

# Trade Creation and Trade Diversion Effects of the EU

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- ▶ 511 Regional Trade Agreements (RTAs) have been notified to World Trade Organization (WTO) as of January, 2012, out of which 319 RTAs are in force. Among the RTAs 90 percent are Free Trade Areas (FTA) and 10 percent are Custom Union (CU) ([WTO website](#)).
- ▶ 97 percent of international trade in 2000 was among the countries that had joined at least one of the RTAs. However, this share was 72 percent in 1990 ([Clarete et al. \(2003\)](#)).
- ▶ Similarly, 21 Asia-Pacific Economic Cooperation (APEC) economies collectively, account for 44 percent of world trade ([Hagen \(1994\)](#), [Stevens \(1995\)](#)).
- ▶ Likewise, EU is the chief economic area in the world with 30 percent of global GDP and 17 percent of the global trade ([EUCOM \(2009\)](#)).

## An RTA effects partners countries through two channels

- ▶ **Scale and Competition Channel:** bigger markets, more competition, efficient and quality product and opportunity to reap benefits of large scale production
- ▶ **Trade and Location Channel:** due to removal of tariff the shifts in demand and supply from non-members to members. Comparative advantage in production and the re-allocation of resources

## Theoretical Backgrounds

- ▶ Viner (1950), Lipsey (1957), Bhagwati (1971), Gehrels (1956), Riezman (1979) and Kowalczyk (2000) have discussed theoretical framework about trade creation, trade diversion and the welfare effects of the RTA.
- ▶ Empirical investigation of an RTA and trade includes the studies like Sayan (1998), Keuschnigg et al. (1996), Radelet (1997), Goto and Hamada (1999), Watcher (2005), Nguyen and Ezaki (2005), Kandogan (2005), Sarker and Jayasinghe (2007), Georges (2008), Lee et al. (2008), Lambert and McKoy (2009), Datta and Kouliavtsev (2009) and Vollrath et al. (2009).
- ▶ However, These studies present mixed results. Some of them conclude that an RTA creates trade and while the other studies point out that an RTA diverts the trade. Moreover, the effects of an RTA on trade flows vary from bloc to bloc, country to country and from commodity to commodity.
- ▶ Cooper (2006) divides the existing empirical findings into three groups.

- ▶ [Morrison R\(2010\)](#) states that The Customs Union protocol came into force in 2005 and by 2007 the total intra EAC trade had increased by 22 percent from USD 1342.6 million to USD 1973.2 million.
- ▶ [Frankle and Rose \(2002\)](#) using the two step estimation methodology to analyze the effects of the common currencies on trade and income revealed that belonging to a currency union/board triples trade with other currency union members.
- ▶ [Kimberly \(2001\)](#) find that the trade that was already freely flowing from Canada to the United States increased approximately 40 per cent over the five years following the agreement.
- ▶ [Fredrik \(2006\) and Ludo \(1999 \)](#) state all ASEAN countries will experience trade diversion from the enlargement of the EU and the European Eastern European countries.
- ▶ [Japan Hyun-Hoon et al \(2008\)](#) observed that trade diversion occurs only for Chinese' exports to the EU, EFTA and EAEC.
- ▶ [Thomas et al \(2009\)](#) states that in case clothing except 1995 , indirect impact of bilateral FTAs appears to have diverted trade from the efficient suppliers.

## The Objectives of the Study

- ▶ To estimate the overall trade creation and trade diversion impact of the 4<sup>th</sup> and 5<sup>th</sup> extensions of the EU.
- ▶ To estimate the commodity group specific trade creation and trade diversion impact of the 4<sup>th</sup> and 5<sup>th</sup> extensions of the EU.
- ▶ To estimate the trade creation and trade diversion impact of the new members joining the EU in 4<sup>th</sup> and 5<sup>th</sup> extensions of the EU.

- ▶ EU is the chief economic area in the world with 30 percent of global GDP and 17 percent of the global trade (EUCOM (2009)). Moreover, EU has gone through many extensions.
- ▶ Effects of the regional trade agreements vary from country to countries, from commodity to commodity and from agreement to agreement.
- ▶ Existing analyse only single commodity or sector to estimate the impact of an RTA on the trade flows of members and non-members.

