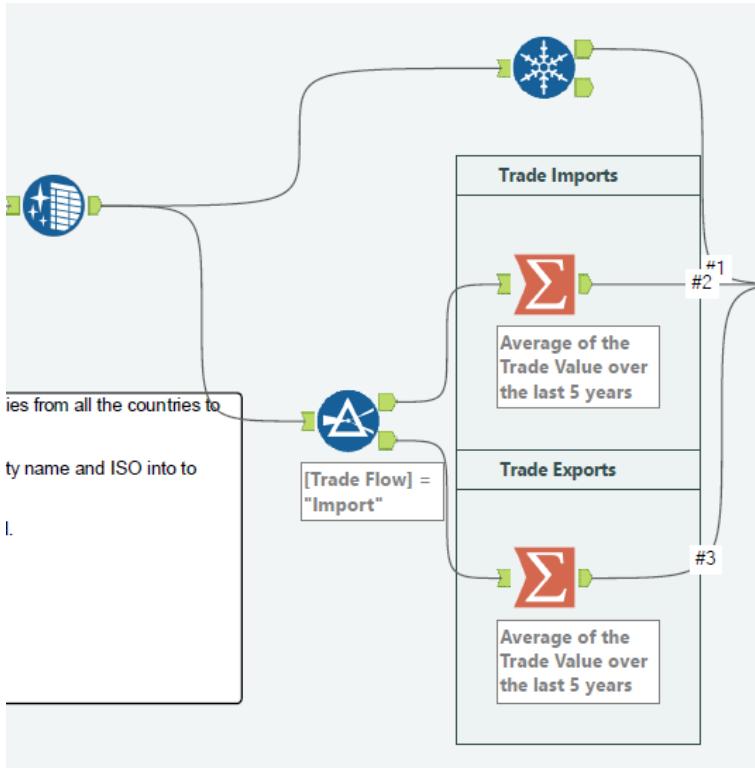
The result is as follow:

Results - Data Cleansing (21) - Output26

15 of 15 Fields | Cell Viewer | 1,443 records displayed | ↑ ↓ | Search | Data | Metadata

Cl...	Year	Trade Flow Code	Trade Flow	Reporter Code	Reporter	Reporter ISO	Partner Code	Partner	Commodity Code	Commodity	Qty Unit Code	Qty Unit	Qty	Trade Value (US\$)
1	HS	2017	1	Import	8	Albania	ALB	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
2	HS	2017	2	Export	8	Albania	ALB	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
3	HS	2017	1	Import	12	Algeria	DZA	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
4	HS	2017	2	Export	12	Algeria	DZA	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
5	HS	2017	1	Import	20	Andorra	AND	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
6	HS	2017	2	Export	20	Andorra	AND	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
7	HS	2017	1	Import	36	Australia	AUS	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
8	HS	2017	2	Export	36	Australia	AUS	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
9	HS	2017	1	Import	40	Austria	AUT	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
10	HS	2017	2	Export	40	Austria	AUT	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
11	HS	2017	1	Import	48	Bahrain	BHR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
12	HS	2017	2	Export	48	Bahrain	BHR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
13	HS	2017	1	Import	51	Armenia	ARM	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
14	HS	2017	2	Export	51	Armenia	ARM	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
15	HS	2017	1	Import	56	Belgium	BEL	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
16	HS	2017	2	Export	56	Belgium	BEL	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
17	HS	2017	1	Import	60	Bermuda	BMU	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
18	HS	2017	2	Export	60	Bermuda	BMU	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
19	HS	2017	1	Import	68	Bolivia (Plur...)	BOL	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
20	HS	2017	2	Export	68	Bolivia (Plur...)	BOL	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
21	HS	2017	1	Import	70	Bosnia Herzeg...	BH	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
22	HS	2017	2	Export	70	Bosnia Herzeg...	BH	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
23	HS	2017	1	Import	76	Brazil	BRA	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
24	HS	2017	2	Export	76	Brazil	BRA	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
25	HS	2017	1	Import	96	Brunei Daruss...	BRN	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
26	HS	2017	2	Export	96	Brunei Daruss...	BRN	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
27	HS	2017	1	Import	100	Bulgaria	BGR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
28	HS	2017	2	Export	100	Bulgaria	BGR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
29	HS	2017	1	Import	104	Myanmar	MMR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
30	HS	2017	2	Export	104	Myanmar	MMR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
31	HS	2017	1	Import	112	Belarus	BLR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
32	HS	2017	2	Export	112	Belarus	BLR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
33	HS	2017	1	Import	116	Cambodia	KHM	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
34	HS	2017	2	Export	116	Cambodia	KHM	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
35	HS	2017	1	Import	124	Canada	CAN	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
36	HS	2017	2	Export	124	Canada	CAN	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
37	HS	2017	1	Import	144	Sri Lanka	LKA	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0
38	HS	2017	2	Export	144	Sri Lanka	LKA	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0

Now we calculate the average of the Trade Imports and Trade Exports, for that the Summarize tool is used.



First, we use the Unique tool and use the Reporter Code field as key, that way we can get a list of all the different countries.

Unique (28) - Configuration

Select columns to find unique values from:

