CIMALSA
Centres logístics de Catalunya

Generalitat de Catalunya
Departament de Territori i Sostenibilitat

The Logistics Observatory

Indicators of competitiveness for the Catalan Logistics system (9th edition)

+ Advanced data for 2014

July 2014

Institut Cerdà

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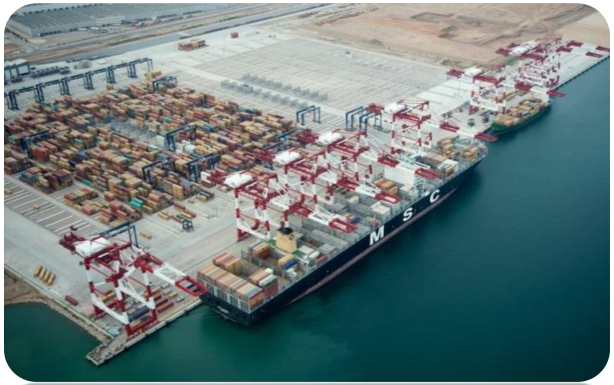


Introduction

The Logistics Observatory is:

- A tool for the **continuous evaluation of the needs of the sectors of the economy in relation to the infrastructure systems and logistics services.**
- **A meeting point for the companies and key agents** that enables the needs of the business sectors of the economy to be integrated with planning and management of infrastructures and services.

The objectives of the Indicators of Competitiveness of the logistics system are:

- To create **a reference framework that is stable over time**, based on real parameters and objective observation.
- **To monitor the most relevant data** from the logistics system and **analyse their evolution** by contrasting the derived information with experts in each specific area.
- To become a **tool that provides information for the planning and management of the logistics system.**

Introduction

Document structure:

- ❑ This work is divided into **two main parts**:
  - ✓ **The document itself: 34 indicadors**.
  - ✓ **The statistical annex:** more than **50 complementary statistical data.**

❑ The document is organised in the following sections:

1.- Socioeconomic context

2.- Infrastructure supply

3.- Supply and demand

4.- Logistics real estate market

5.- Efficiency

6.- Summary table of indicators

CONTENTS

Introduction

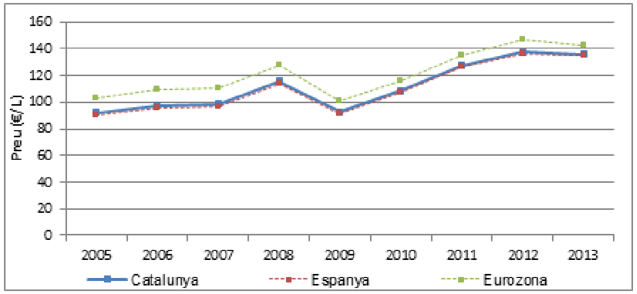
INDICADOR 3. PREU MITJÀ DEL GASOIL A LES GASOLINERES CATALANES

1.- MOTIVACIÓ: Conèixer el preu de mitjà del litre de gasoil a les gasolineres catalanes, espanyoles i europees, amb l'objectiu d'establir una comparativa entre les diferents unitats territorials.

2.- DEFINICIÓ: Preu mitjà del litre de gasoil d'automoció a Catalunya.

3.- EVOLUCIÓ:

INDICADOR 3	2005	2006	2007	2008	2009	2010	2011	2012	**2013**	Δ 12-13	Δ interanual
Preu del gasoil a Catalunya (€/L)	91,9	97,2	98,3	115,5	92,5	108,5	127,3	137,3	**136,1**	-0,9%	5,0%



Dades complementàries	2005	2006	2007	2008	2009	2010	2011	2012	**2013**	Δ 12-13	Δ interanual
Preu del gasoil a Espanya (€/L)	90,0	95,7	97,0	114,1	91,2	107,5	126,7	136,5	**135,2**	-1,0%	5,2%
Preu del gasoil a l'Eurozona (€/L)	103,5	109,0	110,0	127,1	100,5	115,4	135,5	147,3	**143,1**	-2,9%	4,1%

Indicadors de competitivitat del sistema Logístic Català.

Indicadors de competitivitat del sistema Logístic Català.

4.- RELLEVANCIA I ANALISI DE TENDENCIA:

L'anàlisi de la sèrie 2005-2013 mostra un increment interanual mitjà del 5,0% del preu mitjà del litre de gasoil a Catalunya. No obstant, entre 2012 i 2013 el preu ha disminuït un 0,9%, trencant la tendència a l'alça iniciada el 2009.

Pel que fa a la resta d'unitats territorials, es constata un decrement de preus l'últim bienni analitzat. Addicionalment, es constata que al conjunt de l'Estat el preu mitjà d'aquest carburant es situa un cèntim per sota que a Catalunya, mentre que a l'Eurozona el preu és 7 cèntims d'euro superior. No obstant, la diferència de preus entre Catalunya i l'Eurozona ha disminuït a ritme del 6,1% anual entre 2005 i 2013.