## Gravity Model

- ▶ In order to analyse the impact of 4<sup>th</sup> and 5<sup>th</sup> extensions in the EU on members and non-members trade flows we apply Gravity Model which is vastly used to analyse the bilateral and multilateral trade.
- ▶ Tinbergen (1962) and Poyhonen (1963) are pioneer in applying simple Gravity Model to evaluate the volume of international trade flows.
- ▶ Later with some modification Linnenam(1966), Jozeph (1977), Aderson (1979) , Krugman (1985), Bergetrand (1989), Deardroff (1998), Evenett and Keller (2002), Frankel and Rose (2002), Anderson and Wincoop (2004) have used the modified gravity model to reveal the impact of regionalization on the trade flows.



- ▶ In recent empirical work Hyun-Hoon et al (2008) have applied Gravity Model to uncover the effects of leading Regional Trading Blocs on the exports from China, Korea and Japan. Thomas et al (2009) have applied this methodology to investigate the influence of bilateral import protection, free trade agreements and other factors on the trade flows in agriculture and clothing. Similarly Soloaga and Winter (2001) and Kandogan (2005) have applied this model to analyse the impact of regional integration on trade flows.

We use correctly-specified fixed effect gravity model used by [Kandogan \(2005\)](#) to estimate the effects of extension in the EU on the trade flows.

$$M_{ijts} = \lambda_t + \alpha_i + \gamma_j + \delta_{ij} + \theta_s + \beta_1 Y_{it} + \beta_2 Y_{jt} + \beta_3 d_{ij} + \beta_4 \Delta e_{ijt} + \beta_5 R_{it} + \beta_6 R_{jt} + \beta_7 SIM_{ijt} + \beta_8 RF_{ijt} + \beta_9 COL_{ij} + \beta_{10} CL_{ij} + \beta_{11} CB_{ij} + \varepsilon_{ijt} \quad (1)$$

where  $M_{ijts}$  real imports of commodity group  $s$  of country  $i$  from country  $j$  at time  $t$ .  $\lambda_t$ ,  $\alpha_i$ ,  $\gamma_j$ ,  $\theta_s$  and  $\delta_{ij}$  denote year, importer, exporter, commodity group, and bilateral interaction fixed effects, respectively.

## Similarity Index

$$SIM = \ln\left[1 - \left(\frac{Y_{it}}{Y_{it} + Y_{jt}}\right)^2 - \left(\frac{Y_{jt}}{Y_{it} + Y_{jt}}\right)^2\right] \quad (2)$$

## Relative factor Endowment

$$RF_{ij} = \left| \ln\left[\frac{K_{it}}{L_{it}}\right] - \ln\left[\frac{K_{jt}}{L_{jt}}\right] \right| \quad (3)$$

## Initial Capital stock

$$K_{i1} = 5(GFCF_{i0} + GFCF_{i1}) \quad (4)$$

## Capital Stock at time $t$

$$K_{it} = 0.9K_{it-1} + GFCF_{it} \quad (5)$$

where  $GFCF_{it}$  is the gross fixed capital formation in country  $i$  at time  $t$ .

We assume that capital stock depreciate at a constant rate of 10 percent.

## Trade Creation (TC)

$$TC = \bar{\varepsilon}_{ijt} \text{ after for members} - \bar{\varepsilon}_{ijt} \text{ before for members} \quad (6)$$

## Trade Diversion

$$TD = \bar{\varepsilon}_{ijt} \text{ after for non-members} - \bar{\varepsilon}_{ijt} \text{ before for non-members} \quad (7)$$

## Net Trade

$$NET = TC - TD \quad (8)$$

- ▶ Annual data  $\Rightarrow$  1988 to 2008.
- ▶ Bilateral imports (M) and bilateral exports (X) of 27 EU member countries have been taken from the **United Nations Commodity Trade Statistics Database; UN COMTRADE 2009**.
- ▶ Data on GDP, foreign exchange reserves, labor force, gross fixed capital formation, and exchange rates are extracted from **World Development Indicator (WDI) 2009**.
- ▶ Geographical distance between the trading partners, past colonial relationship, common language, and common border are taken from **CEPII online**.