Column Names

Classification

Year

Trade Flow Code

Trade Flow

Reporter Code

Reporter

Reporter ISO

Partner Code

Select All

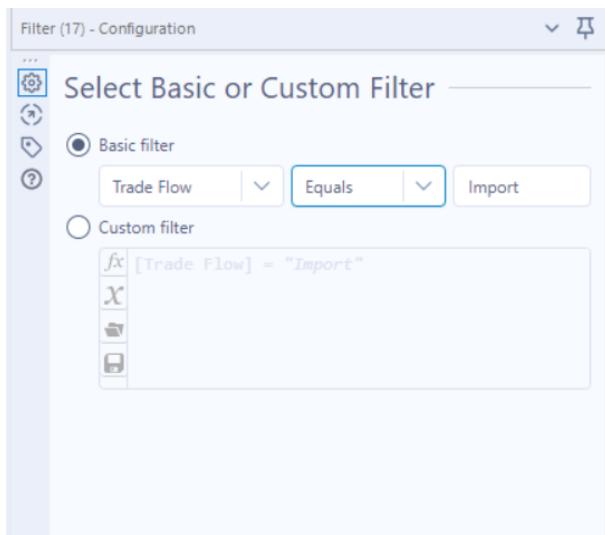
Results - Unique (28) - Out - Unique

15 of 15 Fields | Cell Viewer | 170 records displayed | |

Re	Classification	Year	Trade Flow Code	Trade Flow	Reporter Code	Reporter	Reporter ISO	Partner Code	Partner	Commodity Code	Commodity	Qty Unit Code	Qty Unit	Qty	Trade Value (US\$)
1	H5	2017	1	Import	100	Bulgaria	BGR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	34263590069
2	H5	2017	1	Import	104	Myanmar	MMR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	19234551102
3	H5	2019	1	Import	108	Burundi	BDI	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	887018854
4	H5	2017	1	Import	112	Belarus	BLR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	34234849200
5	H5	2017	1	Import	116	Cambodia	KHM	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	14283414116
6	H5	2017	1	Import	12	Algeria	DZA	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	4605301589
7	H4	2016	1	Import	120	Cameroon	CMR	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	489887030
8	H5	2017	1	Import	124	Canada	CAN	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	433045052733
9	H5	2019	1	Import	132	Cabo Verde	CPV	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	789705845
10	H4	2016	1	Import	140	Central African Rep.	CAF	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	401319710
11	H5	2017	1	Import	144	Sri Lanka	LKA	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	2131619950
12	H5	2017	1	Import	152	China	CHN	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	65257275661
13	H5	2017	1	Import	156	China	CHN	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	1843792938795
14	H5	2017	1	Import	170	Colombia	COL	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	46050188612
15	H5	2018	1	Import	174	Comoros	COM	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	229710910
16	H5	2018	1	Import	178	Congo	COG	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	3485609079
17	H4	2016	1	Import	180	Dem. Rep. of the Congo	COD	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	5491784152
18	H5	2017	1	Import	188	Costa Rica	CRI	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	16352350364
19	H5	2017	1	Import	191	Croatia	HRV	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	24512646924
20	H5	2017	1	Import	196	Cyprus	CYP	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	9310362788
21	H5	2017	1	Import	20	Andorra	AND	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	1478292965
22	H5	2017	1	Import	203	Czechia	CZE	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	16289891578
23	H5	2019	1	Import	204	Benin	BEN	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	2904571635
24	H5	2017	1	Import	208	Denmark	DNK	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	92117788022
25	H5	2017	1	Import	214	Dominican Rep.	DOM	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	19524253471
26	H5	2017	1	Import	218	Ecuador	ECU	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	19844243617
27	H5	2017	1	Import	222	El Salvador	SLV	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	10571509382
28	H4	2016	1	Import	231	Ethiopia	ETH	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	17451145266
29	H5	2017	1	Import	233	Estonia	EST	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	1737291325
30	H5	2018	1	Import	24	Angola	AGO	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	16036479575
31	H5	2017	1	Import	242	Fiji	FJI	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	2419936788
32	H5	2017	1	Import	246	Finland	FIN	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	70100318075
33	H5	2017	1	Import	251	France	FRA	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	61312639717
34	H5	2017	1	Import	268	Georgia	GEO	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	8057160147
35	H4	2017	1	Import	270	Gambia	GMB	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	460705804
36	H4	2016	1	Import	275	State of Palestine	PSE	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	5363768017
37	H5	2017	1	Import	276	Germany	DEU	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	1167753355161
38	H3	2016	1	Import	28	Antigua and Barbuda	ATG	0	World-WLD	TOTAL	All Commodities	1	No Quantity	0	490523305

2.1.2.1. Average Trade Imports

First, we used a Filter tool to Split the data into Imports and Exports



The Imports and then given to a Summarize tool in order to calculate the average Trade Imports. Getting the next result:

Field	Type
Classification	V_String
Year	V_String
Trade Flow Code	V_String
Trade Flow	V_String
Reporter Code	V_String
Reporter	V_String
Reporter ISO	V_String
Partner Code	V_String
Partner	V_String
Commodity Code	V_String

Action	Output Field Name
Group By	Reporter Code
Average	Avg_Imports Trade Value (US\$)
Count Distl...	#Years Avg for Imports

Results - Summarize (23) - Output

3 of 3 Fields | Cell Viewer | 169 records displayed | ↑ ↓

Record	Reporter Code	Avg_Imports Trade Value (US\$)	#Years Avg for Imports
1	100	34728671591.5	4
2	104	18175635255.4	5
3	108	772289677.75	4
4	112	34499551420	5
5	116	16105584378.75	4
6	12	46571849787.5	2
7	120	5041258166	2
8	124	430897555525.8	5
9	132	767517325	4
10	140	401475829	3
11	144	18974590317.75	4
12	152	67096985241	4
13	156	1938247421693.4	5
14	170	47659048840.6	5
15	174	209080859.5	4
16	178	5389671280.5	4
17	180	6942637183.2	5
18	188	16085789073	4
19	191	25689330164.6	5
20	196	8935101690.4	5
21	20	1480594383.33333	3
22	203	168020254282.4	5
23	204	2968207356	4
24	208	94441994397.8	5
25	214	19831380431.6667	3
26	218	19832420198.25	4
27	222	10811834792.4	5
28	231	1606520772.6667	3
29	233	17868255165.4	5
30	24	15282167850	3
31	242	2547560514.75	4
32	246	70110538906.2	5
33	251	611809088648.2	5
34	268	8466576093.4	5
35	270	468104732.6	5
36	275	6092665397	4
37	276	1186634792306.2	5
38	28	564459932.25	4

2.1.2.2. Average Trade Exports

For the Exports we need to do the same thing as above:

Summarize (24) - Configuration

Fields:

Field	Type
Classification	V_String
Year	V_String
Trade Flow Code	V_String
Trade Flow	V_String
Reporter Code	V_String
Reporter	V_String
Reporter ISO	V_String
Partner Code	V_String
Partner	V_String
Commodity Code	V_String

Actions:

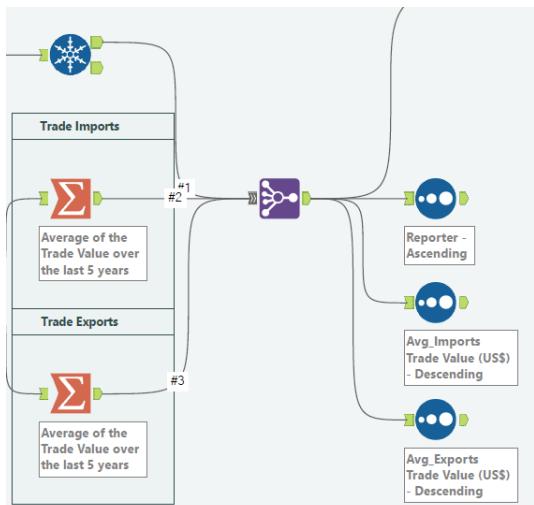
Field	Action	Output Field Name
Reporter Code	Group By	Reporter Code
Trade Value (US\$)	Average	Avg_Exports Trade Value (US\$)
Year	Count Disti...	#Years Avg for Exports

