

**Title:** International trade of fruits between Portugal and the world

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## **International trade of fruits between Portugal and the world**

### **Abstract**

For Portugal there are few or none works about the international trade of fruits between Portugal and the other countries. In this work it aims to analyze the more recent data for the Portuguese international trade of fruits. They were used data for the years from 2006 to 2010, available by the INE (Statistics Portugal), gently given by the AICEP (Trade & Investment Agency). To complement this data analysis they were made some estimations with several econometrics method and based in the neoclassical theory, with the absolute convergence model. It was concluded that the biggest relationship, in the international trade of fruits, is with the European countries and there are not statistical regularity in the estimations and the data are not stationary.

**Keyword:** Fruits, international trade, data analysis.

## 1. Introduction

Portugal has excellent conditions to produce fruits, because has a climate very favorable for these productions. However, this is a sector with some problems, because is much deregulated economic activity as result of the common agricultural policy (CAP). The CAP is little focused for the south countries of the Europe, because this, some authors say that the CAP is economically inefficient and socially unjust. Economically inefficient, because induce the farmers to decide for productions with more subsidies and for productions more adjusted to the local conditions and socially unjust, because is a policy that support the biggest farmers. So, only from here there is a long way to go.

In the recent years the different reforms of the CAP tried to solve some of these situations, but are not enough. One of this trying is the suspension of the CAP payments from the production, with the objective to guide production management and resources distribution to be in connection only with the market prices and structural capacities. The results demonstrate which the payments of CAP not connected with the production have significant economic consequences and the expected augments in the prices do not balance the failure of the Agenda 2000 area payments (Fragoso et al., 2009).

Anyway the international trade of fruits is an important business area, however some countries have comparative advantages. For example, in the ASEAN countries (Philippines, Indonesia, Singapore and Thailand), Singapore has structural advantage in 5 products (ground-nuts, hazelnuts, plums, apricots and walnuts), Philippines has structural advantage in 3 products (tomatoes prepared or preserved, tomatoes whole or in pieces and cherries), Thailand and Malaysia have structural advantage in 2 products, while Indonesia has structural advantage in 1 product (cashew nuts). Malaysia has structural advantage only in tomatoes and apple juice but structural disadvantage in other products such as cashew nuts, walnuts and fruit and vegetable juice (Emmy and Ismail, 2009).

For the NAFTA countries, namely for USA and Mexico, some studies analyze the consequences of this economic integration in the international trade of fruits and vegetables. The conclusion is that the import price elasticities show which imports are not susceptible to price adjusts. Nevertheless, the income elasticities of import demand differ by products. There is trade growth as consequence of the NAFA in the vegetable and fruit trade. The amount of trade creation is larger than the quantity of trade diversion in most products analyzed (Karemera et al., 2007).

In the European Union the import regimes after the Uruguay Round are based on ingress prices that in practice function like lowest prices. On other hand, in this time, the European Union has celebrated trade favorite agreements namely with Southern Mediterranean countries which are significant suppliers of fruit and vegetables to the European Union. In the export side, the subsidies do not look capable to increase the exports of eligible products. Consequently, the European Union

must consider if should maintain those subsidies (Cioffi and dell'Aquila, 2004). The models illustrate which prices work in a different way when import prices are different of the start entry price (Cioffi et al., 2010). Trade openness has a great effect on European fruit sector, at productive and commercial level. European Union fruit sector, at productive and export level, are expected to decrease considerably. European vegetables production and exports are reasonably protected and are expected to earning from the diminution in European Union fruit sector (Bunte, 2005).

Analyzing the international trade of fruits between the South Mediterranean Countries and the European Union, the Magreb region, achieve comparatively poorer than the exporting countries from in the interior of the European. One explanation for this is the trade variation effects of European Union integration and the increasing demands for quality and service forced by horticultural retailers, which are improved in developed countries. This could too clarify why Israel functions well than exports flows from the Magreb and Mashrek subregions (Coque and Selva, 2007).

In Africa, agricultural trade between the countries of ECOWAS (a group of 15 countries of the West Africa which has eliminated tariffs on agricultural trade between each one) is superior than the expected. This does not signify that there are no non-tariff barriers inside ECOWAS, but it implies that any barriers are less damaging to agricultural trade in ECOWAS than in the rest of the world. This shows that African countries are not reluctant to agricultural trade, and local operators have been successful at finding trade new destinies (Seck et al., 2010).