## Imports and Exports

Table 1: Total Imports and Exports of the EU

Year	Exports		Imports	
	EU	Non-EU	EU	Non-EU
1991	897.178	599.212	728.406	691.319
1992	978.662	659.016	780.385	735.160
1993	853.682	631.667	625.977	669.779
1994	997.841	717.866	718.951	759.469
<b>1995</b>	<b>1248.802</b>	<b>857.755</b>	<b>999.024</b>	<b>808.655</b>
1996	1286.715	897.245	1024.682	850.885
1997	1312.686	913.134	1018.747	874.318
1998	1385.83	917.242	1084.673	902.841
1999	1692.766	812.773	1320.102	864.025
2000	1685.791	859.093	1326.308	999.440
2001	1733.482	867.738	1317.510	985.415
2002	1884.879	947.549	1404.801	1013.325
2003	2248.341	1114.12	1694.494	1222.631
<b>2004</b>	<b>2690.877</b>	<b>1330.278</b>	<b>2208.513</b>	<b>1334.170</b>
2005	2916.706	1470.914	2357.005	1526.033
2006	3302.405	1667.333	2665.484	1791.460
2007	3821.73	1934.349	3184.714	2030.862
2008	4167.848	2173.137	3199.224	2191.428

Figures in billion dollars.

## Intra EU Imports

Table 2: Percentage Share of Intra EU Imports

Year	SITC 0	SITC 1	SITC 2	SITC 3	SITC 4	SITC 5	SITC 6	SITC 7	SITC 8	SITC 9
1988	48.1	68.2	26.5	16.5	42.6	50.5	42.9	42.8	42.9	20.5
1989	49.3	69.0	26.3	13.4	45.5	50.5	43.0	43.5	42.7	21.5
1990	50.5	69.6	27.0	14.6	50.3	50.9	44.3	44.9	43.3	22.8
1991	58.1	72.2	35.1	21.5	57.2	60.7	54.9	56.0	48.6	32.0
1992	58.4	70.0	34.3	20.6	51.7	60.1	54.9	56.5	48.1	36.7
1993	56.9	70.8	31.9	19.4	51.9	57.2	50.9	52.1	41.9	61.2
1994	56.2	70.7	31.4	18.8	50.6	57.8	50.4	52.5	42.6	57.3
1995	58.3	73.2	41.6	21.3	51.7	62.0	61.3	59.0	47.0	67.5
1996	57.8	70.7	40.9	21.3	56.2	61.7	60.8	59.0	46.8	66.8
1997	57.6	69.6	40.3	21.2	55.9	60.9	59.9	57.4	45.7	68.3
1998	57.8	70.8	40.4	22.3	52.8	61.4	59.3	57.7	45.0	67.2
1999	66.3	76.8	46.0	28.8	61.4	71.6	66.2	61.8	49.0	83.9
2000	64.5	74.9	43.3	28.0	61.9	70.4	62.5	58.6	45.9	78.2
2001	64.4	75.7	43.6	28.0	63.4	70.5	63.7	60.4	46.2	50.1
2002	65.2	76.6	46.0	28.3	63.1	71.8	63.4	60.8	46.8	55.0
2003	65.7	78.0	46.3	29.6	62.2	71.6	63.2	59.2	46.4	75.6
2004	69.0	79.9	51.8	31.8	61.5	73.4	68.8	64.8	51.7	78.5
2005	68.6	80.2	51.7	31.9	61.4	73.3	67.8	64.4	50.5	68.9
2006	68.7	80.5	52.2	31.7	59.7	72.9	66.2	63.7	49.2	68.6
2007	68.3	80.9	52.5	31.0	59.2	72.3	65.7	65.1	50.7	81.9
2008	68.7	81.2	51.2	31.4	58.7	71.2	66.0	63.2	49.1	80.9

Figures are in percentages.