Results - Summarize (24) - Output

3 of 3 Fields | Cell Viewer | 170 records displayed | ↑ ↓ |

Record	Reporter Code	Avg_Exports Trade Value (US\$)	#Years Avg for Exports
1	100	31379548305.75	4
2	104	15456294671	5
3	108	155562652.5	4
4	112	29727610640	5
5	116	1221815377.25	4
6	12	32591609443	2
7	120	2697317336	2
8	124	418990845041.8	5
9	132	61861565	4
10	140	113235429	3
11	144	11241986122.75	4
12	152	68684760121.5	4
13	156	2388881680652.8	5
14	170	36237600528.6	5
15	174	40868809.75	4
16	178	8220887111	4
17	180	13399457156.6	5
18	188	10977072192.25	4
19	191	16123784995.6	5
20	196	3537827664.4	5
21	20	114775573.33333	3
22	203	187722975267.2	5
23	204	734972197.25	4
24	208	104380480066.8	5
25	214	8998725396.66667	3
26	218	19956382394.25	4
27	222	5604076947	5
28	231	1947652832.33333	3
29	233	16194212630.8	5
30	24	35019705647	3
31	242	988861662	4
32	246	67660713711.6	5
33	251	525146529073.4	5
34	268	3076875526.2	5
35	270	21997911.2	5
36	275	1062706384.5	4
37	276	1444706587726.4	5
38	28	46668763.75	4

2.1.2.3. Joining the Results



Once we have the averages calculated, we need to join the result. For that a Join Multiple tools is used, so that we get the average Imports and Exports for every country.

Join Multiple (29) - Configuration

Join by Record Position (radio button selected)

Join by Specific Fields

Input #1	Input #2	Input #3
1 Reporter Cod	Reporter Code	Reporter Code
-	-	-

Cartesian Joins:

Error on multidimensional joins of more than 16 Records

Only Output Records that Join from All Inputs

Options | TIP: To reorder multiple rows: select, right-click and drag.

	Input	Field	Type	Size	Rename
<input checked="" type="checkbox"/>	Input #1	Reporter Code	V_String	254	
<input checked="" type="checkbox"/>	Input #1	Reporter	V_String	254	
<input checked="" type="checkbox"/>	Input #1	Reporter ISO	V_String	254	
<input checked="" type="checkbox"/>	Input #1	Partner Code	V_String	254	
<input checked="" type="checkbox"/>	Input #1	Partner	V_String	254	
<input checked="" type="checkbox"/>	Input #1	Commodity Code	V_String	254	
<input checked="" type="checkbox"/>	Input #1	Commodity	V_String	254	
<input checked="" type="checkbox"/>	Input #2	Avg_Imports Trade Value (US\$)	Double	8	
<input checked="" type="checkbox"/>	Input #2	#Years Avg for Imports	Int64	8	
<input checked="" type="checkbox"/>	Input #3	Avg_Exports Trade Value (US\$)	Double	8	
<input checked="" type="checkbox"/>	Input #3	#Years Avg for Exports	Int64	8	

Getting the next results:

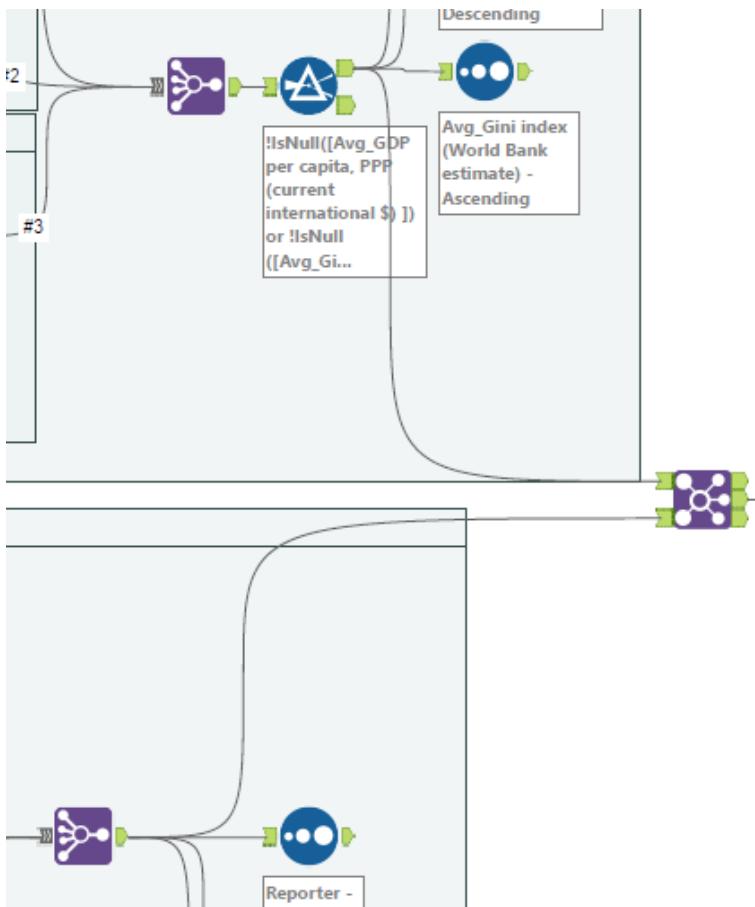
Results - Join Multiple (29) - Output

11 of 11 Fields | Cell Viewer | 170 records displayed | ↑ ↓ | Search | Data | Metadata | Action