## **2. Data analysis**

Observing the table 1 below, Portugal import, from South Africa, specifically citrus fruit, grapes, apples, pears and quinces. From Angola and Cape Verde do not import any fruits. Brazil export to Portugal, namely, dates, figs, pineapples or pineapple, mangoes, mangosteens, fresh or dried and melons, watermelons and papaws (papayas), fresh, as expected because is a tropical country. Costa Rica export to Portugal, namely, bananas and dates, figs, pineapples or pineapple, mangoes, mangosteens, fresh or dried. From the United States the Portuguese import, specifically, other nuts, fresh or dried, whether or not shelled or peeled. From China Portugal import several fruits, without regularity. Turkey send to Portugal, namely, dates, figs, pineapples or pineapple, mangoes, mangosteens, fresh or dried and grapes. India send to the Portuguese coconuts, Brazil nuts from Brazil and cashew nuts, fresh or dried, etc and other nuts, fresh or dried, whether or not shelled or peeled. From Germany and France import apples, pears and quinces, fresh. From Belgium import dates, figs, pineapples or pineapple, mangoes, mangosteens, fresh or dried. From Spain, Estonian, Ireland, Italy, Luxembourg and Poland import several fruits without a visible majority. From Greece

import fruits, cooked or not, frozen, containing added sugar or sweetener. Holland send to Portugal, namely, other fresh fruit and the United Kingdom send bananas, including plantains (platains), fresh or dried and dates, figs, pineapples or pineapple, mangoes, mangosteens, fresh or dried.