## Intra EU Exports

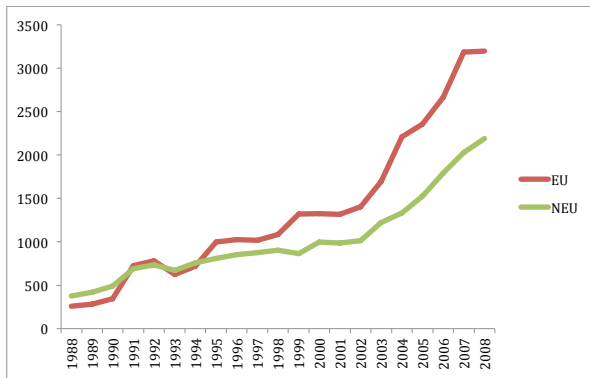
Table 3: Percentage Share of Intra EU Exports

Year	SITC 0	SITC 1	SITC 2	SITC 3	SITC 4	SITC 5	SITC 6	SITC 7	SITC 8	SITC 9
1991	70.8	54.4	70.0	60.7	65.2	55.7	55.7	64.0	57.6	60.6
1992	70.1	53.4	70.1	61.2	61.6	55.2	55.2	63.9	57.4	61.0
1993	70.1	51.0	67.9	58.2	64.6	52.8	52.8	62.0	54.3	59.3
1994	69.9	50.8	70.2	57.7	63.9	54.3	54.3	63.1	55.0	59.1
1995	69.6	52.0	70.4	59.0	62.8	55.8	55.8	64.5	56.5	59.3
1996	69.7	52.6	68.4	59.9	65.8	55.6	55.6	63.4	56.3	59.6
1997	68.1	51.6	68.2	62.2	60.6	55.1	55.1	63.6	57.0	60.0
1998	69.7	53.3	69.5	61.0	58.7	55.6	55.6	65.5	59.0	60.2
1999	78.9	63.0	74.9	69.6	68.0	63.9	63.9	71.6	66.1	67.8
2000	77.5	60.6	74.2	68.7	66.5	63.1	63.1	70.0	64.9	65.5
2001	78.3	60.9	74.0	70.0	71.0	63.1	63.1	70.9	65.4	66.0
2002	78.6	61.2	73.1	68.9	71.7	63.0	63.0	70.0	65.8	66.1
2003	79.6	61.6	73.7	68.2	73.2	63.5	63.5	70.7	65.5	67.2
2004	80.4	62.1	73.4	67.5	73.3	64.2	64.2	70.6	65.2	66.7
2005	80.6	61.4	71.7	67.5	74.4	64.5	64.5	69.6	64.3	66.7
2006	80.4	59.4	71.7	66.0	76.6	64.1	64.1	70.4	64.6	66.1
2007	80.7	60.2	72.6	64.4	78.2	64.7	64.7	70.9	63.6	66.5
2008	79.8	60.8	71.1	64.9	79.7	64.9	64.9	70.2	61.9	66.4

Figures are in percentages

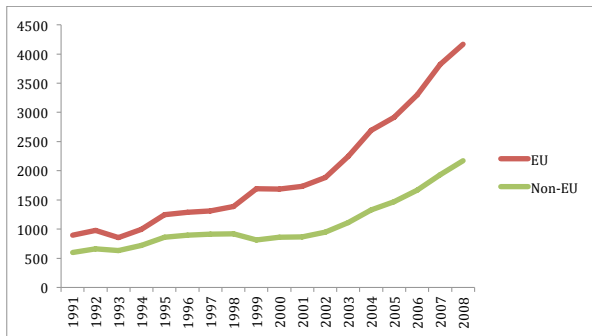
## Imports

Figure 1: Total Imports (in Billion Dollars) of the EU to Member and Non-member Countries from 1991 to 2008



## Exports

Figure 2: Total Exports (in Billion Dollars) of the EU to Member and Non-member Countries from 1991 to 2008



