#### ANNEX

# Estimation of bilateral migration flows

#### **Equations**

## Emigration : $log(E_t^{DD}) = c + b * log(E_{t-1}^{DD}) + d^* (UNR_t^{DD} - UNR_t^{IRL})$

where  $E_t^{DD}$  is the emigration from Ireland to country of destination DD in time t,  $UNR_{IRL}$  is the unemployment rate in Ireland and  $UNR_{DD}$  is the unemployment rates in country destination DD.

	United Kingdom	United States	EU13 <sup>1</sup>	Other countries
c	1.176 ***	0.93 ***	0.484 ***	0.718 ***
b	0.447 ***	0.264	0.221	0.669 ***
d	-0.086 ***	-0.052 ***	-0.039 ***	0.006
R-squared	0.87	0.52	0.69	0.92
Durbin-Watson	1.52	1.96	2.29	1.86

## Immigration : $log(M_t^{OO}) = c + b^* log(M_{t-1}^{OO}) + d^* (UNR_t^{OO} - UNR_t^{IRL})$

where  $M_t^{OO}$  is the immigration from country OO to Ireland . UNR<sub>DD</sub> is the unemployment rates in OO.

	United Kingdom <sup>1</sup>	United States	EU13 <sup>1</sup>	Other countries <sup>2</sup>
С	2.09 ***	2.405 ***	1.10 ***	1.73 ***
b	0.419 ***	0.474 ***	0.353 ***	0.658 ***
d	0.038 ***	0.0626 ***	0.031 ***	0.073***
R-squared	0.81	0.59	0.76	0.97
Durbin-Watson	2.01	1.65	2.20	1.76

\*\*\* significant at 0.05% level

1. Equation includes a linear time trend.

2. Equation includes a dummy variable to capture the effect of accession to the EU of Central and Eastern Europe member states.

The sample covers 1988-2014. The lagged dependent variable captures dynamics of adjustment while the constant c (and trend when included) absorbs other omitted factors. The equations are estimated individually for each destination or country of origin. This is not a full structural model of migration and the results should be interpreted as a reduced form relationship between unemployment rates and bilateral migratory flows. EU13 comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Luxembourg, Netherlands, Spain, Sweden and Portugal. "Other countries" include all other countries apart from United States, United Kingdom and those not included in EU13. For the "Other countries" category the OECD unemployment rate is used to gauge labour market developments.

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