**Table 1. Fruits, in different forms, import percentage relatively to the total of each country**

	Year	South Africa	Angola	Cape Verde	Brazil	Costa Rica	United States of America	China	Turkey	India	Germany	Belgium	Spain	Estonian	France	Greece	Holland	Ireland	Italy	Luxembourg	Poland	United Kingdom
Coconuts,	2006				6					60	0	0			0		1		0			3
Brazil nuts from	2007				5	0				58	0	0			0		2					2
Brazil and	2008				5	0	0	0		69	1	0			0		2					0
cashew nuts,	2009				8			0	0	30	5	0			0		2				3	8
fresh or dried,	2010				7	0		0		0	2	0			0		4					11
Other nuts,	2006						99	84	7	38	3		6		11	32	8		2			2
fresh or dried,	2007				0		92	2	11	41	4	0	5		9	19	3		2			1
whether or not	2008						99	6	13	30	15	0	5	2	13		5		1			1
shelled or	2009						100	5	8	68	12		6	4	14		4		1		13	0
peeled,	2010						100	3	14	98	16	2	6	4	14		8		1			0
Bananas,	2006				3	42					1	47	9		22		3					15
including	2007				3	55					0	3	10		16		3		35			12
plantains	2008				3	41	0				0	5	13	4	14		0		4			11
(platains), fresh	2009				1	40					1	2	10		25		4	60	1			64
or dried	2010				0	32					0	0	12		14		0		0			36
Dates, figs,	2006	1			48	57	0		34	1	1	30	8		2		23		2			57
pineapples or	2007	7			38	44	2	1	37	1	1	41	9		3		22		3			49
pineapple,	2008	8			40	59	0		37	1	3	39	10	4	2		17		1			17
mangoes,	2009	5			34	59	0		34	1	5	29	11	9	2		9	40	0	62		12
mangosteens,	2010	0			34	67	0	0	26	2	5	17	9	4	2		12		0	15		15
Citrus fruit,	2006	8			7			0			11	1	7		0		2		0			0
fresh or dried	2007	40			5						12	0	8		1		5		4			16
	2008	39			6						1	0	8	13	1		5		14			27
	2009	31			7						4	4	9	0	1		8		19			
	2010	80			8						3	3	10	0	0		8		2			
Grapes, fresh	2006	57			0		1		42		7	7	11	100	0		6		3			0
or dried	2007	20			0				35		7	2	12		0	7	6		12		29	0
	2008	22							34		15	3	10	4	2	7	8		18			21
	2009	22						30	39		9	3	11	23	6	3	5		16			2
	2010	9						0	23	38	13	2	9	12	5		4		27			0
Melons,	2006				29	1	0				4		13		0		2		0			
watermelons	2007				30	1	4				6		13		0	3	1					3
and papayas	2008				32	0	0				15		13	31	0	15	3					6
(papayas),	2009	0			34	1					15		13	7	0	16	0			38		
	2010				33	1					15		13	26	0	2	3		0	56		6
Apples, pears	2006	18			7						42	2	10		54		12		6			
and quinces,	2007	26			18				62		37	6	10		63		19		24			13
fresh	2008	20			13				83		24	10	9	10	59		4		30		100	9
	2009	31			16				14		6	7	8	28	32		12		39		68	10
	2010	9			16				2		2	3	6	20	52		10		44			23
Apricots,	2006	14									17	1	20		1		2		0			
cherries,	2007	7									17	1	16		1		2					
peaches	2008	12									10	2	15	28	1		0		1			1
(including	2009	10						2			11	8	15	4	0		1		0			
nectarines),	2010	2									7	4	18	22	0	3	1		0			1
Other fresh	2006				1					0	9	7	14		3		35		23			20
fruit	2007				1		0			0	7	24	14	100	3		30		20			1
	2008	0			1		0	0		0	5	28	14	4	4	3	34		28			2
	2009	0			1	0					16	24	13	25	16	7	40		22			0
	2010	0			1					0	19	54	14	12	7		39		21			3
Fruits, cooked	2006							8	1		0	6	0		3	68	5				100	0
or not, frozen,	2007							31			0	22	1		2	71	7		0		71	0
containing	2008							3	1		1	12	0		1	75	22		2			2
added sugar or	2009							19	4		1	24	1		2	74	13		2			0
sweetener	2010				2		0	50			1	14	0		4	95	12		4	29		0
Fruit	2006										3	0	1		0				0			1
provisionally	2007										4		1		1				0			1
preserved but	2008										3	0	2		1				0			0
unsuitable in	2009									0	8		2		1				0			0
that state	2010										6		1		1				1			
Dried fruit,	2006	1			0		0	8	16	0	2	0	1		2		0		0			2
mixtures	2007	0			0		1	4	17	0	3	0	1		1		0		0			0
thereof or nuts	2008	0			0		0	8	15		7	1	1		1		0		0			2
	2009	0			0		0	33	13	0	7		1		1		1		0		17	3
	2010				0		0	21	22		12		1		0		1		0			3
Peel of citrus	2006										0		0									
fruits, melons	2007										0	0										
and / or melons	2008					0		0			0	0	0		0							0
fresh, dried or	2009										0		0		0				0			
frozen, etc.	2010										0		0		0							

Portugal export (table 2) to South Africa, namely, dates, figs, pineapples or pineapple, mangoes, mangosteens, fresh or dried, to Angola other nuts, fresh or dried, whether or not shelled or peeled, to Cape Verde and Brazil apples, pears and quinces, fresh, to United States other nuts, fresh or dried, whether or not shelled or peeled. To Germany, France, Ireland, Poland and United Kingdom export, specifically, apples, pears and quinces, fresh. To Holland export other fresh fruits, to Italy bananas,

including plantains (platains), fresh or dried and to Luxembourg other nuts, fresh or dried, whether or not shelled or peeled.