## Summary Statistics

Table 4: Some characteristics of the European Union countries

Extension	COUNTRY	Y	PY	RES	DIST	K/L	Tarif1	Tarif2	Tarif3	Tarif4
Founding Members	Belgium	2972.260	284.847	144.301	5904.044	1338.724	2.738		2.738	2.310
	France	15295.480	251.581	769.223	6173.096	1058.741	3.465	4.226	3.465	2.310
	Germany	21810.030	266.135	1167.555	6171.918	1082.405	3.348	4.205	3.348	2.310
	Italy	12952.260	225.344	806.659	5902.234	1122.651	3.481	4.227	3.481	2.310
	Luxembourg	290.293	631.120	2.354	4858.806	3005.668	2.718		2.718	2.310
	Netherlands	4387.335	277.736	363.237	6156.097	1158.058	3.473	4.228	3.473	2.310
1 <sup>st</sup>	Denmark	13662.040	2569.814	234.022	5960.626	9324.386	3.439	4.209	3.439	2.310
	Ireland	1099.932	280.205	61.899	6011.805	1373.723	3.443	4.238	3.443	2.310
	United Kingdom	10083.810	170.910	510.138	6427.224	585.882	3.487	4.228	3.487	2.310
2 <sup>nd</sup>	Greece	1586.142	146.513	134.759	5120.412	715.890	3.437	4.225	3.437	2.310
3 <sup>rd</sup>	Portugal	1343.456	130.725	222.818	5826.640	635.546	3.413	4.230	3.413	2.310
	Spain	7105.264	173.426	562.199	5886.856	983.490	3.503	4.236	3.503	2.330
4 <sup>th</sup>	Austria	2235.897	278.285	203.819	5421.344	1326.915	3.384	4.226	3.384	2.310
	Finland	1328.738	257.305	98.478	5647.318	1024.297	3.437	4.234	3.437	2.310
	Sweden	23284.260	2622.476	230.076	5996.414	9050.720	3.452	4.230	3.452	2.310
5 <sup>th</sup>	Cyprus	111.258	117.650	29.602	4172.727	479.308	3.392	4.413	3.392	2.310
	Czech Rep.				4961.782					
	Estonia	1457.574	1073.310	16.913	4677.071	6603.488	3.001		3.001	2.310
	Hungary	185980.500	18268.250	195.046	4757.844	98691.300	3.243	4.038	3.243	2.311
	Latvia	78.117	33.609	23.253	4281.622	183.063	3.004	4.350	3.004	2.310
	Lithuania	613.984	177.681	31.539	4189.571	859.890	3.063	4.225	3.063	2.309
	Malta	42.979	110.486	22.179	4347.709	589.568	3.321	4.575	3.321	2.309
	Poland	8968.603	234.178	381.387	4871.189	1034.336	3.099	4.014	3.099	2.310
	Slovakia	461.052	85.610	106.455	4395.978	482.822	3.125	4.350	3.125	2.311
Slovenia	252.507	126.353	50.471	4409.432	656.387	3.160	3.848	3.160	2.330	
6 <sup>th</sup>	Bulgaria	410.719	52.146	88.378	4734.072	249.890	2.866		2.866	2.309
	Romania	2464.418	111.769	2290.297	4537.797	508.098	3.327	4.333	3.327	2.310

Y=Real GDP in Billion, PY=Per Capita Real GDP,RES=Foreign Reserves in Billion, K/L= Capital Labor ratio

Tarif1=Average tariff for 1988-2008, Tarif2=Average tariff for 1988-1994, Tarif3=Average tariff for 1995-2003, Tarif4=Average tariff for 2004-2008

Y, PY, DIST, RES Values are the averages for each country for 1998-2008

## Regression Results

Table 5: Total Imports of the EU from 1988 to 2008

	Before 4 <sup>th</sup> Extension	Before 5 <sup>th</sup> Extension	With 4 <sup>th</sup> and 5 <sup>th</sup> Extension
$Y_i$	1.880*** (0.240)	1.270*** (0.136)	0.616*** (0.103)
$Y_j$	0.133 (0.161)	0.082 (0.078)	0.108 (0.088)
$d_{ij}$	-1.260*** (0.094)	-1.457*** (0.079)	-1.549*** (0.086)
$SIM$	-0.104 (0.108)	-0.040 (0.059)	-0.023 (0.060)
$e_{ij}$	-0.077*** (0.021)	-0.111*** (0.020)	-0.133*** (0.021)
$R_i$	0.302*** (0.038)	0.475*** (0.031)	0.475*** (0.033)
$R_j$	0.144*** (0.025)	0.163*** (0.034)	0.177*** (0.038)
$RF$	-0.085 (0.075)	-0.020 (0.041)	-0.006 (0.040)
$COL$	0.682*** (0.110)	0.561*** (0.122)	0.561*** (0.132)
$CL$	0.471*** (0.102)	0.563*** (0.097)	0.597*** (0.108)
$CB$	0.397** (0.160)	0.555*** (0.122)	0.574*** (0.128)
$N$	41824	129811	165901
$r^2_o$	0.597	0.577	0.563
$N\_clust$	124	151	155

