

Import Content Share Estimations

This document provides a short overview of the estimation of import content. Here I provide total import content exclusively with estimates for direct and indirect import content available. The estimates were derived using the identical methodology to Bussière et al. (2013).

To begin with I provide a comparison with the original results by the Bussière et al. (2013) paper in Table 1. As can be seen my estimates tend to underestimate on average the results by 2.44 percentage points. That is a relatively large difference that is difficult to explain. The main issues are driven by import content of **investment** and **export**. While the prior is potentially due to data specification, export might be driven by a methodological failure on my side. When comparing the OECD published Import content of exports to both my estimates and those of Bussière et al. (2013) it is evident that data differences are likely driving the stark percentage point divergence between my estimates and those of Bussière et al. (2013). With only an **approx. 0.4 percentage point difference (overestimation)** in my estimates compared to the OECD suggests that we can rely on the estimates presented below (see Table 2).

		Bussière et al. (2013)			My Estimates			Difference btw Bussière et al. (2013) and My Estimates			
Type	Country	1995	2000	2005	1995	2000	2005	1995	2000	2005	Avg Diff
Government	United States	3.655591	5.995496	6.216408	4.052031	4.522514	5.614271	-0.39644	1.472982	0.602137	0.55956
Consumption	United States	8.658571	10.5329	11.8611	8.416977	10.76252	12.16085	0.241593	-0.22963	-0.29975	-0.09593
Investment	United States	18.39646	19.13557	17.27673	16.39871	16.70605	16.58578	1.997747	2.429515	0.69095	1.70607
Export	United States	9.450254	11.03156	12.34251	9.051968	10.22362	10.75158	0.398286	0.807943	1.590933	0.932387
Government	United Kingdom	11.22637	12.65756	12.54479	8.486128	9.581233	9.422358	2.740242	3.076329	3.122435	2.979669
Consumption	United Kingdom	21.13872	24.91414	27.16782	18.25898	19.20361	20.80694	2.879746	5.710527	6.360879	4.983717
Investment	United Kingdom	37.3764	35.01822	25.43431	29.24878	27.08254	23.37674	8.127626	7.93568	2.057564	6.04029
Export	United Kingdom	22.16688	20.29628	18.64989	15.75004	15.00783	14.88215	6.416838	5.288448	3.767744	5.157677
Government	Japan	2.961555	2.848312	6.011266	2.9362	3.512154	5.288066	0.025355	-0.66384	0.723199	0.028237
Consumption	Japan	9.05529	9.753557	11.70404	7.173922	8.520473	11.16177	1.881368	1.233084	0.542272	1.218908
Investment	Japan	8.235458	10.64959	15.25948	8.098042	10.02829	13.62846	0.137417	0.6213	1.631016	0.796578
Export	Japan	8.3571	9.618018	15.36313	5.585684	6.981593	11.06006	2.771416	2.636424	4.303068	3.236969
Government	France	8.214034	7.999475	8.681065	6.100968	7.589467	8.176286	2.113066	0.410008	0.50478	1.009284
Consumption	France	19.38693	22.01549	22.74622	18.93592	22.38299	22.89118	0.451	-0.3675	-0.14496	-0.02049
Investment	France	24.73972	27.22743	25.43135	20.36732	25.00543	23.37087	4.3724	2.221997	2.060483	2.88496
Export	France	19.78651	26.50662	26.99214	16.54394	21.0963	21.22232	3.242575	5.410325	5.769821	4.807574
Government	Germany	6.298799	8.032654	8.598779	6.246927	8.441612	8.990133	0.051872	-0.40896	-0.39135	-0.24948
Consumption	Germany	18.28729	22.07206	22.55688	17.84622	21.88379	22.42178	0.441073	0.188265	0.135106	0.254815
Investment	Germany	22.73744	30.54617	31.09093	19.90686	27.6358	28.35271	2.830582	2.910371	2.738218	2.82639
Export	Germany	20.3699	25.75322	27.19987	14.55186	19.22954	20.22126	5.818045	6.523681	6.978604	6.44011
Government	Italy	5.715622	6.716853	7.227418	5.758854	7.063915	7.681979	-0.04323	-0.34706	-0.45456	-0.28162
Consumption	Italy	18.19723	20.65193	21.27005	18.4086	21.25888	21.49975	-0.21138	-0.60695	-0.22971	-0.34934
Investment	Italy	25.71021	29.58861	27.29548	23.27355	27.097	25.07384	2.436663	2.491607	2.221638	2.383303
Export	Italy	23.36115	27.09457	28.9897	16.05817	18.74429	20.31275	7.302973	8.350277	8.676947	8.110066
Government	Canada	10.27376	10.03472	9.769019	8.873991	10.70583	9.836361	1.399773	-0.67111	-0.06734	0.22044
Consumption	Canada	25.90598	23.73383	25.76615	24.29514	26.54017	24.09899	1.610845	-2.80634	1.667163	0.157223
Investment	Canada	38.99182	42.10267	34.79644	35.23509	40.64352	34.07976	3.756736	1.459147	0.716682	1.977522
Export	Canada	30.48116	30.90617	27.35198	24.0738	26.05265	21.69381	6.407354	4.85352	5.658172	5.639682

