Table 1 : Estimates of leakage rates[1] associated with the implementation of the Kyoto Protocol.

	leakage rate in 2010[1]
Light et al.(1999)	21%
WorldScan[2]	20%
Merge[3]	20%
Babiker[4]	15-16%
GEMINI-E3[5]	13%
GTAP-E[6]	± 10%
EPPA-MIT[5]	6%
G-Cubed[5]	6%
GREEN[6]	5%
GREEN[7]	2%

(1) calculated as the ratio of the additional emissions in non-Annex 1 countries to the emission reduction in the Annex 1 countries.
(2) Bollen et al., 1999.
(3) extrapolated from Manne and Richels, 1998, figure 6.1.
(4) Babiker , 2001.
(5) Bernard and Vielle, 2000.
(6) Truong, 1999.
(4) Babiker and Jacoby, 1999.
(5) Mc Kibbin et al., 1999.
(6) This corresponds to a scenario without use of the flexiblity mechanisms, see OECD, 1999.
(7) Assuming full use of the "flexibility mechanisms" between Annex 1 countries; see OECD, 1999.

Table 2 : Structure of GDYN-E.

Countries/regions		**Sectors**	
1) United States	USA	1) Agriculture and Forestry	Agriculture
2) European Union	EU	2) Coal	Coal
3) Eastern Europe and the Former Soviet Union	EEFSU	3) Crude Oil	Oil
4) Japan	JPN	4) Natural Gas	Gas
5) Rest of Annex 1	RoA1	5) Refined oil products	Oil_Pcts
6) Energy Exporting countries	EEx	6) Electricity	Electricity
7) China and India	CHIND	7) Energy Intensive Industries	En_Int_ind
8) Rest of the World	RoW	8) Other industries and services	Oth_ind_ser
		9) Capital goods	CGDS

Table 3 : Values of the most important parameters in GDYN-E in the central case.

Parameter	Value
Substitution elasticity between labor and the composite "capital + energy" (1)	1.2 – 1.4
Substitution elasticity between capital and the composite energy good(1)	0.5
Substitution elasticity between electricity and the composite non-electricity good(1)	1.0
Substitution elasticity between coal and the composite non-coal good(1)	0.5
Substitution elasticity between the remaining fossil fuels (crude oil, natural gas and refined petroleum products) (1)	1.0
Substitution elasticity between domestic and imported energy goods	2 – 2.8 (30 for crude oil)
Substitution elasticity between domestic and imported non-energy goods	2.3 – 2.5
Substitution elasticity between imported energy goods from different origins	5.6 (30 for crude oil)
Substitution elasticity between imported non-energy goods from different origins	4.6 – 5.8
Investment elasticity	10
Supply elasticity of coal	10
Supply elasticity of crude oil	1
Supply elasticity of natural gas	4
Supply elasticity in agriculture	6

(1) in non-energy sectors.

Figure 1 : Production nesting in GDYN-E.