Robust Standard errors in parentheses, Standard errors are clustered by Partner

Time, Reporter, Partner and Sector fixed effects are controlled

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Trade Creation and Trade Diversion for Imports

Table 6: Trade Creation and Trade Diversion Effects of 4<sup>th</sup> and 5<sup>th</sup> Extension in the EU,

Imports	Extension	TD	TC	Net
Total	4 <sup>th</sup>	-0.0262	0.1185	0.1447
Total	5 <sup>th</sup>	-0.0322	0.1504	0.1826
S3-0	4 <sup>th</sup>	-0.0394	0.2064	0.2458
	5 <sup>th</sup>	-0.0454	0.2492	0.2945
S3-1	4 <sup>th</sup>	-0.0796	0.2373	0.3169
	5 <sup>th</sup>	-0.1069	0.2662	0.3731
S3-2	4 <sup>th</sup>	-0.0288	0.0885	0.1173
	5 <sup>th</sup>	-0.0525	0.1280	0.1805
S3-3	4 <sup>th</sup>	0.0010	0.0061	0.0052
	5 <sup>th</sup>	-0.0061	0.0236	0.0298
S3-4	4 <sup>th</sup>	-0.0687	0.0835	0.1522
	5 <sup>th</sup>	-0.1020	0.1256	0.2276
S3-5	4 <sup>th</sup>	-0.0139	0.0834	0.0973
	5 <sup>th</sup>	-0.0266	0.1124	0.1389
S3-6	4 <sup>th</sup>	-0.0041	0.0462	0.0503
	5 <sup>th</sup>	-0.0148	0.0739	0.0886
S3-7	4 <sup>th</sup>	0.0056	0.1101	0.1045
	5 <sup>th</sup>	0.0213	0.1600	0.1386
S3-8	4 <sup>th</sup>	-0.0077	0.0417	0.0494
	5 <sup>th</sup>	-0.0069	0.0553	0.0621
S3-9	4 <sup>th</sup>	-0.0334	0.2047	0.2381
	5 <sup>th</sup>	-0.0461	0.4397	0.4859

## New Members Trade Creation and Trade Diversion for Imports

Table 7: Trade Creation and Trade Diversion Effects of New members joining EU in 4<sup>th</sup> and 5<sup>th</sup> Extension

Extension	New Member	TD	TC	Net
4 <sup>th</sup>	Austria	-0.097	0.147	0.244
	Finland	0.018	0.112	0.094
	Seweden	-0.026	0.308	0.334
5 <sup>th</sup>	Cyprus	-0.249	-0.090	0.159
	Czech Republic	-	-	-
	Estonia	0.031	0.184	0.153
	Hungary	-0.261	0.388	0.648
	Latvia	0.003	0.210	0.207
	Lithuania	-0.124	0.220	0.344
	Malta	-0.121	0.212	0.333
	Poland	0.049	0.345	0.296
Slovakia	0.043	0.321	0.277	
	Slovenia	-0.517	0.104	0.621

The data of Czech Republic is not available.

## Trade Creation and Trade Diversion for Exports

Table 8: Trade Creation and Trade Diversion of 4<sup>th</sup> and 5<sup>th</sup> Extension in the EU