**Table 2. Fruits, in different forms, export percentage relatively to the total of each country**

Year	South Africa	Angola	Cape Verde	Brazil	Costa Rica	United States of America	China	Turkey	India	Germany	Belgium	Spain	Estonian	France	Greece	Holland	Ireland	Italy	Luxembourg	Poland	United Kingdom
Coconuts,						4				0	0	0		0	0	0	0	0	0		0
Brazil nuts from						6				0	0	0		0	0	0	0	0	5		0
Brazil and						5				0	0	0		0	0	0	0	0	0		0
cashew nuts,						5				0	0	0		0	0	0	0	0	0		0
fresh or dried,						4	100			0	0	0		0	0	0	0	0	0		0
Other nuts,						76				13	33	25		11		2	0	22	98		3
fresh or dried,						72				33	29	20		9	100	1	0	26	21	0	3
whether or not						70			100	11	17	16		15		1	0	7	26		0
shelled or						67				7	76	14		19		0		17	58		1
peeled						58				16	71	14		14		2	0	23	30		3
Bananas,										0	5	13		19			0	60			11
including										0	6	16		10				48		4	9
plantains										1		17						61	2		0
(platains), fresh												14		0				56	5		0
or dried,												10		0		0		39	11		
Dates, figs,						14				18	0	18		0		2	0	13	0		0
pineapples or						11				1	0	13		1		3	0	19	26		0
pineapple,						11			100	6	0	15		2	100	3	0	26	20		0
mangoes,						9				0	0	16		1	100	1	0	23	0	6	0
mangosteens,						9				0	0	14		0		1		35	0		0
Citrus fruit,										4		15		6				2	0	29	2
fresh or dried										4	8	24		8		0		3		39	1
										9	0	28	100	13		3	1	3	6	10	1
										1	0	16	76	14		0	0	3	4	21	0
										0	0	34	100	8	100	1		1	5	3	0
Grapes, fresh										7	0	4		1		0	0	3	0		0
or dried						1				8	1	2		1		0		1	2		0
						1				18	1	2		1		0		1	0		0
										0	1	8		0				0	1		2
						0				0	0	3		0				0	1	1	2
Melons,						5				16		3		3		0	0	0	0		1
watermelons						5				6	1	2		1				0			0
and papaw s						3				0		2		0		0	0	0	7	5	0
(papayas),						8				0	0	1		0		0	0	0	6	1	0
						14				0	0	1		0		0		1	9	0	1
Apples, pears										14	11	6		25		31	92	0		71	52
and quinces,										30	6	10		28		25	97	1	7	56	60
fresh										52	39	7		36		33	97	0	28	70	71
						6				86	5	11	24	39		17	98	0	17	47	78
										79	0	5		49		12	100	0	29	93	71
Apricots,										21		4		2		0	8	0			9
cherries,										16		3		1			3			1	12
peaches										2		2		2			1	0	7	15	11
(including										0		7		1		1	1	6	24		11
nectarines),						13				0		5		0				7	3		11
Other fresh										1	33	12		9		63		0			19
fruit										0	32	10		8		69			15		15
										0	11	10		12		58	0	0	3		16
										4	14	11		15		80	0	0	3		8
										3	29	11		11		85	0	5			13
Fruits, cooked										8	18	1		25		2	0				3
or not, frozen,										2	16	1		32		1		2			0
containing						8				2	32	0		20		2		1			0
added sugar or										2	4	2		11		1		0	0		0
sweetener										0	2			17				2	2		0
Fruit														0		0					0
provisionally														0		0					0
preserved but														0		0	0				0
unsuitable in																					0
that state																					0
Dried fruit,										0	0	0		0			0		1		0
mixtures						4				0	0	0		0		1	0		24		0
thereof or nuts						1				0	0	0		0		0			0		0
						4				0	0	0		0		0			0		0
						1				0	0	0		0			0		0		0
Peel of citrus														0							
fruits, melons														0							
and / or melons,														0							
fresh, dried or														0							
frozen, etc.														0							

From table 3 it is possible to see that Portugal import the majority of the fruits from Spain, some fruits from Germany and France, and some tropical fruits from Brazil and Costa Rica (coconuts, Brazil nuts from Brazil and cashew nuts, fresh or dried, etc, melons, watermelons and papaw s (papayas), fresh, bananas, including plantains (platains), fresh or dried and dates, figs, pineapples or pineapple, mangoes, mangosteens, fresh or dried).