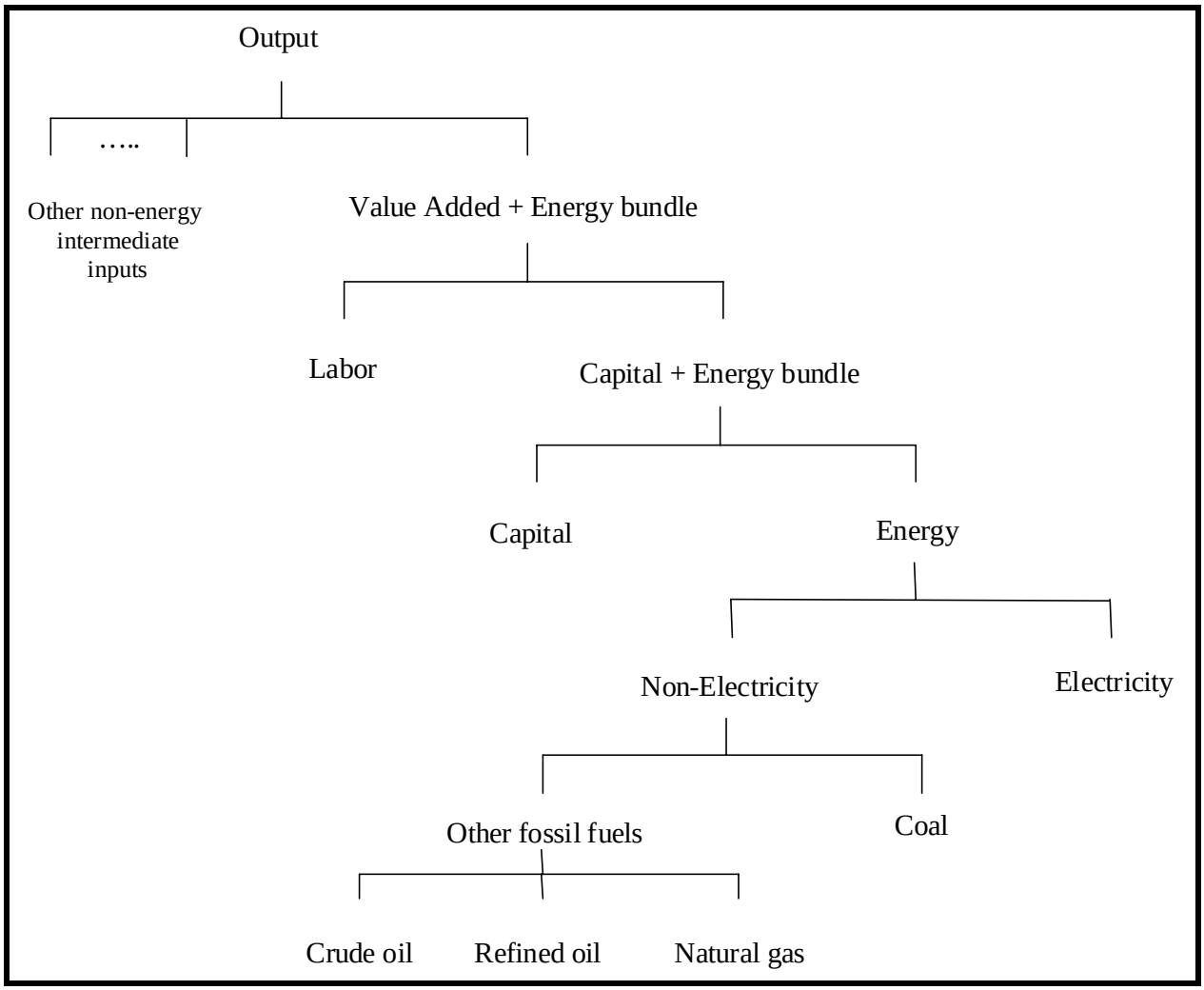

Figure 2 : The investment response in GDYN-E.