Record	Reporter Code	Reporter	Reporter ISO	Partner C...	Partner	Commodity Code	Commodity	Avg_Imports Trade Value (US\$)	#Years Avg for Imports	Avg_Exports Trade Value (US\$)	#Years Avg for Exports
1 100	Bulgaria	BGR	0	World-WLD	TOTAL	All Commodities	34728671591.5	4	31379548305.75	4	
2 104	Myanmar	MMR	0	World-WLD	TOTAL	All Commodities	18175635255.4	5	15456204671	5	
3 108	Burundi	BDI	0	World-WLD	TOTAL	All Commodities	772289677.75	4	155562652.5	4	
4 112	Belarus	BLR	0	World-WLD	TOTAL	All Commodities	34499551420	5	29727610640	5	
5 116	Cambodia	KHM	0	World-WLD	TOTAL	All Commodities	1610558478.75	4	122181153772.25	4	
6 12	Algeria	DZA	0	World-WLD	TOTAL	All Commodities	4657184978.75	2	32591609443	2	
7 120	Cameron	CMR	0	World-WLD	TOTAL	All Commodities	5041258166	2	2697317336	2	
8 124	Canada	CAN	0	World-WLD	TOTAL	All Commodities	43089755552.5	5	41899045404.8	5	
9 132	Cabo Verde	CPV	0	World-WLD	TOTAL	All Commodities	767517325	4	61861565	4	
10 140	Central African...	CAF	0	World-WLD	TOTAL	All Commodities	401475829	3	113235429	3	
11 144	Sri Lanka	LKA	0	World-WLD	TOTAL	All Commodities	1897493017.75	4	11241986122.75	4	
12 152	Chile	CHL	0	World-WLD	TOTAL	All Commodities	6709685241	4	68684760121.5	4	
13 156	China	CHN	0	World-WLD	TOTAL	All Commodities	193824721693.4	5	238888160652.8	5	
14 170	Colombia	COL	0	World-WLD	TOTAL	All Commodities	47659484840.6	5	36237600528.6	5	
15 174	Comoros	COM	0	World-WLD	TOTAL	All Commodities	209080859.5	4	408688097.5	4	
16 178	Congo	COG	0	World-WLD	TOTAL	All Commodities	5389671280.5	4	822087111	4	
17 180	Dem. Rep. of the...	COD	0	World-WLD	TOTAL	All Commodities	6942637183.2	5	13399457156.6	5	
18 188	Costa Rica	CRI	0	World-WLD	TOTAL	All Commodities	16085789073	4	10977072192.25	4	
19 191	Croatia	HRV	0	World-WLD	TOTAL	All Commodities	25689330164.5	5	16123784995.6	5	
20 196	Cyprus	CYP	0	World-WLD	TOTAL	All Commodities	8935101690.4	5	3537827664.4	5	
21 20	Andorra	AND	0	World-WLD	TOTAL	All Commodities	1480594383.3333	3	11477557333333	3	
22 203	Czechia	CZE	0	World-WLD	TOTAL	All Commodities	168020254282.4	5	187722875267.2	5	
23 204	Benin	BEN	0	World-WLD	TOTAL	All Commodities	2986207356	4	734972197.25	4	
24 208	Denmark	DNK	0	World-WLD	TOTAL	All Commodities	94441994397.8	5	104380480066.8	5	
25 214	Dominican Rep.	DOM	0	World-WLD	TOTAL	All Commodities	19831380431.6667	3	8998723396.66667	3	
26 218	Ecuador	ECU	0	World-WLD	TOTAL	All Commodities	19832420198.25	4	19956382394.25	4	
27 222	El Salvador	SLV	0	World-WLD	TOTAL	All Commodities	10911834792.4	5	5604076947	5	
28 231	Ethiopia	ETH	0	World-WLD	TOTAL	All Commodities	16065207722.6667	3	19476528233333	3	
29 233	Estonia	EST	0	World-WLD	TOTAL	All Commodities	17966355165.4	5	16194212630.8	5	
30 24	Angola	AGO	0	World-WLD	TOTAL	All Commodities	15282167850	3	35019705647	3	
31 242	Fiji	FJI	0	World-WLD	TOTAL	All Commodities	25475605147.5	4	988861662	4	
32 246	Finland	FIN	0	World-WLD	TOTAL	All Commodities	70110538906.2	5	67660713711.6	5	
33 251	France	FRA	0	World-WLD	TOTAL	All Commodities	61180908648.2	5	525146529073.4	5	
34 268	Georgia	GEO	0	World-WLD	TOTAL	All Commodities	8466576093.4	5	30768755262	5	
35 270	Gambia	GMB	0	World-WLD	TOTAL	All Commodities	468104732.6	5	21997911.2	5	
36 275	State of Palestine	PSE	0	World-WLD	TOTAL	All Commodities	6092656397	4	10627063545	4	
37 276	Germany	DEU	0	World-WLD	TOTAL	All Commodities	1186634792306.2	5	1444706587726.4	5	
38 28	Antigua and Ba...	ATG	0	World-WLD	TOTAL	All Commodities	564459932.5	4	46668763.75	4	

2.2. Create the Graphs

Before creating the graphs, we need to Join both datasets.



To join the two datasets, the Join tool is used. Using the “Country Code” and “Reporter ISO” as keys.

Join (57) - Configuration

Join by Record Position

Join by Specific Fields

Left	Right
1 Country Code	Reporter ISO
*	*

Options | TIP: To reorder multiple rows: select, right-click and drag.

Input	Field	Type	Size
<input checked="" type="checkbox"/> Left	Country Name	V_String	254
<input checked="" type="checkbox"/> Left	Country Code	V_String	254
<input checked="" type="checkbox"/> Left	Avg_GDP per capita, PPP (current intern...	Double	8
<input checked="" type="checkbox"/> Left	#Years Averaged GDP per capita	Int64	8
<input checked="" type="checkbox"/> Left	Avg_Gini Index (World Bank estimate)	Double	8
<input checked="" type="checkbox"/> Left	#Years Averaged Gini	Int64	8
<input checked="" type="checkbox"/> Right	Avg_Imports Trade Value (USS)	Double	8
<input checked="" type="checkbox"/> Right	#Years Avg for Imports	Int64	8
<input checked="" type="checkbox"/> Right	Avg_Exports Trade Value (USS)	Double	8
<input checked="" type="checkbox"/> Right	#Years Avg for Exports	Int64	8
<input type="checkbox"/> Right	Reporter Code	V_String	254
<input type="checkbox"/> Right	Reporter	V_String	254
<input type="checkbox"/> Right	Reporter ISO	V_String	254
<input type="checkbox"/> Right	Partner Code	V_String	254
<input type="checkbox"/> Right	Partner	V_String	254

That way we get data on 166 countries:

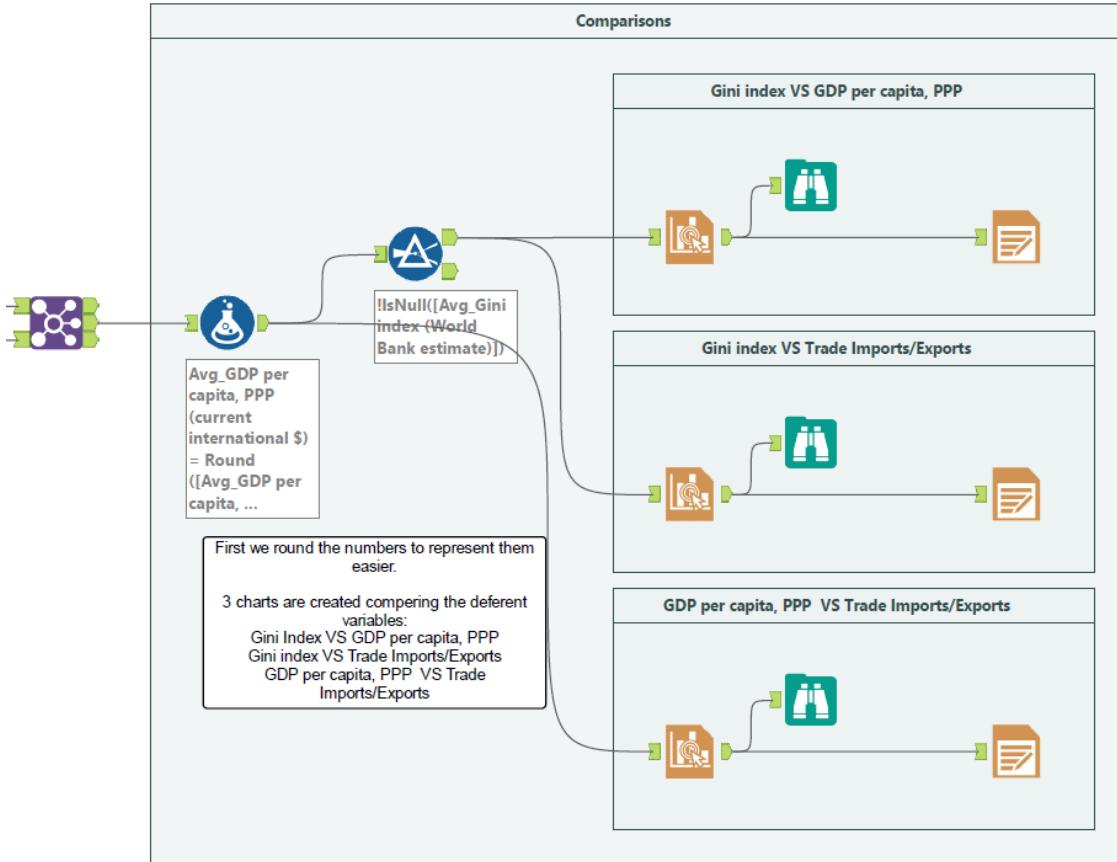
Results - Join (57) - Out - Join

10 of 10 Fields • Cell View • 166 records displayed | ↑ ↓ |

Search Data Metadata Actions • 000

	Country Name	Country Code	Avg_GDP per capita, PPP	#Years Averaged GDP	Avg_Gini Index	#Years Averaged Gini	Avg_Imports Trade Value (US\$)	#Years Avg for Imports	Avg_Exports Trade Value (US\$)	#Years Avg for Exports
1.	Aruba	ABW	38241.073873	2	[Null]	[Null]	1165050952.4	5	80759304	5
2.	Afghanistan	AFG	2072431364	5	[Null]	[Null]	7502914071	3	783816115	3
3.	Angola	AGO	7000.993279	5	[Null]	[Null]	15282167850	3	35019705647	3
4.	Albania	ALB	13289.001185	5	[Null]	[Null]	5482928474.8	5	2474694685.8	5
5.	United Arab E...	ARE	67421.556737	4	[Null]	[Null]	25555130004.5	4	346472106096	4
6.	Argentina	ARG	22195.086249	5	[Null]	[Null]	595463223212.6	5	5956399746.4	5
7.	Armenia	ARM	12671.021278	5	[Null]	[Null]	4314984418.2	5	2295245124.8	5
8.	Antigua and Ba...	ATG	20539.657605	5	[Null]	[Null]	564459932.5	4	46668763.75	4
9.	Australia	AUS	50159.38278	5	[Null]	[Null]	21743606385.8	5	236797159382	5
10.	Austria	AUT	55530.2924	5	30433333	3	16637787655.6	5	163068075123.2	5
11.	Azerbaijan	AZE	14509.034469	5	[Null]	[Null]	10615966055.2	5	16310335060.4	5
12.	Burundi	BDI	780.997344	5	[Null]	[Null]	77228967.75	4	155562652.5	4
13.	Belgium	BEL	51675.972476	5	[Null]	[Null]	307164004304	5	29982051879.2	5
14.	Benin	BEN	3243.592039	5	[Null]	[Null]	296820736	4	73497197.25	4
15.	Burkina Faso	BFA	2132.104248	5	[Null]	[Null]	3902157602.5	4	2964100270.5	4
16.	Bulgaria	BGR	22652.941349	5	40766667	3	34728671591.5	4	31795480505	4
17.	Bahrain	BHR	45987.139076	5	[Null]	[Null]	17578960221667	3	1245961694.6667	3
18.	Bahamas, The	BHS	53897.000445	5	[Null]	[Null]	3310716233333	3	46674254033333	3
19.	Bosnia and Herz...	BHR	14646.356802	5	[Null]	[Null]	10645420000.4	5	6306900000.12	5
20.	Bolivia	BOL	19128.583001	5	[Null]	[Null]	25.3	4	3449551402	5
21.	Bolivia	BLZ	7176.271662	5	[Null]	[Null]	919272901.6	5	244208053	5
22.	Bermuda	BMU	81709.457474	4	[Null]	[Null]	1028273454	5	17781606	5
23.	Bolivia	BOL	84492.15659	5	434329	4	8966307412.6	5	8186618569	5
24.	Brazil	BRA	14805.151423	5	53475	4	17268287334.8	5	211342161712.8	5
25.	Barbados	BRB	15533.895932	5	[Null]	[Null]	15804669054	5	44884033	5
26.	Brunet Ondus...	BRN	61903.340431	5	[Null]	[Null]	3757441577.5	4	6014592636.75	4
27.	Botswana	BWA	17604.328021	5	[Null]	[Null]	6083054932.4	5	577835264.6	5
28.	Central African...	CAF	938.816914	5	[Null]	[Null]	401475829	3	112353429	3
29.	Canada	CAN	48752.517884	5	33	2	43089755552.8	5	418990045041.8	5
30.	Switzerland	CHE	7076.231235	5	32.933333	3	276431606267.8	5	308891059465.2	5
31.	Chile	CHL	24738.243108	5	44.4	1	67096985241	4	68684760121.5	4
32.	China	CHN	15522.169877	5	38.5	1	1938247421693.4	5	23888160652.8	5
33.	Cote d'Ivoire	CIV	5120.655443	5	[Null]	[Null]	9911836987.5	4	11940292436.75	4
34.	Cameroun	CMR	36437.399878	5	[Null]	[Null]	5041258166	2	2697317336	2
35.	Congo, Dem. Rep.	COD	1082.183492	5	[Null]	[Null]	6942637183.2	5	13399457156.6	5
36.	Congo, Rep.	COG	3946.389318	5	[Null]	[Null]	5339671280.5	4	8220887111	4
37.	Colombia	COL	14607.153043	5	50.5	4	4765904804.6	5	36237600528.6	5
38.	Comoros	COM	3107.726826	5	[Null]	[Null]	20908085.5	4	40868809.75	4

2.2.1. Comparisons



The first thing we need to do with the data is round the results of the GDP per capita, PPP and Gini Index, using the Formula tool, for a better representation.

Formula (71) - Configuration

Output Column	Data Preview
Avg_GDP per capita, PPP ...	38241.074
$\text{Round}([\text{Avg_GDP per capita, PPP (current international \$)}], 0.001)$	
Avg_Gini index (World Ba... [Null]	
$\text{Round}([\text{Avg_Gini index (World Bank estimate)}], 0.01)$	

For the 2 graphs that uses the Gini Index, we need to eliminate the Nulls values, as them will mess with the graphs.