**Table 3. Fruits, in different forms, import percentage relatively to the total of each year**

Year	South Africa	Angola	Cape Verde	Brazil	Costa Rica	United States of America	China	Turkey	India	Germany	Belgium	Spain	Estonian	France	Greece	Holland	Ireland	Italy	Luxembourg	Poland	United Kingdom
Coconuts, 2006				33					8	0		6		0		3		0			0
Brazil nuts from 2007				30	0				9	1		9		1		4					0
Brazil and 2008				20	0	0			17	1		15		2		2					0
cashew nuts, 2009				40				0	0	3	6	8		2		3				0	3
fresh or dried, 2010				42	0					3		10		1		4					3
Other nuts, 2006						19		1	1	1	2	47		10	0	2		1			0
fresh or dried, 2007				0		16		0	1	1	3	0	48	12	0	1		1			0
w hether or not 2008						13		0	2	2	4	0	43	0	14			1			0
shelled or 2009						12		0	1	2	3		54	0	17		1		0		0
peeled 2010						12		0	1	2	4	0	48	0	13		2		0		0
Bananas, 2006				1	18						0	5	23		6		0	7			0
including 2007				1	29						0	0	26		7		0	4			0
plantains 2008				1	23	0					0	0	38	0	5		0	1			0
(platains), fresh 2009				0	22						0	0	27		10		0	0	0		1
or dried 2010				0	20						0	0	38		5		0	0			1
Dates, figs, 2006	0			23	35	0		2	0	0	5	26		1		3		0			0
pineapples or 2007	2			18	31	0		0	2	0	4	34		1		3		1			1
pineapple, 2008	2			17	37	0		2	0	0	2	33	0	1		2		0			0
mangoes, 2009	1			14	40	0		1	0	0	2	35	0	1		1	0	0	1		0
mangosteens, 2010	0			16	45	0		0	1	0	1	31	0	1		1		0	0		0
Citrus fruit, 2006	3			9				0		10	1	65		0		1		0			0
fresh or dried 2007	14			4						6	0	47		1		1		1			0
2008	20			4						0	0	45	0	0		1		4			1
2009	12			6						1	0	56	0	0		2		7			
2010	38			4						0	0	36	0	0		1		0			
Grapes, fresh 2006	11			0		0		3		4	2	61	0	0		1		1			0
or dried 2007	7			0		0		3		4	0	70	0	0	0	1		3		0	0
2008	12					0		3		3	0	63	0	1	0	2		5			1
2009	7					0	0	3		1	0	62	0	5	0	1		5			0
2010	7					0	0	2		3	0	58	0	3		1		6			0
Melons, 2006				23	1	0				2		72				0		0			0
w atermelons 2007				21	1	0				3		73		0	0	0					0
and papaw s 2008				23	0	0				2		73	0	0	0	1					0
(papayas), 2009				24	1					2		71	0	0	0	0			1		0
2010				25	1					3		70	0	0	0	0		0	0		0
Apples, pears 2006	2			3						13	0	31		20		2		1			0
and quinces, 2007	4			7				0		9	0	29		28		2		3			0
fresh 2008	6			6				1		2	0	33	0	26		1		5		0	0
2009	8			8				0		1	0	31	0	18		2		10		0	0
2010	5			10				0		0	0	29	0	27		1		7			1
Apricots, 2006	2									7	0	88		1		0		0			0
cherries, 2007	2									8	0	87		1		0					0
peaches 2008	7									2	0	89	0	0		0		0			0
(including 2009	4						0			2	1	92	0	0		0		0			0
nectarines), 2010	1									1	1	96	0	0	0	0		0			0
Other fresh 2006				0						0	5	2	72		2		8		5		0
fruit 2007				1		0				0	3	3	73	0	2		6		5		0
2008	0			0			0			0	1	2	75	0	3	0	6		7		0
2009	0			1	0					2	2	65	0	11	0	6		7			0
2010	0			1						0	3	7	72	0	4		5		4		0
Fruits, cooked 2006							1	1		2	14	22		16	6	11				1	0
or not, frozen, 2007							3			1	26	29		12	9	12		0		1	0
containing 2008							0	1		1	6	17		5	9	30		4			1
added sugar or 2009							2	2		1	15	25		13	15	17		4			0
sweetener 2010				8		0	4			1	13	18		18	14	11		5	0		0
Fruit 2006										22	0	73		4				1			0
provisionally 2007										20		72		7				1			0
preserved but 2008										4	0	90		6				0			0
unsuitable in 2009								0		12		80		6				1			0
that state 2010										13		78		8				1			0
Dried fruit, 2006	2			0		0	1	12	0	12	0	42		14		1		0			0
mixtures 2007	0			1		1	1	14	0	14	0	38		13		1		1			0
thereof or nuts 2008	0			3		0	1	16		12	1	42		10		1		1			1
2009	1			1		0	5	11	0	15		36		3		1		0		0	1
2010				0		0	3	14		24		33		3		1		0			1
Peel of citrus 2006										0		100									
fruits, melons 2007										88	12										
and / or melons 2008						72	0			2	1	2		11							3
fresh, dried or 2009										0		60		0							40
frozen, etc. 2010										0		38		62							

Portugal export the majority of the fruits to Spain (table 4) and some fruits to France (namely, fruits, cooked or not, frozen, containing added sugar or sweetener), to Italy (bananas, including plantains (platains), fresh or dried and dates, figs, pineapples or pineapple, mangoes, mangosteens, fresh or dried), to the United Kingdom, to Angola (dried fruit, mixtures thereof or nuts) and to Cape Verde.