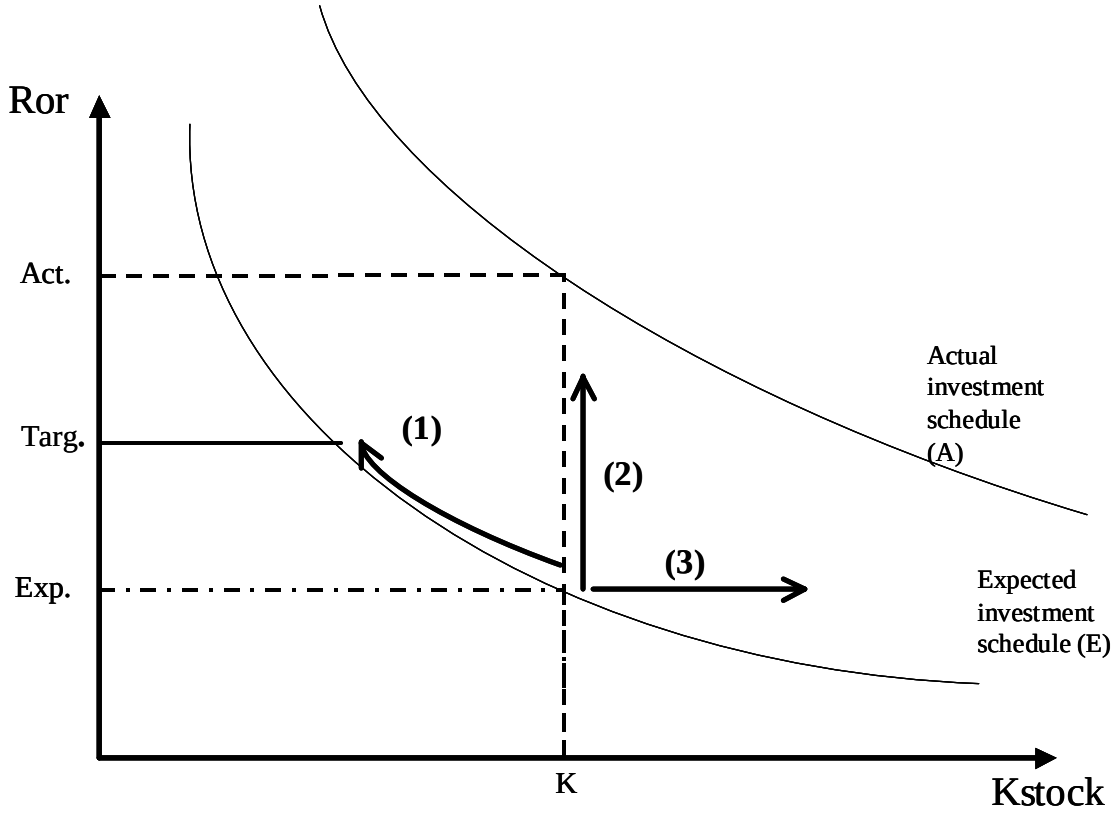

Figure 3 : Investment response in an Annex 1 country.

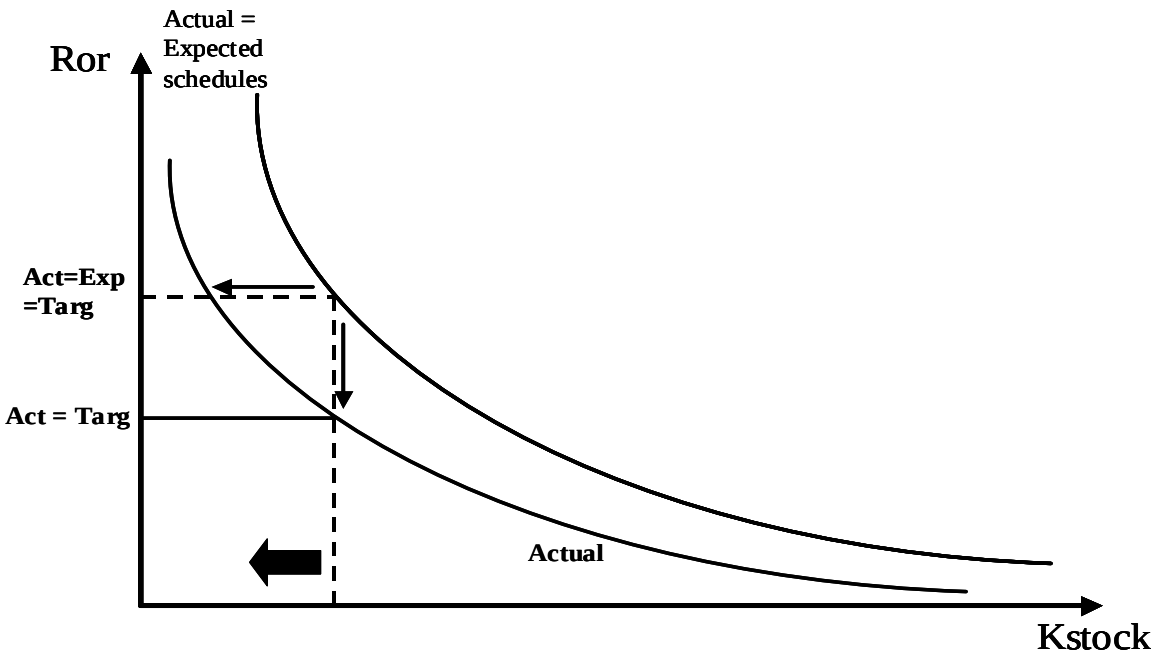

Figure 4 : Investment response in a non-Annex 1 country.