5.- METODOLOGIA

La informació per a la construcció d'aquest indicador s'ha extret dels informes anuals de preus dels carburants publicats pel Ministeri d'Indústria, Comerç i Turisme, prenent com a referència els preus amb impostos del gasoil d'automoció.

Pel que fa al preu corresponent a l'Eurozona, es considera la mitjana ponderada dels països pertanyents a la zona Euro, indicats en cada cas en els informes anuals consultats.

6.- FONTS:

- Precios de carburantes y combustibles (Ministeri d'Indústria, Comerç i Turisme).

7.- INFORMACIÓ ESTADÍSTICA DE REFERÈNCIA RECOLLIDA A L'ANNEX:

- I.11.- Composició del preu mitjà del litre de gasoil

Introduction

Information search process:

- **More than 30 sources of information used**
  - **Oriented towards analysis of the economic context:**
    - Statistical Institute of Catalonia
    - National Statistics Institute
    - Eurostat
    - ...
  - **For finding specific sectorial data:**
    - Permanent survey of road freight transport (Spanish Ministry for Development).
    - Freight transport databases: from the rail sector RENFE, ADIF i FGC.
    - Statistical reports from the Ports.
    - Statistical data from the Spanish air authorities Aena and Clasa.
    - Data of average daily intensity (Catalan Transit Service)
    - Census data from sectorial magazines and logistics platforms (Alimarket)
    - ...
- **Secondary sources: contrasting the primary results with experts from the various specialised areas within the sector.**

Introduction: WHAT’S NEW IN THE 2014 EDITION?

OBJECTIVES

✓ Study, analyze and define **new indicators**, improving the necessary ones in order to **offer a global picture of the Catalan logistics sector.**

8 NEW INDICATORS

- Diesel average price at the Catalan gas stations and comparative
- Value of the commercial exchanges with the Spanish State
- Rail share for the international land transport flows
- Intermodal railway transport
- Activity of the private rail operators
- Logistics real state sector at the Mediterranean Corridor
- Emissions or the road freight transport
- Importance of alternative fuels

+ 7 NEW STATISTICAL ANNEXES

+ ADVANCED DATA FOR 2014

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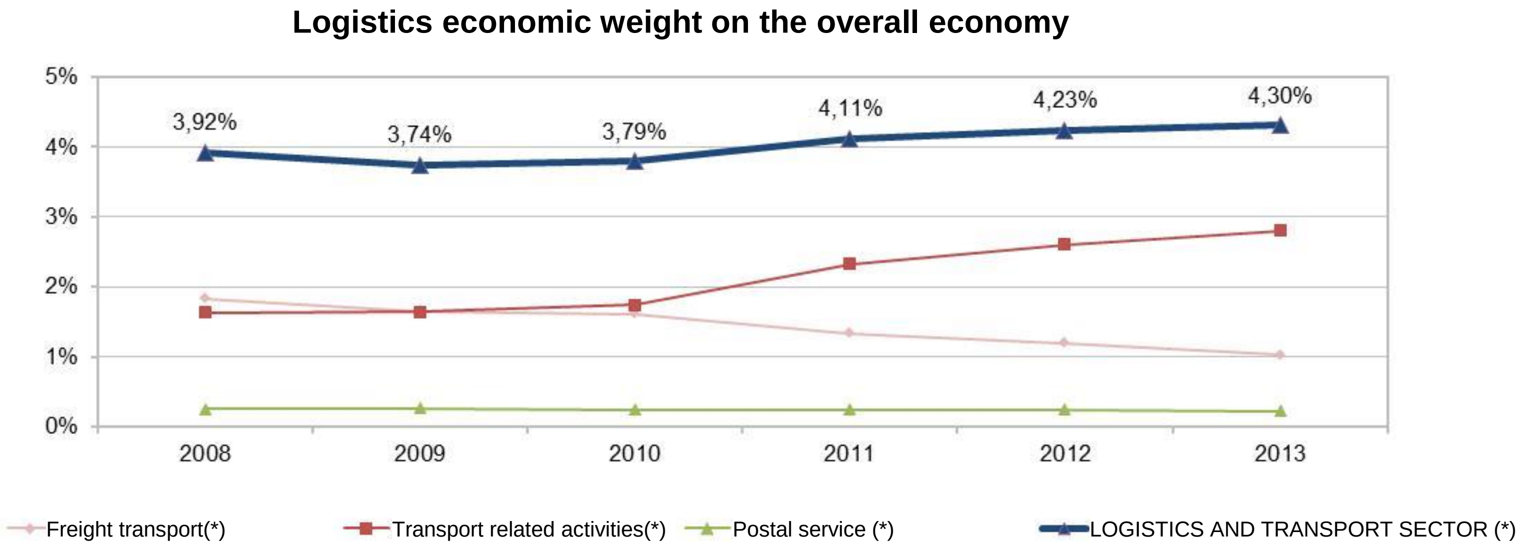
Socioeconomic context: CONCLUSIONS