Government	Australia	8.990856	9.957633	9.921483	6.389189	7.533098	8.075623	2.601667	2.424534	1.84586	2.290687
Consumption	Australia	16.96206	18.59259	18.40947	16.59169	17.14525	16.99756	0.370373	1.447334	1.411919	1.076542
Investment	Australia	26.5391	26.59741	25.98045	25.52019	28.35509	25.83802	1.018914	-1.75768	0.142438	-0.19878
Export	Australia	13.99135	14.14268	14.01553	11.38568	13.13175	11.63914	2.605675	1.010928	2.376384	1.997663
Government	Spain	7.317564	9.873024	11.34797	7.887883	10.45066	11.23279	-0.57032	-0.57764	0.11518	-0.34426
Consumption	Spain	18.06638	23.14579	23.99586	19.01422	24.15212	23.21107	-0.94785	-1.00633	0.78479	-0.3898
Investment	Spain	26.13968	34.63353	28.26453	22.82476	29.34942	26.11713	3.314926	5.284107	2.147408	3.582147
Export	Spain	26.56596	33.88082	34.22666	19.58038	24.61152	24.22433	6.985577	9.269295	10.00233	8.7524
Government	Netherlands	10.4067	11.17155	11.25759	11.29461	11.10093	11.0696	-0.88791	0.070615	0.187993	-0.20977
Consumption	Netherlands	26.16478	28.5175	30.33222	28.86661	30.65667	28.492	-2.70183	-2.13917	1.840214	-1.00026
Investment	Netherlands	41.5806	41.61532	39.28991	40.16449	38.58723	35.47724	1.416109	3.02809	3.812672	2.75229
Export	Netherlands	33.28699	36.87843	34.9379	22.94145	25.31198	24.43405	10.34554	11.56645	10.50385	10.80528
Government	Portugal	8.667945	10.89044	9.508952	8.079675	8.72767	9.052867	0.588271	2.16277	0.456086	1.069042
Consumption	Portugal	27.5358	32.45614	29.01091	26.70294	30.8488	29.40012	0.832861	1.607338	-0.3892	0.683665
Investment	Portugal	35.27792	38.31834	36.14652	33.35904	37.22712	35.08241	1.918875	1.091225	1.064113	1.358071
Export	Portugal	35.75187	30.77923	38.90404	23.38351	26.0697	26.84408	12.36837	4.709527	12.05997	9.71262
Government	Norway	11.1166	10.92693	10.90916	9.139314	8.761336	8.720137	1.977287	2.165594	2.189021	2.110634
Consumption	Norway	29.0592	31.82713	32.02396	24.38837	26.10967	25.61698	4.670835	5.717457	6.406979	5.598424
Investment	Norway	42.052	41.96199	36.40469	40.13166	36.135	32.45414	1.920338	5.826984	3.950551	3.899291
Export	Norway	21.57799	16.85319	16.17314	16.36427	14.64742	13.21224	5.213715	2.205773	2.960902	3.46013
Government	New Zealand	10.0798	11.6114	9.84876	9.44032	10.22319	9.100374	0.63948	1.388215	0.748386	0.92536
Consumption	New Zealand	21.08614	23.75511	21.414	20.69399	23.83648	22.33323	0.392149	-0.08136	-0.91922	-0.20281
Investment	New Zealand	37.90668	41.19338	39.34453	33.98911	37.16205	33.21306	3.917565	4.031328	6.131471	4.693455
Export	New Zealand	18.09852	19.24121	17.53427	16.11309	16.61901	15.17134	1.985427	2.622198	2.362924	2.323516
Government	Sweden	10.53447	11.34694	11.17444	10.14415	11.49866	11.19795	0.390322	-0.15171	-0.02351	0.071699
Consumption	Sweden	23.21518	26.42952	28.12277	23.96422	27.87223	28.69358	-0.74905	-1.4427	-0.57081	-0.92085
Investment	Sweden	43.65245	47.83388	43.01987	41.01873	43.65835	37.92705	2.63372	4.175528	5.092816	3.967355
Export	Sweden	28.85699	32.28138	33.19739	22.14271	24.75866	26.30556	6.71428	7.522714	6.891831	7.042942
Government	Belgium	7.722632	10.59883	12.4247	11.31271	14.46716	14.12786	-3.59007	-3.86833	-1.70316	-3.05385
Consumption	Belgium	32.26941	36.52364	33.6063	33.42754	37.18256	35.99013	-1.15813	-0.65893	-2.38384	-1.4003