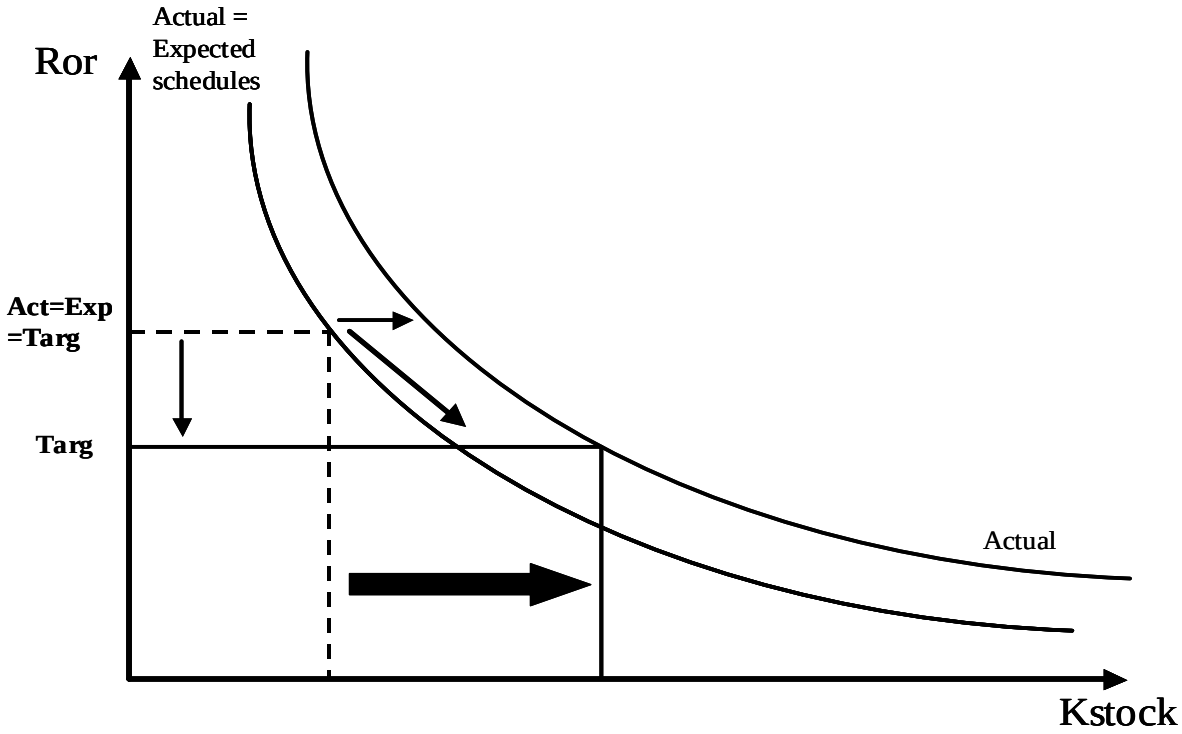

Figure 5 : Comparison of leakage rates in the Kyoto Protocol in GREEN and GDYN-E : 2000-2030.