**Table 4. Fruits, in different forms, export percentage relatively to the total of each year**

Year	South Africa	Angola	Cape Verde	Brazil	Costa Rica	United States of America	China	Turkey	India	Germany	Belgium	Spain	Estonian	France	Greece	Holland	Ireland	Italy	Luxembourg	Poland	United Kingdom
Coconuts,						2				0	0	0		4		0	0	0	0		0
2006																					
Brazil nuts from		32	57			4				0	0	0		0		0	0	0	0		0
2007																					
Brazil and		41	41			3				0	0	1		0		0	0	0	0		1
2008																					
cashew nuts,		31	19			3				0	0	43		1			0	0	0		0
2009																					
fresh or dried,		55	17			4	0			0	0	1		1			0	0	0		14
2010																					
Other nuts,		5	0	13		1				0	2	47		11		0	0	14	1		3
2006																					
fresh or dried,		5	0	17		1				1	2	43		11	1	0	0	14	0	0	3
2007																					
w hether or not		7	0	13		1		0		1	1	46		21		0	0	6	1		1
2008																					
shelled or		5	0	13		1				1	4	32		20		0		17	3		1
2009																					
peeled		4	0	14		1				1	2	40		12		1	0	18	1		2
2010																					
Bananas,		0	0							0	0	26		21			0	42			10
2006																					
including		0	0							0	1	41		15				32		0	11
2007																					
plantains		0	0							0		50						50	0		0
2008																					
(plantains), fresh		0	0									35		0				65	0		0
2009																					
or dried		0	0									48		0		0		52	1		
2010																					
Dates, figs,		1	1			0				1	0	76		1		1	0	18	0		0
2006																					
pineapples or		2	2	2		0				0	0	64		2		3		25	0		0
2007																					
pineapple,		1	2	1		0		0		1	0	57		3	0	2	0	30	1		0
2008																					
mangoes,		0	2	1		0				0	0	57		1	0	1	0	37	0	0	0
2009																					
manosteens,		0	1	1		0				0	0	57		0		1		39	0		0
2010																					
Citrus fruit,		0	5							0	0	71		14				3	0	3	3
2006																					
fresh or dried		0	4							0	1	72		13		0		2		4	1
2007																					
		0	3							1	0	71	0	16		1	0	2	0	1	1
2008																					
		0	5							0	0	59	0	24		0	0	5	0	1	0
2009																					
		1	3	0						0	0	88	0	6	0	0		0	0	0	0
2010																					
Grapes, fresh		1	8	6						2	0	57		5		1	0	17	0		1
2006																					
or dried		15	11			0				2	1	42		19		0		5	0		4
2007																					
		14	9	0		0				11	1	45		6		1		6	0		1
2008																					
		6	6							0	0	80		1				1	0		6
2009																					
		10	9			0				0	0	64		1				3	0	0	9
2010																					
Melons,		0	3			0				4		45		27		0	0				10
2006																					
w atermelons		1	5			1				2	1	60		21				1			3
2007																					
and papaw s		0	9			0				0		72		3		2	0	1	4	5	2
2008																					
(papayas),		1	12			2				1	0	58		7		4		3	5	1	2
2009																					
		1	9			3				0	0	62		1		0		7	4	1	5
2010																					
Apples, pears		0	2	17						0	0	8		16		5	8	0		2	29
2006																					
and quinces,		0	3	15						0	0	11		17		5	8	0	0	2	32
2007																					
fresh		0	2	10						2	1	8		20		7	9	0	1	3	32
2008																					
		0	2	18		0				4	0	11	0	19		4	7	0	0	1	28
2009																					
		0	2	27						3	0	7		20		3	6	0	0	4	22
2010																					
Apricots,		2	2	4						3		35		9		0	6	0			38
2006																					
cherries,		2	2	5						2		32		6						0	50
2007																					
peaches		1	2	3								25		8			1	0	1	5	47
2008																					
(including		1	2	7						0		51		3		1	1		1	4	29
2009																					
nectarines),		2	2	10		1				0		54		1			0		1	1	25
2010																					
Other fresh		0	1	0						0	3	34		14		25		0			23
2006																					
fruit		0	0	0						0	3	28		13		34			0		20
2007																					
		0	1	0						0	1	29		17		29	0	0	0		18
2008																					
		0	1	0						0	1	28		18		46		0	0		7
2009																					
		0	0	0						0	1	32		9		48		0	0		8
2010																					
Fruits, cooked		0	0	0						0	3	4		75		1	0				8
2006																					
or not, frozen,		0	0	0						0	3	3		86		1		3			0
2007																					
containing		0	0	0		0				1	7	2		83		2		2			0
2008																					
added sugar or		0	0	0						1	1	24	</								