Investment	Belgium	43.58437	52.55199	49.7058	44.22084	49.18049	48.14865	-0.63647	3.371499	1.557159	1.430729
Export	Belgium	40.92671	45.92688	43.22952	31.64433	34.74165	32.44405	9.282381	11.18523	10.78547	10.4177
Government	Finland	7.911538	10.78852	11.97608	9.441037	10.22658	11.4484	-1.5295	0.561936	0.52768	-0.14663
Consumption	Finland	20.57225	22.87052	26.84266	21.79696	25.41466	26.50764	-1.22471	-2.54414	0.33502	-1.14461
Investment	Finland	42.35813	34.54668	32.44729	35.34061	33.33285	33.89123	7.017523	1.213837	-1.44393	2.262476
Export	Finland	28.80212	33.44118	38.01597	23.09683	26.37966	28.07038	5.705291	7.061518	9.945587	7.570799
Government	Denmark	7.120517	8.940909	10.39557	7.217596	8.629268	11.66067	-0.09708	0.31164	-1.2651	-0.35018
Consumption	Denmark	21.38183	30.32339	31.78464	24.53046	27.24665	29.73323	-3.14863	3.076746	2.051403	0.659839
Investment	Denmark	34.25354	40.30662	39.07358	33.32846	35.28616	34.67513	0.925081	5.020455	4.398453	3.447996
Export	Denmark	27.09937	32.25584	34.85522	24.06003	27.50349	32.00118	3.039339	4.752352	2.854039	3.548577
Government	Korea	11.37219	10.21781	10.48116	7.222314	8.934228	9.901842	4.149874	1.283581	0.57932	2.004259
Consumption	Korea	21.44426	23.81018	24.16597	16.28369	18.50052	18.49486	5.160579	5.309656	5.671116	5.38045
Investment	Korea	30.83756	35.53948	28.88329	27.89704	33.06602	31.58084	2.940529	2.473462	-2.69755	0.90548
Export	Korea	29.90546	38.11716	38.60314	25.45929	30.54774	32.50311	4.446167	7.569419	6.100034	6.03854
								2.353459	2.475297	2.4976	2.442118

Table 1: Green original estimates. Yellow my estimates. Last block are differences. 1985 = 1985 Estimate Original – 1985 My Estimate. Last column is the average of the differences. Very high mean means my estimates are below the originally estimate value while very negative values means I overestimated.