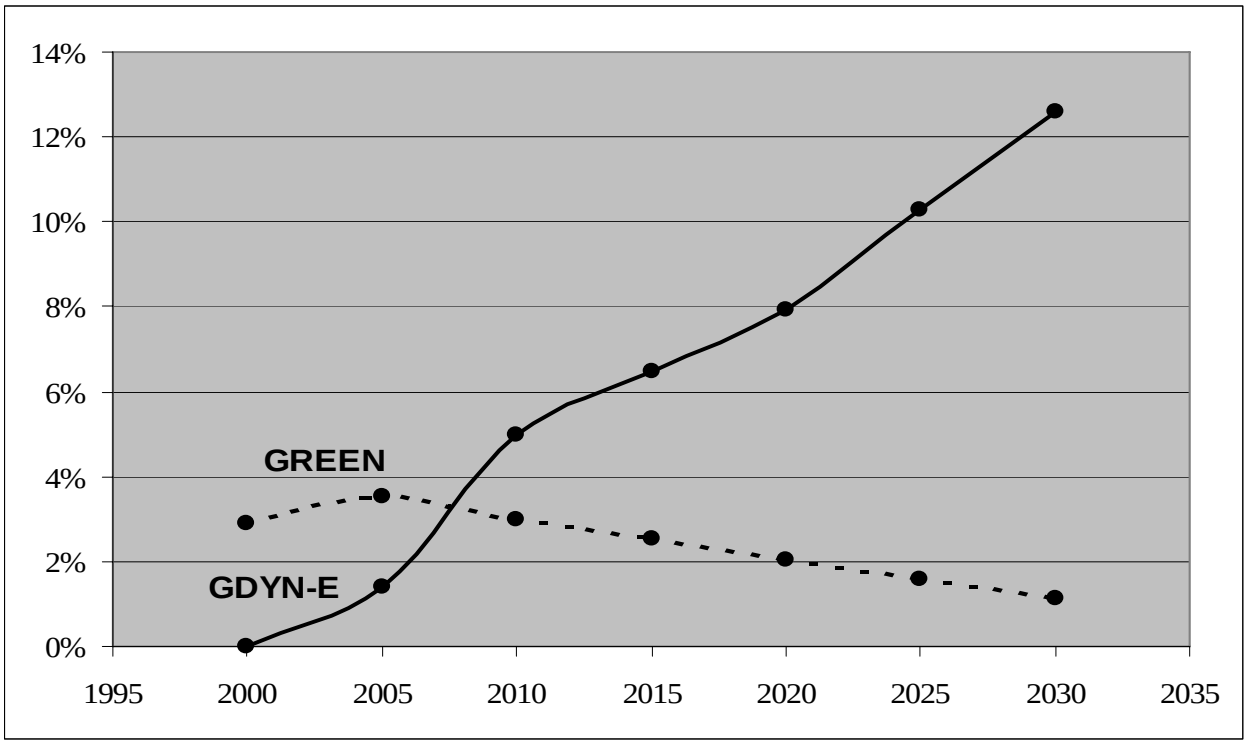

Figure 6: Leakage decomposition in GDYN-E.