Filter (73) - Configuration

Select Basic or Custom Filter

Basic filter

Avg_Gini index (Wor... Is not null

Custom filter

$\text{IsNull}([\text{Avg_Gini index (World Bank estimate)}])$

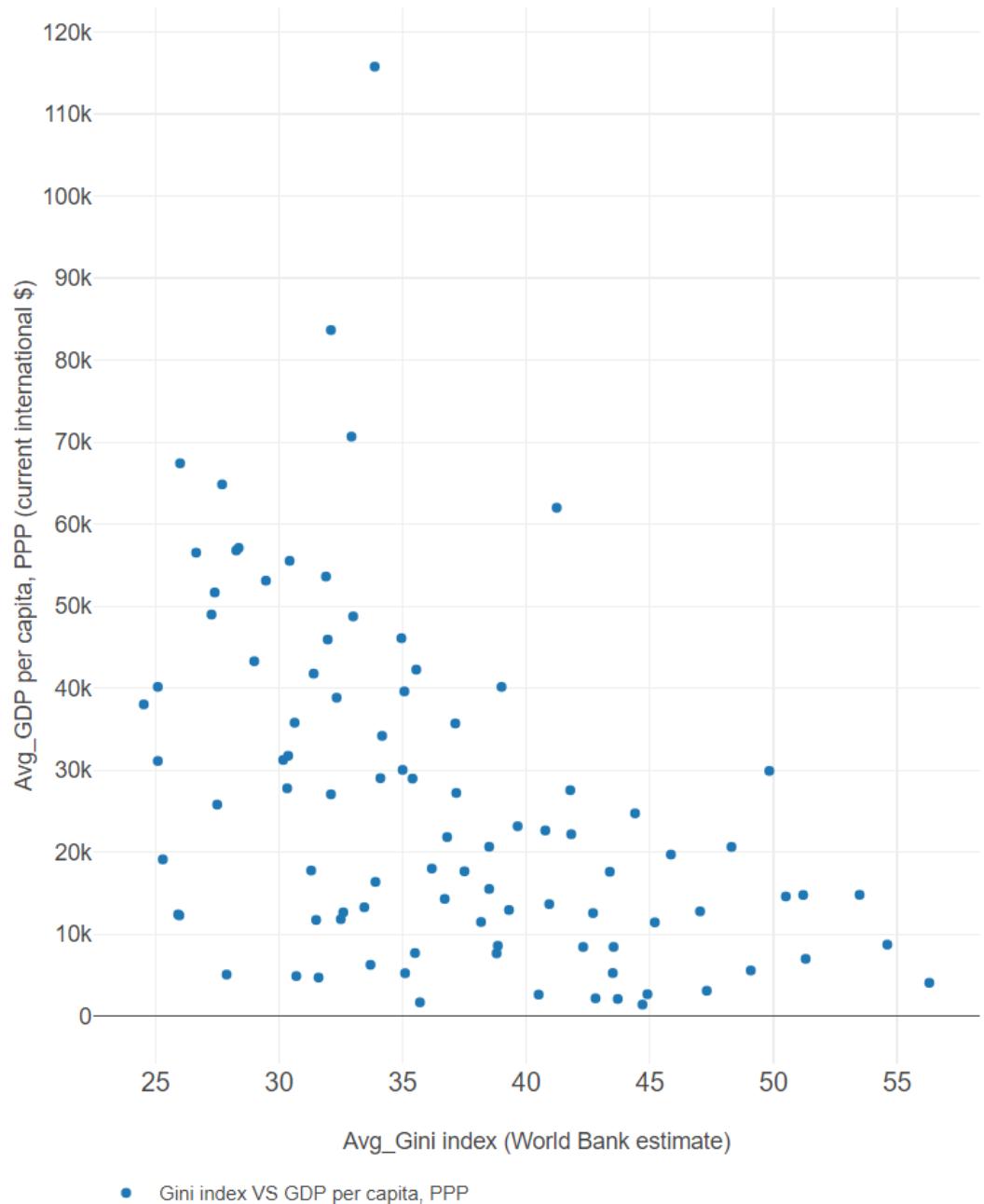
2.2.1.1. Gini index VS GDP per capita, PPP

We make use of the Interactive Chart tool in order to plot the Gini Index against the GDP:

The screenshot shows the 'Interactive Chart' interface in Alteryx. The left sidebar has sections for CREATE (Layer, Template, Transforms), STYLE (Font, Layer, Chart, Axes, Legend, Notes), and BATCH (Batch). The main area is titled 'Gini index VS GDP per capita, PPP'. It includes fields for Name (with icons for B, I, X₂, X², and Ø), Type (Scatter), X (Avg_Gini index (World Bank ...)), and Y (Avg_GDP per capita, PPP (cu...)).