Country	Bussière et al. (2013)			My Estimates			OECD Estimates			Bussière et al. (2013) - OECD			My Estimates - OECD		
	1995	2000	2005	1995	2000	2005	1995 OECD	2000 OECD	2005 OECD	Dif Orig and OECD 1995	Dif Orig and OECD 2000	Dif Orig and OECD 2005	My Estimate s and OECD 1995	My Estimate s and OECD 2000	My Estimate s and OECD 2005
United States	9.450254	11.03156	12.34251	9.051968	10.22362	10.75158	8.63	9.77	10.39	0.820254	1.261559	1.952509 5	0.421968	0.453617	0.361576 594
United Kingdom	22.16688	20.29628	18.64989	15.75004	15.00783	14.88215	15.43	14.73	14.65	6.736883	5.566276	3.999889 3	0.320045	0.277828	0.232145 195
Japan	8.3571	9.618018	15.36313	5.585684	6.981593	11.06006	5.58	6.98	11.02	2.7771	2.638018	4.343126	0.005684	0.001593	0.040058 023
France	19.78651	26.50662	26.99214	16.54394	21.0963	21.22232	16.03	20.36	20.52	3.756515	6.146622	6.472141	0.513939	0.736297	0.702320 469
Germany	20.3699	25.75322	27.19987	14.55186	19.22954	20.22126	14.42	19.06	20.07	5.949905	6.693221	7.129868 3	0.13186	0.169539	0.151264 037

Italy	23.36115	27.09457	28.9897	16.05817	18.74429	20.31275	15.36	18.06	19.68	8.001148	9.034568	9.3097004	0.698175	0.684291	0.632752901
Canada	30.48116	30.90617	27.35198	24.0738	26.05265	21.69381	23.64	25.69	21.41	6.841159	5.216169	5.941977	0.433805	0.362649	0.283805218
Australia	13.99135	14.14268	14.01553	11.38568	13.13175	11.63914	11.12	12.77	11.38	2.871355	1.372683	2.6355262	0.265679	0.361755	0.259142041
Spain	26.56596	33.88082	34.22666	19.58038	24.61152	24.22433	18.24	23.19	23	8.325959	10.69082	11.2266571	1.340382	1.421524	1.224328264
Netherlands	33.28699	36.87843	34.9379	22.94145	25.31198	24.43405	22.77	25.11	24.27	10.51699	11.76843	10.6678965	0.171452	0.201982	0.164045097
Portugal	35.75187	30.77923	38.90404	23.38351	26.0697	26.84408	22.36	24.71	25.43	13.39187	6.069231	13.4740431	1.023508	1.359704	1.414076979
Norway	21.57799	16.85319	16.17314	16.36427	14.64742	13.21224	16.29	14.64	13.22	5.287986	2.213194	2.9531404	0.074271	0.007421	0.007761618
New Zealand	18.09852	19.24121	17.53427	16.11309	16.61901	15.17134	15.78	16.3	14.72	2.318517	2.941207	2.8142651	0.33309	0.319009	0.45134149
Sweden	28.85699	32.28138	33.19739	22.14271	24.75866	26.30556	21.95	24.55	26.04	6.906994	7.731377	7.1573863	0.192714	0.208663	0.265555487
Belgium	40.92671	45.92688	43.22952	31.64433	34.74165	32.44405	31.42	34.54	32.28	9.50671	11.38688	10.9495232	0.224329	0.201646	0.164050499
Finland	28.80212	33.44118	38.01597	23.09683	26.37966	28.07038	22.83	26.14	27.81	5.972124	7.301183	10.2059706	0.266833	0.239665	0.260384033
Denmark	27.09937	32.25584	34.85522	24.06003	27.50349	32.00118	23.67	27.12	31.59	3.429373	5.135844	3.265219	0.390033	0.383492	0.411179749
Korea	29.90546	38.11716	38.60314	25.45929	30.54774	32.50311	25.27	30.25	32.36	4.635456	7.867157	6.2431428	0.189289	0.297738	0.143108476
Average										6.002572	6.16858	6.707887878	0.388725	0.427134	0.397409607

Table 2: Share of Import Content in Exports

To determine which values would be best to use, we can look at YoY results. To begin with, comparing **EA-20** and **EU-27** it is clear that the differences are marginal. This means that averages when estimating EA and EU can be held the same (Figure 1).