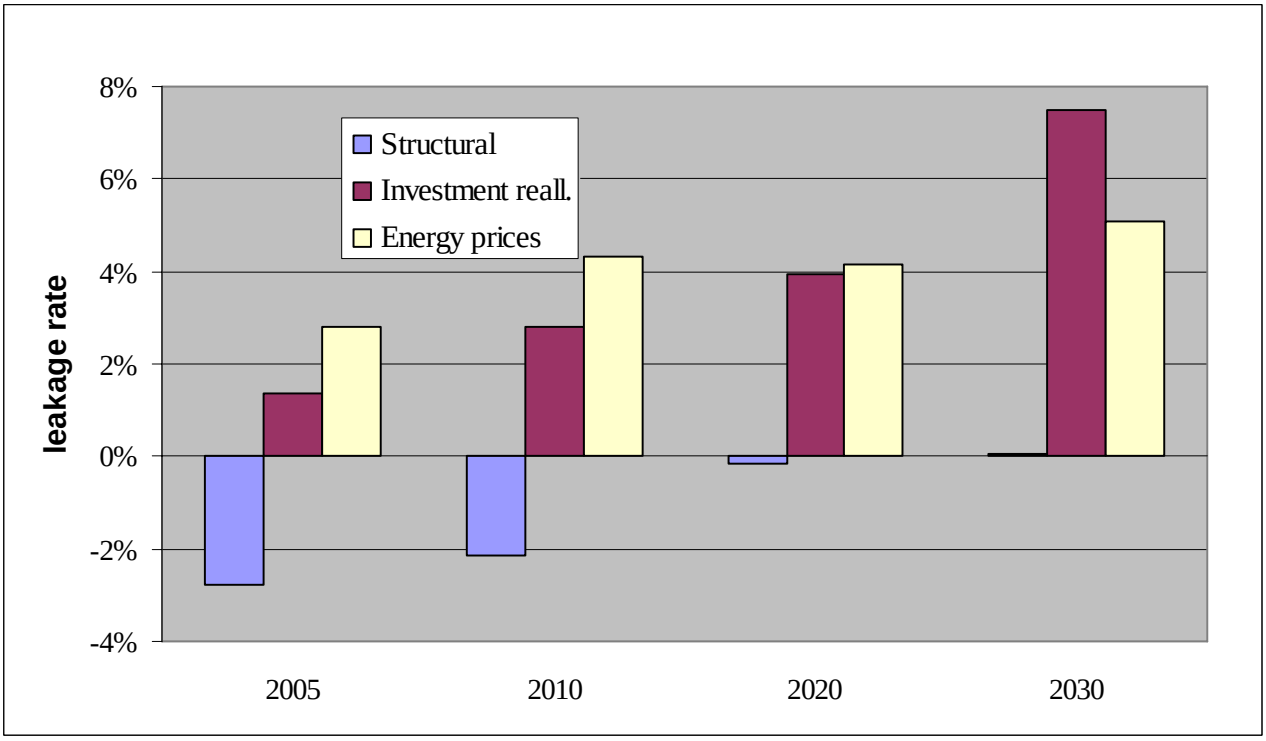

Figure 7 : Allocation of net investment following the implementation of the Kyoto Protocol (2010).

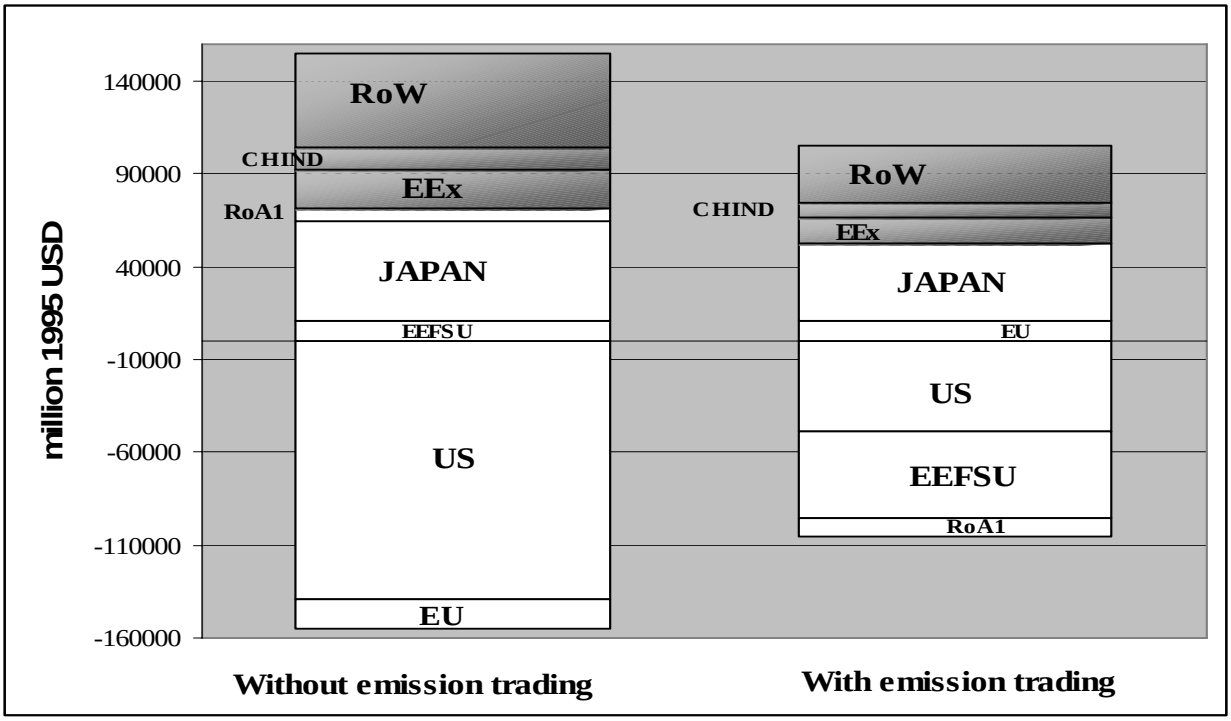

Figure 8 : Sensitivity of the leakage rate to the value of the supply elasticity of coal in GDYN-E.