Exports	Extension	TD	TC	Net
Toatl	4 <sup>th</sup>	-0.0078	0.1192	0.1270
Total	5 <sup>th</sup>	0.0092	0.1607	0.1515
SITC3-0	4 <sup>th</sup>	-0.0212	0.2587	0.2798
	5 <sup>th</sup>	-0.0203	0.3234	0.3437
SITC3-1	4 <sup>th</sup>	-0.0294	0.1962	0.2256
	5 <sup>th</sup>	-0.0013	0.2721	0.2734
SITC3-2	4 <sup>th</sup>	-0.0114	0.0624	0.0738
	5 <sup>th</sup>	-0.0242	0.0748	0.0990
SITC3-3	4 <sup>th</sup>	0.0210	0.0029	-0.0181
	5 <sup>th</sup>	0.0251	0.1125	0.0873
SITC3-4	4 <sup>th</sup>	-0.0606	0.1852	0.2458
	5 <sup>th</sup>	-0.0352	0.0847	0.1199
SITC3-5	4 <sup>th</sup>	-0.0086	0.1382	0.1468
	5 <sup>th</sup>	-0.1035	0.1832	0.2867
SITC3-6	4 <sup>th</sup>	-0.0187	0.1221	0.1408
	5 <sup>th</sup>	-0.0175	0.1384	0.1559
SITC3-7	4 <sup>th</sup>	0.0240	0.0851	0.0611
	5 <sup>th</sup>	0.0439	0.0880	0.0441
SITC3-8	4 <sup>th</sup>	0.0088	0.0684	0.0597
	5 <sup>th</sup>	0.0143	0.0714	0.0571
SITC3-9	4 <sup>th</sup>	0.0021	0.2441	0.2419
	5 <sup>th</sup>	0.4027	0.7173	0.3146



## New members Trade Creation and Trade Diversion for Exports

Table 9: Trade Creation and Trade Diversion of New members joining EU in 4<sup>th</sup> and 5<sup>th</sup> Extensions in the EU

Extension	New Member	TD	TC	Net
4 <sup>th</sup>	Austria	-0.123	0.085	0.207
	Finland	-0.009	0.078	0.087
	Seweden	0.105	0.319	0.214
5 <sup>th</sup>	Cyprus	-0.444	-0.443	0.001
	Czech Republic	-	-	-
	Estonia	-0.081	0.016	0.097
	Hungary	-0.023	0.289	0.312
	Latvia	0.056	0.352	0.296
	Lithuania	0.035	0.515	0.480
	Malta	0.171	0.209	0.038
	Poland	0.060	0.560	0.501
Slovakia	0.016	0.364	0.348	
Slovenia	-0.030	0.181	0.211	

The data of Czech Republic is not available.

## Overall Trade Creation and Trade Diversion

- ▶ Both 4<sup>th</sup> and 5<sup>th</sup> extensions of the EU causes the import diversion.
- ▶ After 4<sup>th</sup> and 5<sup>th</sup> extensions of the EU, the member countries have decreased their imports from non-member countries and have increased their imports from the member countries.
- ▶ However, the decrease in imports from non-member countries is lower than the increase in imports from member countries.
- ▶ Intra EU trade has strengthened after 4<sup>th</sup> and 5<sup>th</sup> extension of the EU and EU member countries' trade with rest of the world has suffered.
- ▶ These findings provide the evidence of trade diversion taking place in results of 4<sup>th</sup> and 5<sup>th</sup> extensions of the EU.

- ▶ From new members joining the EU in 4<sup>th</sup> extension in 1995 Austria and Sweden lead to import diversion and Austria and Finland cause the export diversion.
- ▶ Similarly, from the countries who became the member of the EU in 5<sup>th</sup> extension of the EU in 2004, Cyprus, Hungary, Lithuania Malta and Slovenia increase their imports from member countries but decrease their imports from non-member countries.
- ▶ Moreover, after joining the EU in 2004, Cyprus, Estonia, Hungary, and Slovenia have decreased their exports to non-member countries and their exports to member countries have increased.

## Commodity Groups

- ▶ After the 4<sup>th</sup> extension of EU, intra EU imports has increased at the cost of decreasing imports from the rest of the world in all the commodity groups except “ Minerals Fuel, Lubricants and related material” and “Machinery and Transport equipments”.
- ▶ Except these two commodity groups the 4<sup>th</sup> extension of the EU leads to trade diversion. The trade creation effects for these two commodity groups may indicates that EU countries imports intermediate products from the rest of the world.
- ▶ The evidence of the trade diversion impact for all other commodity groups is an indication that EU countries are becoming self sufficient in fulfilling the domestic need for the products included in the commodity groups.

- ▶ Extensions in the EU increase trade among members but decrease trade with non-members.
- ▶ Trade creation and trade diversion effects vary across the extensions in the EU.
- ▶ Trade creation and trade diversion effects vary across the new members joining the EU in 4<sup>th</sup> and 5<sup>th</sup> extensions of the EU.
- ▶ Trade creation and trade diversion effects vary across the commodity groups.

**Thank You**