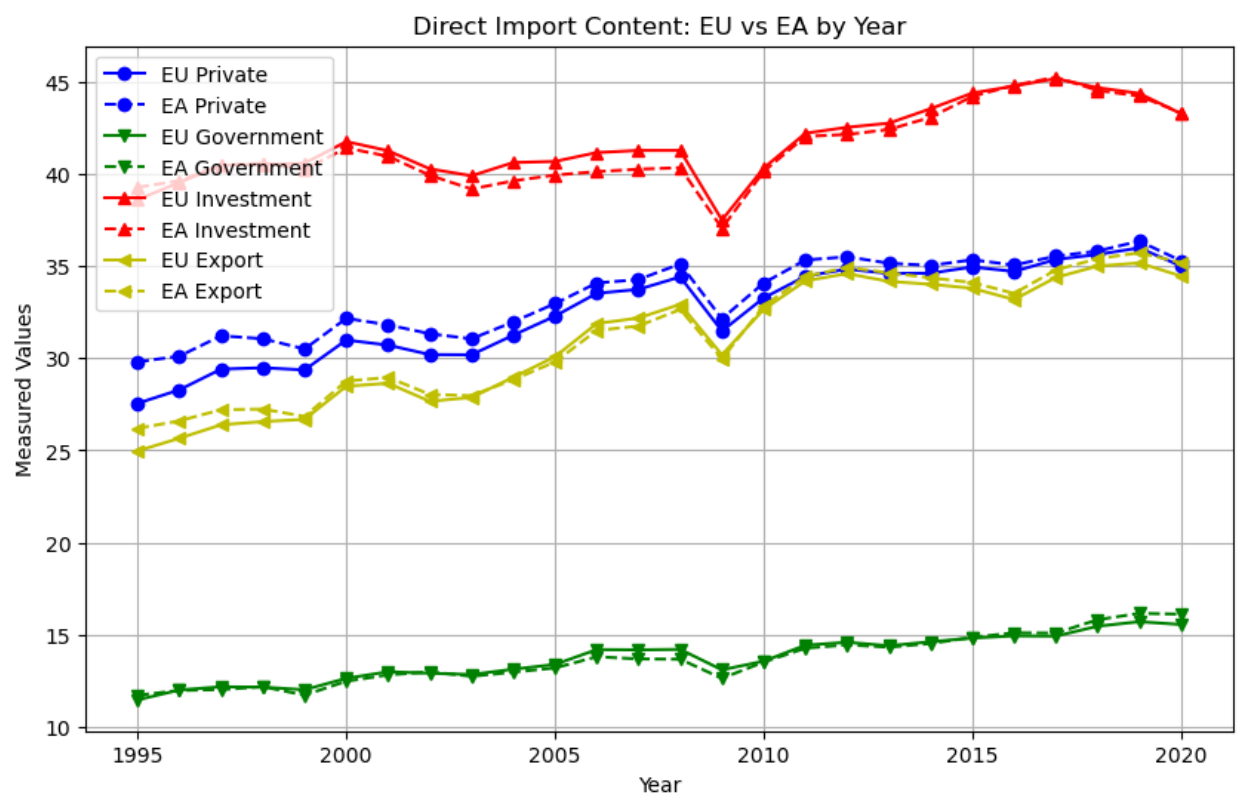


Figure 1: EU and EA Mean Import Content Share over Time.

Starker differences appear when comparing **EA-20/EU-27** to **Non-EA-20/Non-EU-27** showing that that on average the share if import content in GDP components is always lower (Figure 2 & 3).