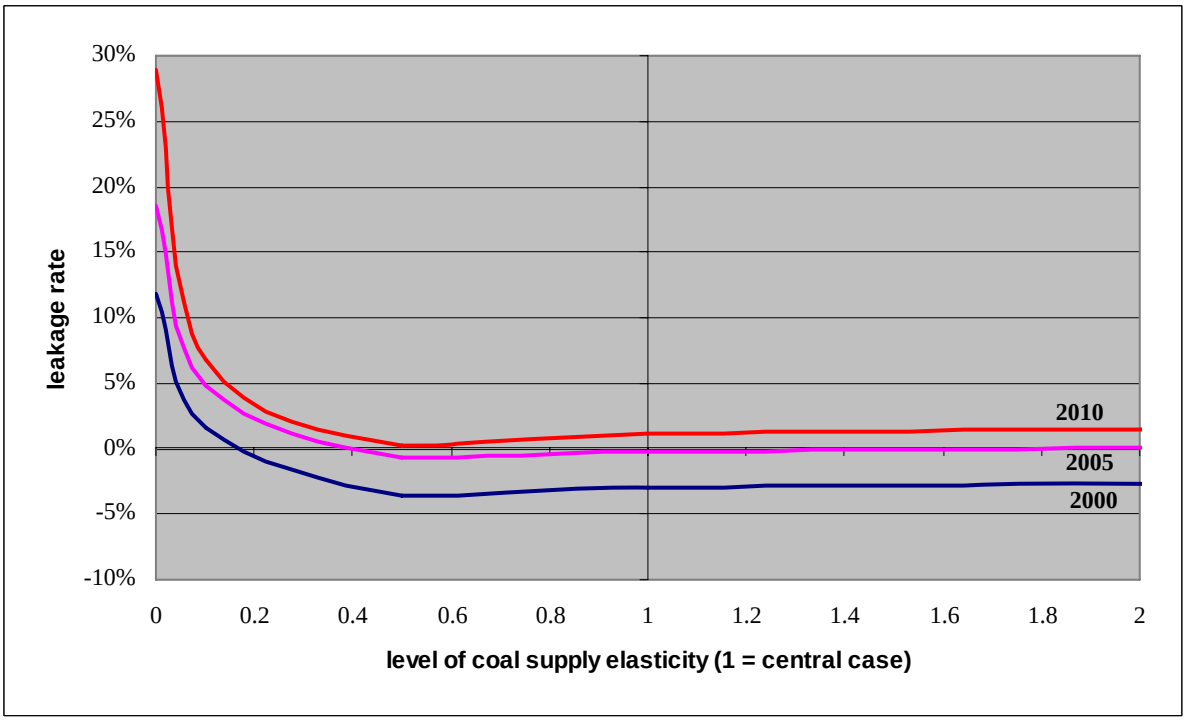

Figure 9 : Sensitivity of the leakage rate to the value of the trade substitution elasticities in GDYN-E.