Next we used the Render tool to save the Chart, getting the next result

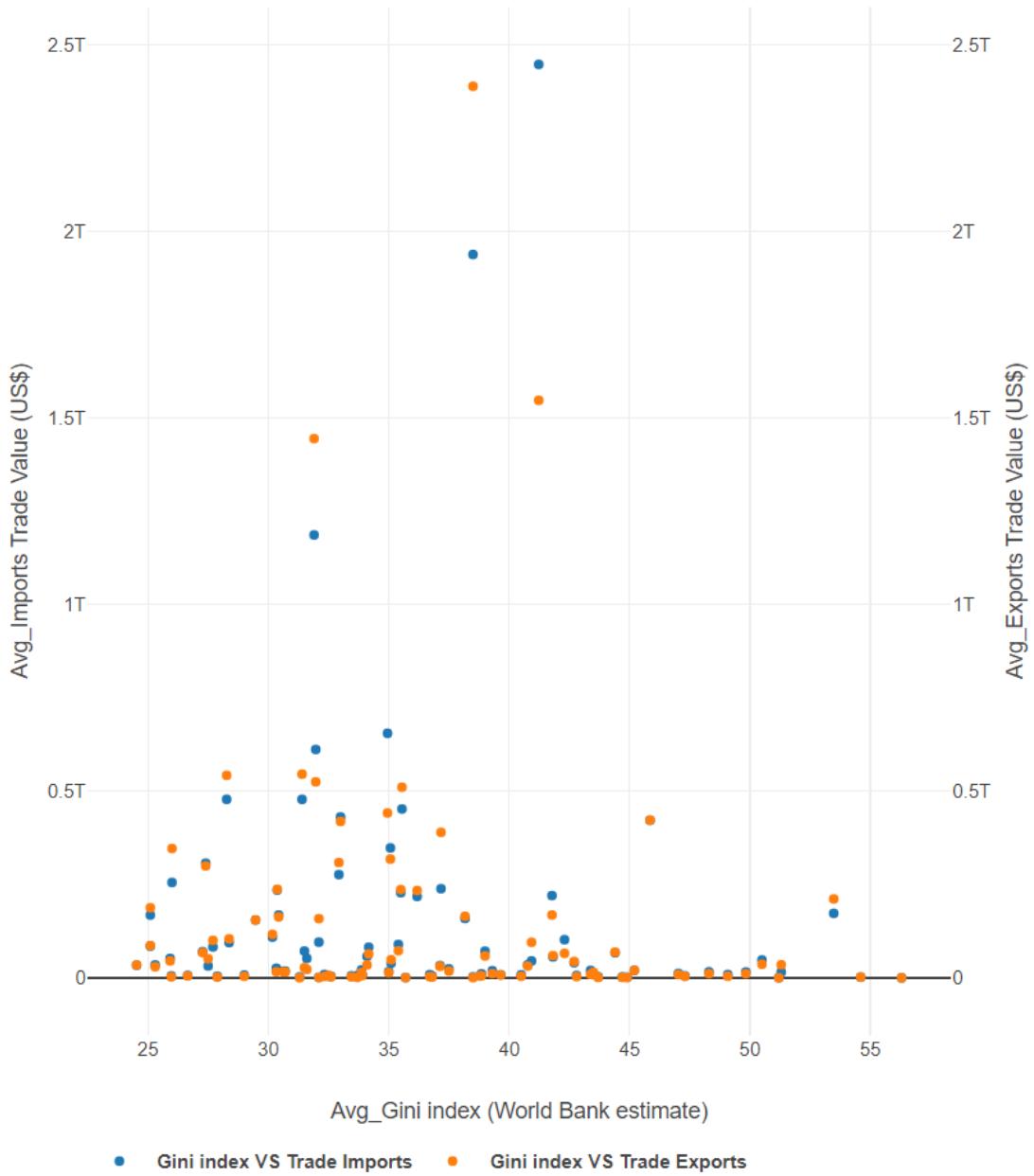
The screenshot shows the 'Render (70) - Configuration' dialog. Under 'Report Configuration', 'Output Mode' is set to 'Choose a Specific Output File' and 'Output File' is set to 'ita with Alteryx\Output data\Gini index VS GDP per capita, PPP.htm'. Under 'Report Data', 'Data Field' is set to 'Chart', 'Separator' is 'No Spacing Between Records', and 'Header' and 'Footer' are both set to 'Chart'. Under 'Report Style', 'Paper Size' is 'Letter (8.5" x 11")', 'Orientation' is 'Portrait', and 'Margins (in.)' is '0.5 inch Margins'. There is also an 'Edit Default Styles...' button.



2.2.1.2. *Gini index VS Trade Imports/Exports*

We make use of the Interactive Chart tool in order to plot the Gini Index against the Trade Imports/Exports:

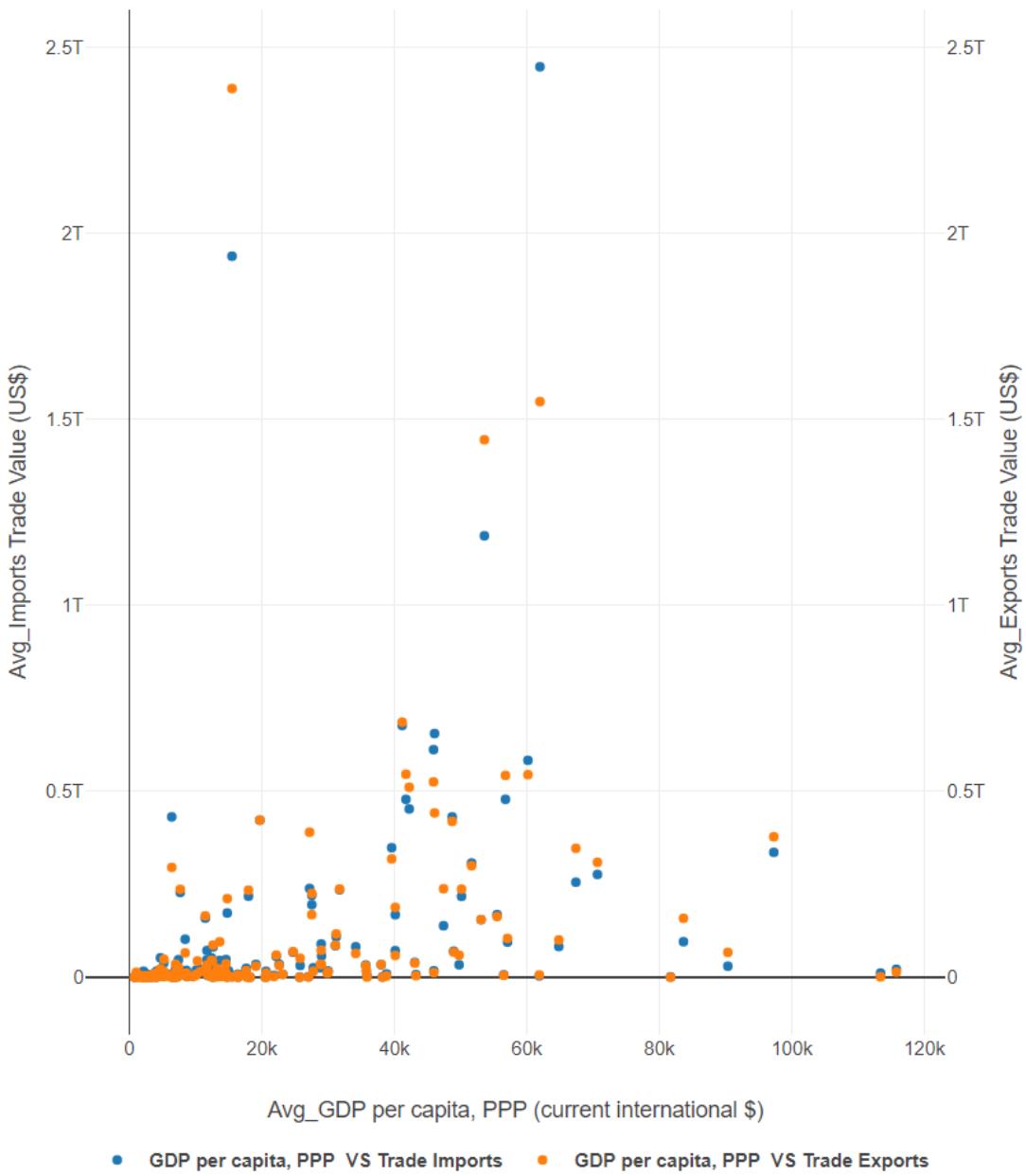
Next, we used the Render tool to save the Chart, getting the next result:



2.2.1.3. GDP per capita, PPP VS Trade Imports/Exports

We make use of the Interactive Chart tool in order to plot the GDP against the Trade Imports/Exports:

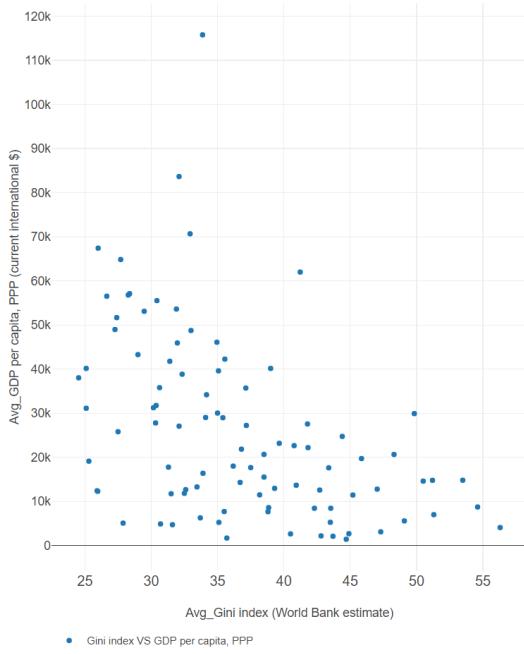
Next, we used the Render tool to save the Chart, getting the next result:



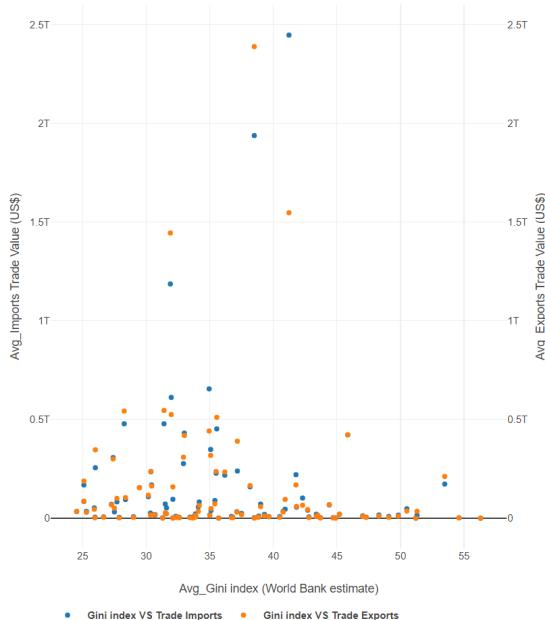
3. Conclusions

The objective was: "The objective is to find the correlation between different variables related to wealth and equality of different countries in relation to the interchange of materials between that country and the rest of the world"

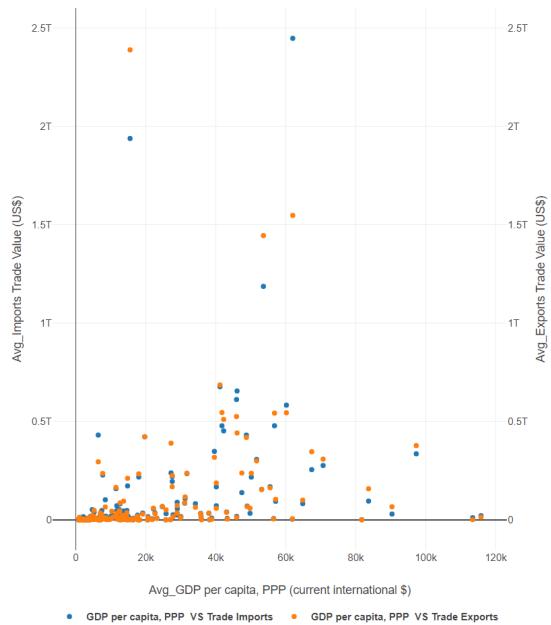
As we can see from the charts there is an inverse correlation between Wealth and Equality. That means that richer countries are more equal. In the chart we can see that the more unequal countries, are the ones with a lower GDP, per capita.



But does this metrics have some correlations with trade? Well, the next chart compares the Gini index with the trade flows (Imports and Exports). We can see that these two variables are less correlated. As we can see we have countries all over the place, although there is a higher concentration in the lower left side, indicating that there might be some slight correlation.

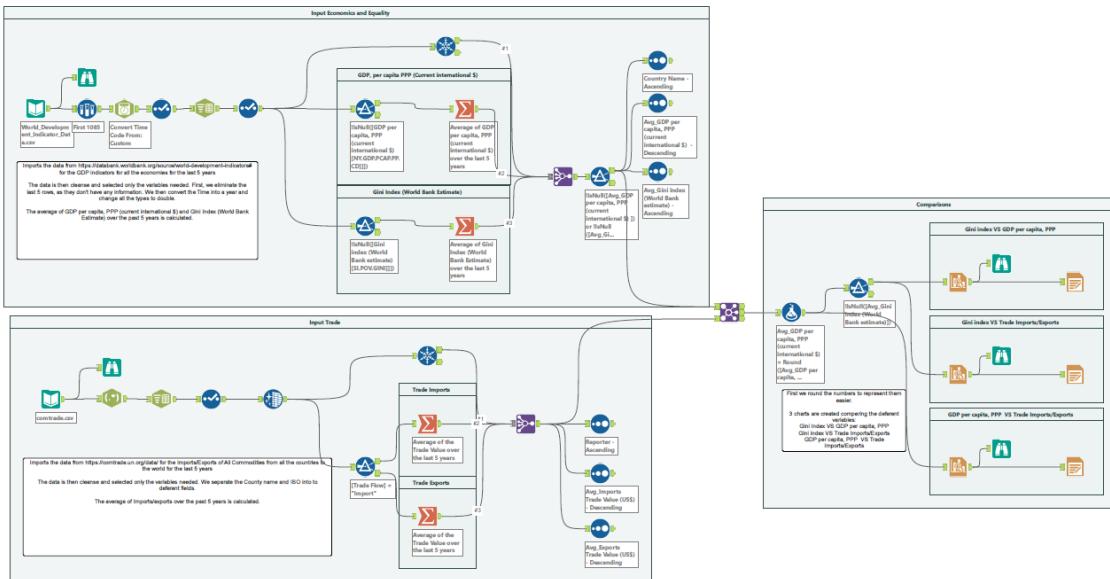


If we check the comparison between the GDP, per capita and the Trade Imports/Exports. We find a similar picture as adobe, as there is no correlation between those variables.



That way we can conclude that there is no correlation between Trade Flows and the wealth and equality of countries.

4. Review



1. In/Out Category

- a. Input Data (1)

2. Preparation Category

- a. Select (2)
- b. Data Cleansing (3)
- c. Filter (4)
- d. Sort (5)
- e. Sample (6)
- f. Formula (7)
- g. Unique (8)

3. Join Category

- a. Join Multiple (9)
- b. Join (10)

4. Parse Category

- a. DateTime (1)
- b. Text to columns (2)
- c. RegEx(3)

5. Transform Category

- a. Summarize

6. Reporting Category

- a. Interactive Chart (1)
- b. Render (2)