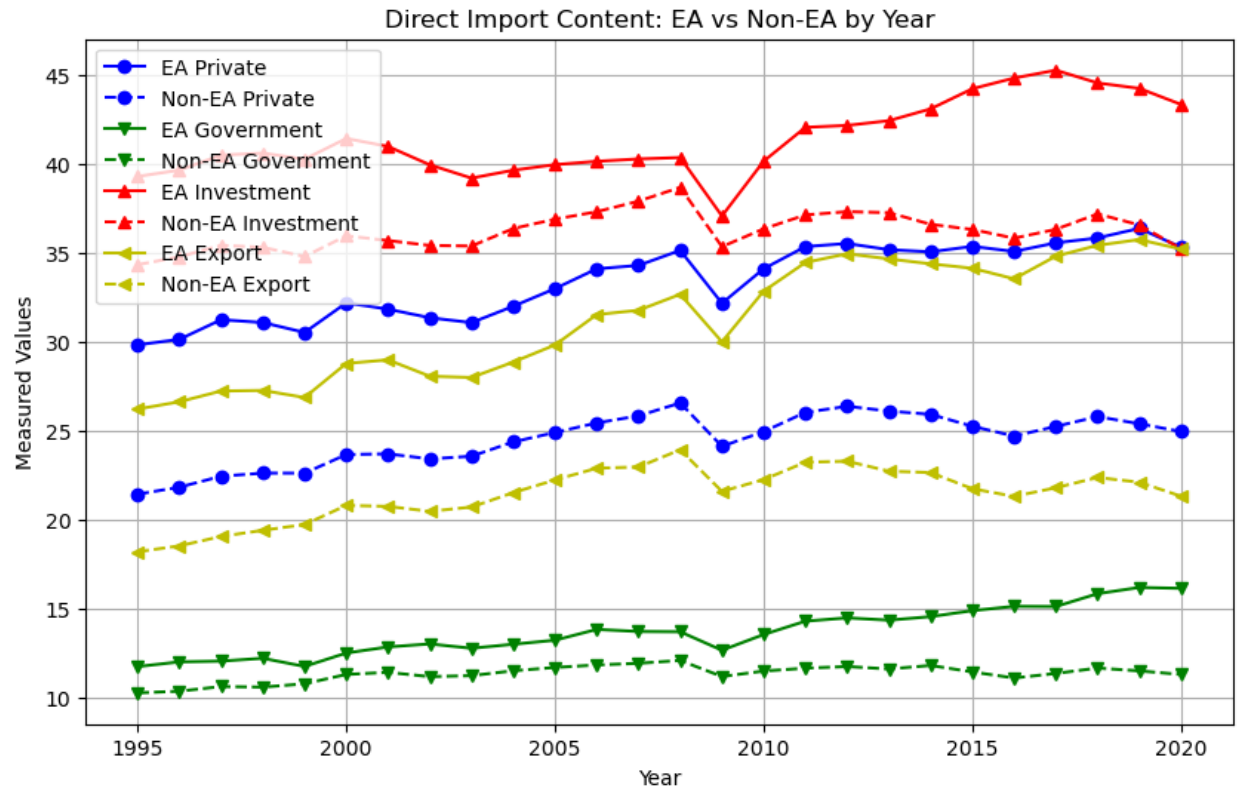


Figure 2: EA and Non-EA Import Content Share over Time.