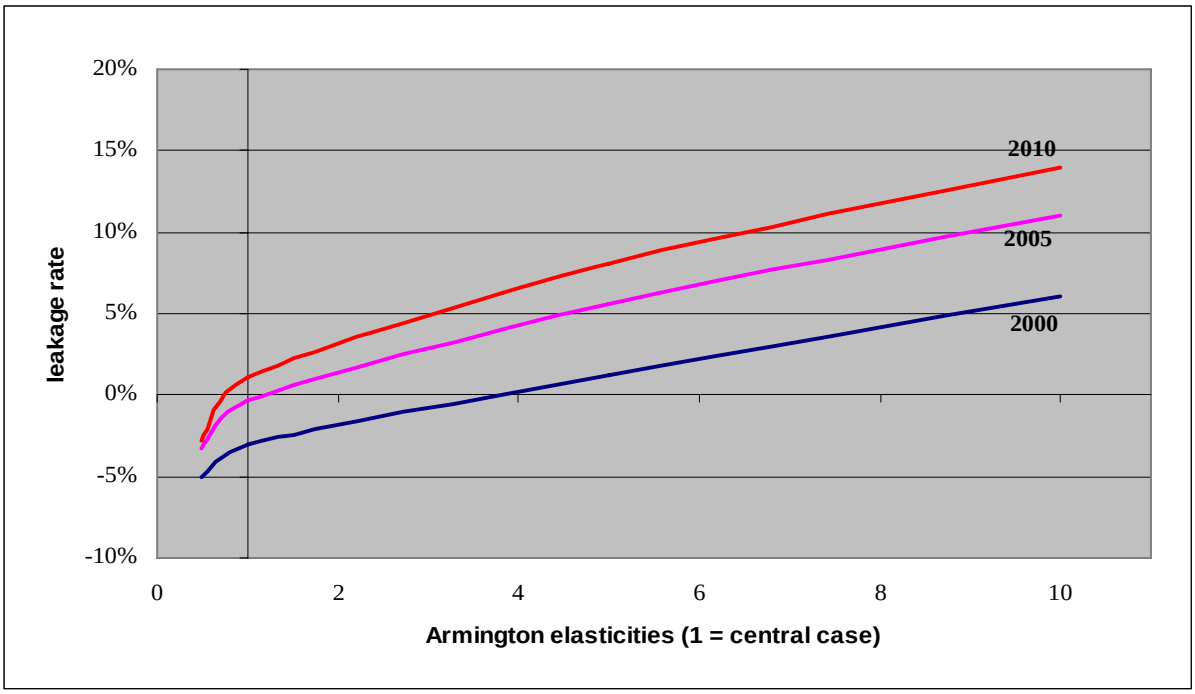

Figure 10 : Sensitivity of the leakage rate to the value of the inter-factor substitution elasticities in GDYN-E.

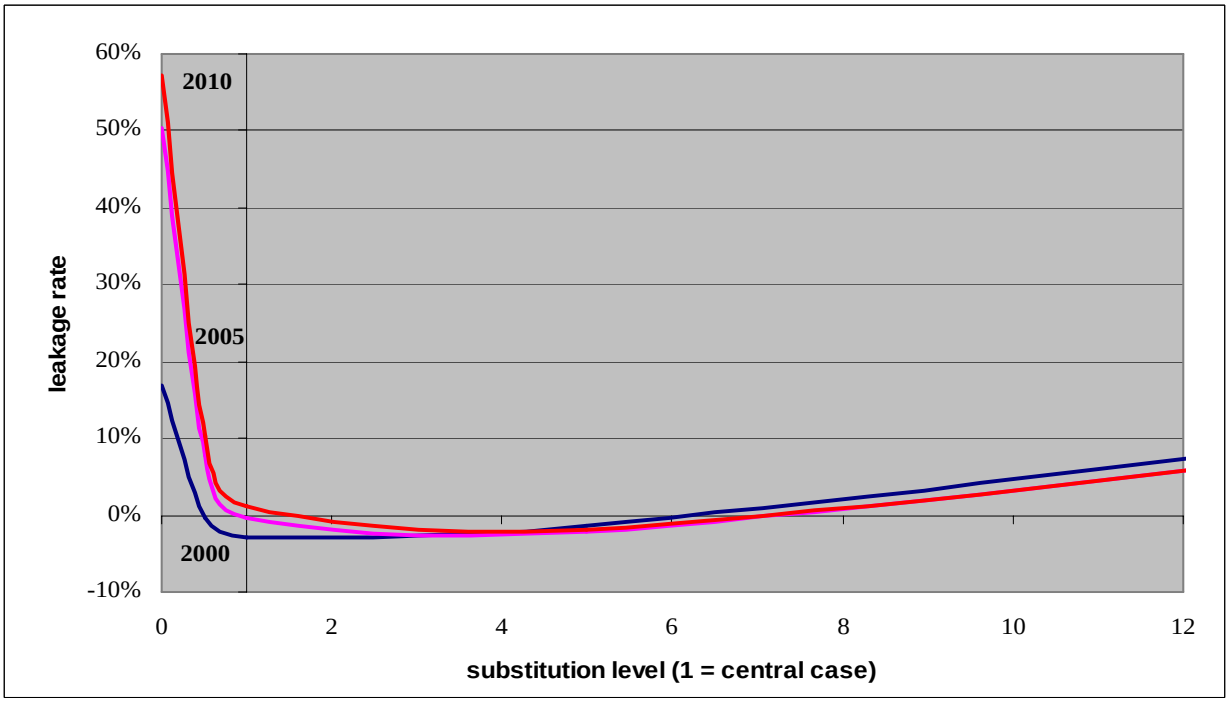

Figure 11 : Sensitivity of the leakage rate to the value of the investment elasticity in GDYN-E.