All the results show that there is not statistically significance for the Portuguese international trade of fruits.

These results with the lack of stationary of the data verified in the volatility analysis, show that there is not an objective policy for the international trade of fruits in Portugal and consequently there is not a policy for the Portuguese fruit production. Like the Keynesian theory say, the export is the engine of the output of each sector.

So, in light of is the common agricultural policy, Portugal must do an adjusted national agricultural policy for the fruit sector.

**Table 5. Results from the absolute convergence model for all fruits import (absolute values)**

	Const. <sup>1</sup>	Coef. <sup>2</sup>	F/Wald(mod.) <sup>3</sup>	F(Fe_OLS) <sup>4</sup>	Corr(u_i) <sup>5</sup>	F(Re_OLS) <sup>6</sup>	Hausman <sup>7</sup>	R <sup>2</sup> <sup>8</sup>	N.O. <sup>9</sup>	N.I. <sup>10</sup>
FE <sup>11</sup>	13.102* (22.170)	-1.047* (-22.200)	492.870*	4.140*	-0.914	-----	-----	0.585	497	-----
RE <sup>12</sup>	2.816* (7.810)	-0.227* (-8.000)	63.950*	-----	-----	11.250*	473.900*	0.585	497	-----
OLS	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
DPD <sup>13</sup>	19.476* (18.630)	-1.533* (-18.680)	417.730*	-----	-----	-----	-----	-----	220	5

Note: 1, Constant; 2, Coefficient; 3, Test F for fixed effects model and test Wald for random effects and dynamic panel data models; 4, Test F for fixed effects or OLS (Ho is OLS); 5, Correlation between errors and regressors in fixed effects; 6, Test F for random effects or OLS (Ho is OLS); 7, Hausman test (Ho is GLS); 8, R square; 9, Number of observations; 10, Number of instruments; 11, Fixed effects model; 12, Random effects model; 13, Dynamic panel data model; \*, Statically significant at 5%.

**Table 6. Results from the absolute convergence model for all fruits export (absolute values)**

	Const. <sup>1</sup>	Coef. <sup>2</sup>	F/Wald(mod.) <sup>3</sup>	F(Fe_OLS) <sup>4</sup>	Corr(u_i) <sup>5</sup>	F(Re_OLS) <sup>6</sup>	Hausman <sup>7</sup>	R <sup>2</sup> <sup>8</sup>	N.O. <sup>9</sup>	N.I. <sup>10</sup>
FE <sup>11</sup>	10.459* (17.390)	-0.937* (-17.450)	304.350*	3.250*	-0.895	-----	-----	0.462	505	-----
RE <sup>12</sup>	2.619* (7.430)	-0.238* (-7.800)	60.800*	-----	-----	2.810*	250.250*	0.462	505	-----
OLS	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
DPD <sup>13</sup>	16.420* (12.730)	-1.439* (-12.690)	263.040*	-----	-----	-----	-----	-----	217	5

**Table 7. Results from the absolute convergence model for all fruits import (percentage values relatively to the total of each country)**