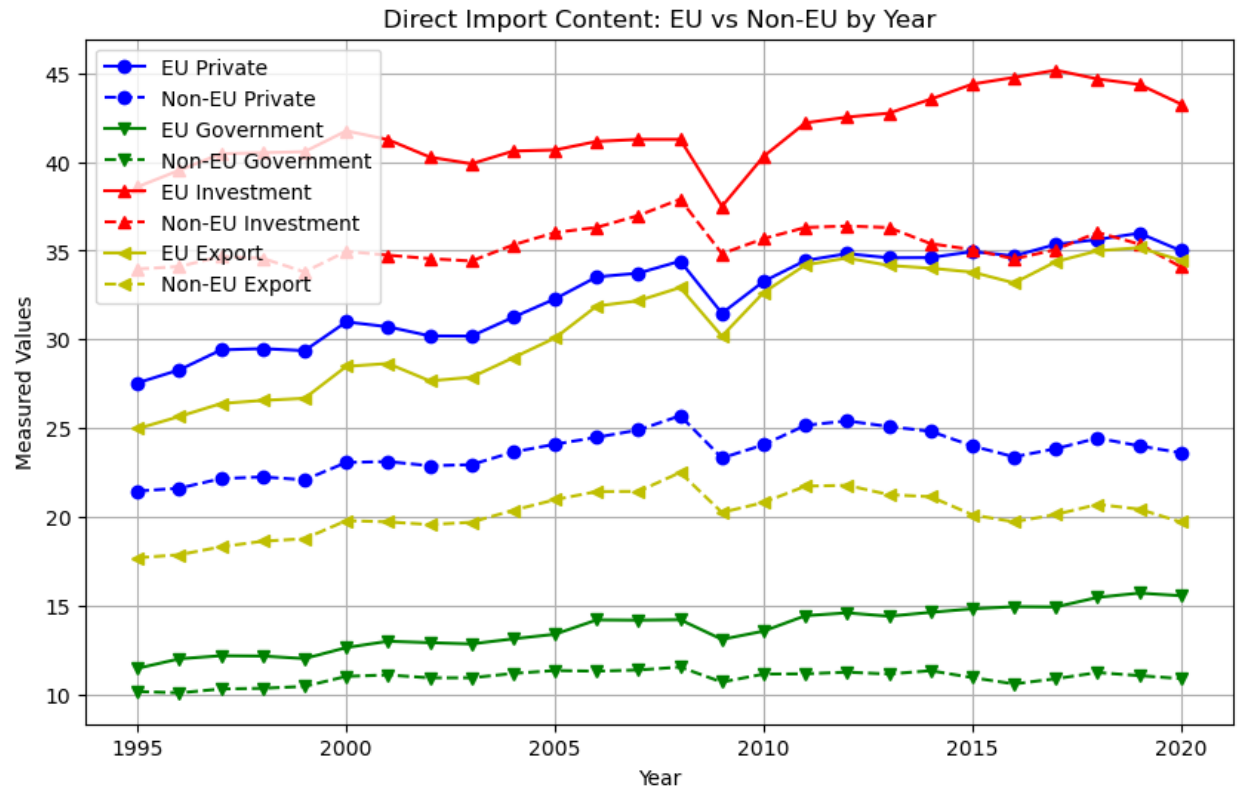


Figure 3: EU and Non-EU Import Content Share over Time.

When comparing different time intervals we can clearly see that both EA and EU see a consistently growing import content share, while the Non-EA and Non-EU countries see a more flat share with a small decline in the 2016-2020 period.

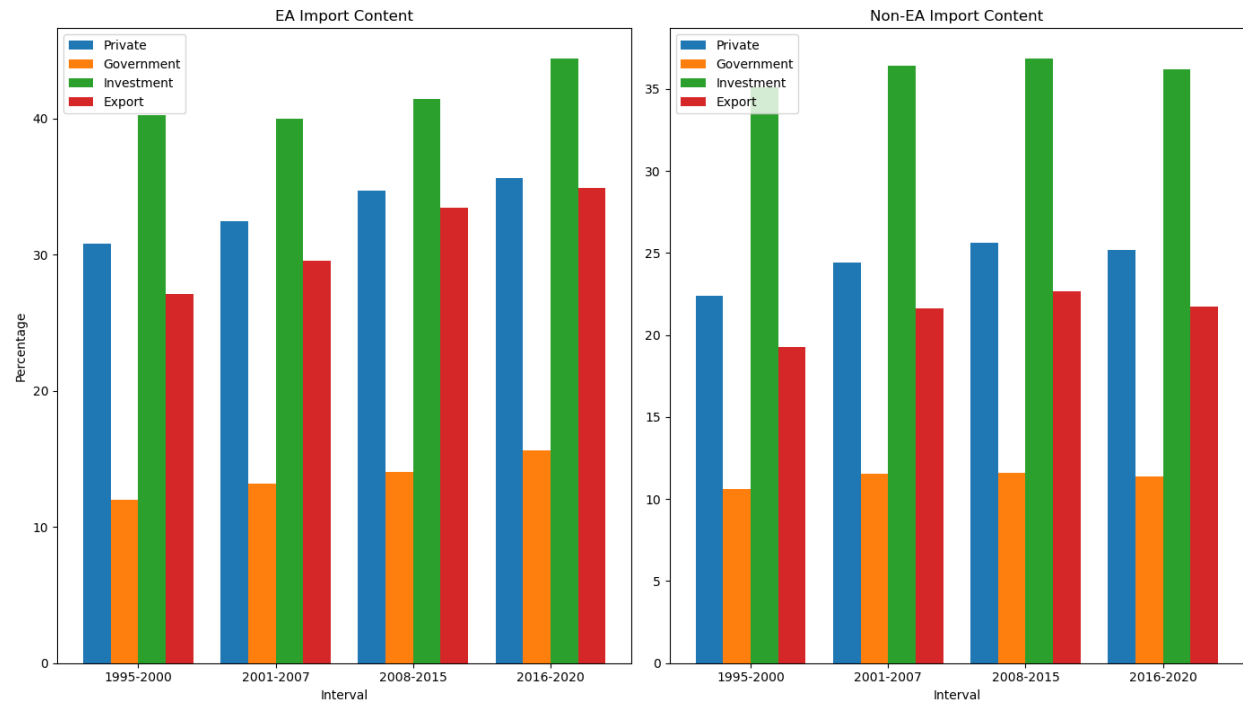


Figure 4: Bar Plot EA and Non-EA over Interval.

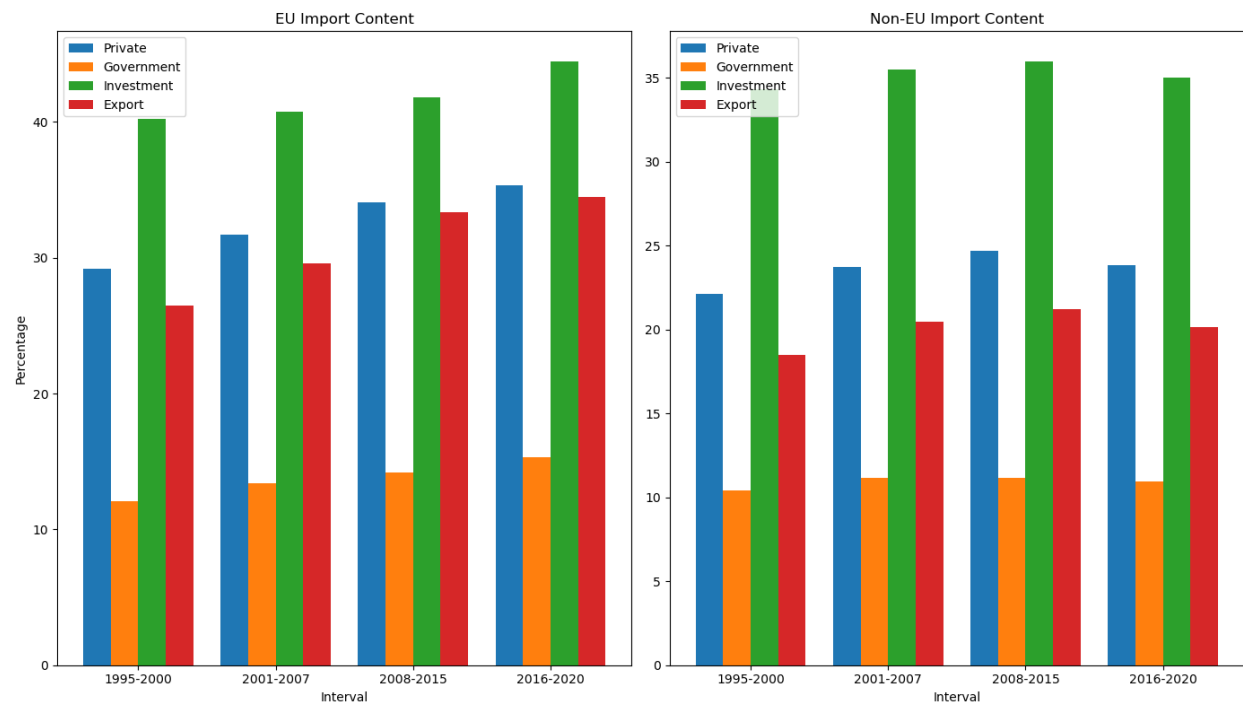


Figure 5: Bar Plot EU and Non-EU over Interval.