	Const. <sup>1</sup>	Coef. <sup>2</sup>	F/Wald(mod.) <sup>3</sup>	F(Fe_OLS) <sup>4</sup>	Corr(u_i) <sup>5</sup>	F(Re_OLS) <sup>6</sup>	Hausman <sup>7</sup>	R <sup>2</sup> <sup>8</sup>	N.O. <sup>9</sup>	N.I. <sup>10</sup>
FE <sup>11</sup>	1.226* (16.780)	-1.079* (-22.060)	486.450*	3.800*	-0.883	-----	-----	0.582	497	-----
RE <sup>12</sup>	0.282* (3.290)	-0.273* (-8.750)	76.580*	-----	-----	9.520*	457.140*	0.582	497	-----
OLS	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
DPD <sup>13</sup>	1.867* (15.700)	-1.549* (-17.380)	377.090*	-----	-----	-----	-----	-----	220	5

**Table 8. Results from the absolute convergence model for all fruits export (percentage values relatively to the total of each country)**

	Const. <sup>1</sup>	Coef. <sup>2</sup>	F/Wald(mod.) <sup>3</sup>	F(Fe_OLS) <sup>4</sup>	Corr(u_i) <sup>5</sup>	F(Re_OLS) <sup>6</sup>	Hausman <sup>7</sup>	R <sup>2</sup> <sup>8</sup>	N.O. <sup>9</sup>	N.I. <sup>10</sup>
FE <sup>11</sup>	0.154* (2.460)	-0.910* (-16.970)	287.950*	3.040*	-0.878	-----	-----	0.449	505	-----
RE <sup>12</sup>	-0.108 (-1.020)	-0.251* (-7.980)	63.680*	-----	-----	3.680*	230.210*	0.449	505	-----
OLS	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
DPD <sup>13</sup>	0.498* (6.020)	-1.440* (-12.140)	239.650*	-----	-----	-----	-----	-----	217	5

**Table 9. Results from the absolute convergence model for all fruits import (percentage values relatively to the total of each year)**

	Const. <sup>1</sup>	Coef. <sup>2</sup>	F/Wald(mod.) <sup>3</sup>	F(Fe_OLS) <sup>4</sup>	Corr(u_i) <sup>5</sup>	F(Re_OLS) <sup>6</sup>	Hausman <sup>7</sup>	R <sup>28</sup>	N.O. <sup>9</sup>	N.I. <sup>10</sup>
FE <sup>11</sup>	0.161* (3.330)	-1.059* (22.210)	493.450*	4.220*	-0.897	-----	-----	0.585	497	-----
RE <sup>12</sup>	-0.046 (-0.490)	-0.293* (-9.150)	83.670*	-----	-----	7.980*	470.680*	0.585	497	-----
OLS	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
DPD <sup>13</sup>	0.467* (8.740)	-1.568* (-18.700)	425.600*	-----	-----	-----	-----	-----	220	5

**Table 10. Results from the absolute convergence model for all fruits export (percentage values relatively to the total of each year)**

	Const. <sup>1</sup>	Coef. <sup>2</sup>	F/Wald(mod.) <sup>3</sup>	F(Fe_OLS) <sup>4</sup>	Corr(u_i) <sup>5</sup>	F(Re_OLS) <sup>6</sup>	Hausman <sup>7</sup>	R <sup>28</sup>	N.O. <sup>9</sup>	N.I. <sup>10</sup>
FE <sup>11</sup>	-0.025 (-0.400)	-0.923* (-16.330)	266.670*	2.900*	-0.863	-----	-----	0.430	505	-----
RE <sup>12</sup>	-0.131 (-1.260)	-0.257* (-7.660)	58.670*	-----	-----	2.280	214.390*	0.430	505	-----
OLS	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
DPD <sup>13</sup>	0.218* (3.230)	-1.397* (-11.660)	239.530*	-----	-----	-----	-----	-----	217	5

#### 4. Conclusions

The Europe, namely Spain, is the principal partner of Portugal to the international trade of fruits. What is expected, because the cost of transport. The transport of fruits is not cheap and transport these products in long distance worse.

This is in line with the new economic geography what says that the transport costs are important and the economic sectors have a tendency to be close to minimizing the cost of transportation.

Portugal needs a new national policy to fruit sector, not only to the international trade, but also to the production. Is not easy to formulate a new national policy, because the limitations of the common agricultural policy from the European Union, but the Portuguese authorities must be able to find new ways for the sector in line with the European policies.

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