- Following the increasing trend of the last four years, despite the reduction of the economic extent of the freight transport, **the logistics sector accounts for over 4% of the overall economy.**
- During 2013, the **number of employees** of the **logistic sector** has **increased by 1.6%** compared to 2012.
- The **Catalan balance of trade** of the recent years has **decreased the difference** between the economic value of imports and exports. In spite of the economic crisis, the **interannual growth of the economic value of exports has been 4%** during the period **2004-2013.**
- The **chemical**, **automotive** and **food and drink** sectors account for **more than 50%** of the **Catalan exports**.
- Between 2009 and 2013, the **economic value** of **Catalan exports** to the **rest** of the **word** has **increased by more than 40%,** while the **value of exports** to the **rest of Spain** has **decreased 1by 5%.**

Socioeconomic context: Economic weight

Following the growing trend of the last 4 years, **the logistics sector accounts for over 4% of the overall economy**. This fact is **due to the growth in the transport related activities**, which provide a **higher added value.**



Source: Elaborated from data from the Statistical Institute of Catalonia and the Caixa Catalunya annual statistics review.

(*) The data for 2011 and 2012 are provisional and have been calculated from indicators of productivity and sectorial activity. These data will be updated as and when the annual services surveys are published.

Socioeconomic context: Employment generation

The transport and storage sector is leading the labour market reactivation

- During **2013**, the **number** of **people employed** in **logistics** has **increased by 1.6%** compared to 2012.

Advanced data for 2014

During the **1st quarter of 2014**, the number of **employees in the transport and storage** sector **has grown by 8.8%** compared to the 1st quarter of 2013. Therefore, the **transport and storage sector is leading the labour market reactivation.**

Source: Idescat

Source: Elaborated from data in the annual services survey

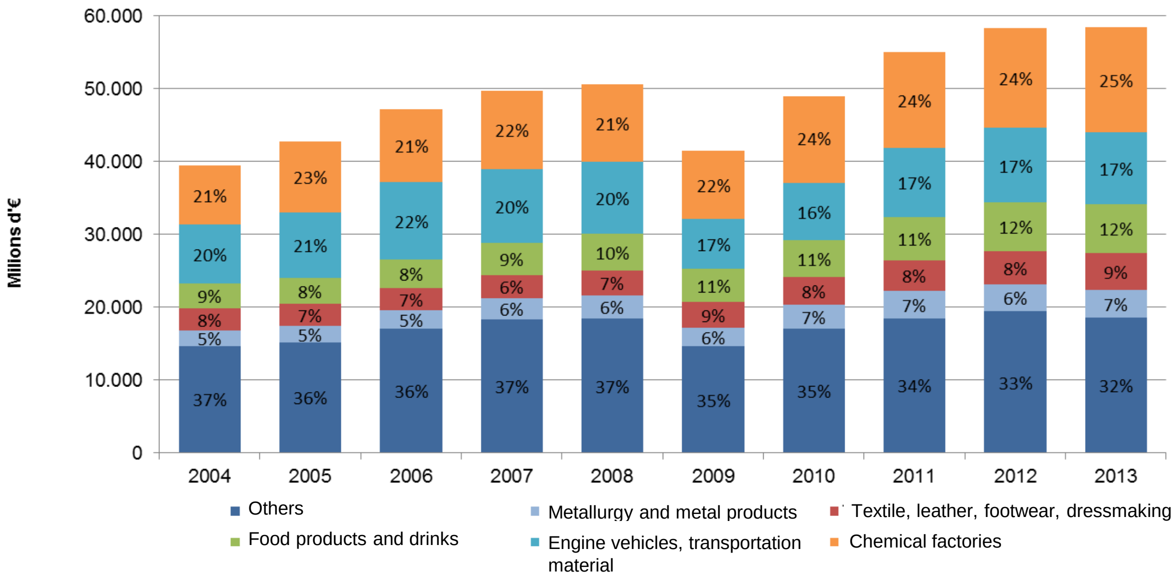
(*) The data for 2012 and 2013 have been calculated from data from the active population survey (INE). These data will be updated when the results of the annual services surveys are published.

New Socioeconomic context: Economic value of exports (I)

Evolution over time

In spite of the **deep fall of the year 2009** (**-18%** compared to 2008), the annual **growth** of the **economic value of exports** has been **4%** during the **period 2004-2013.**

- During 2013, the evolution of the **textile, leather, footwear and dressmaking**, and **chemical** sectors should be highlighted, since the **value of exports** relating to both these sectors **has grown by 10% and 4% respectively**.



Source: Elaborated from data from the National inland revenue agency and Idescat)

Advanced data for 2014

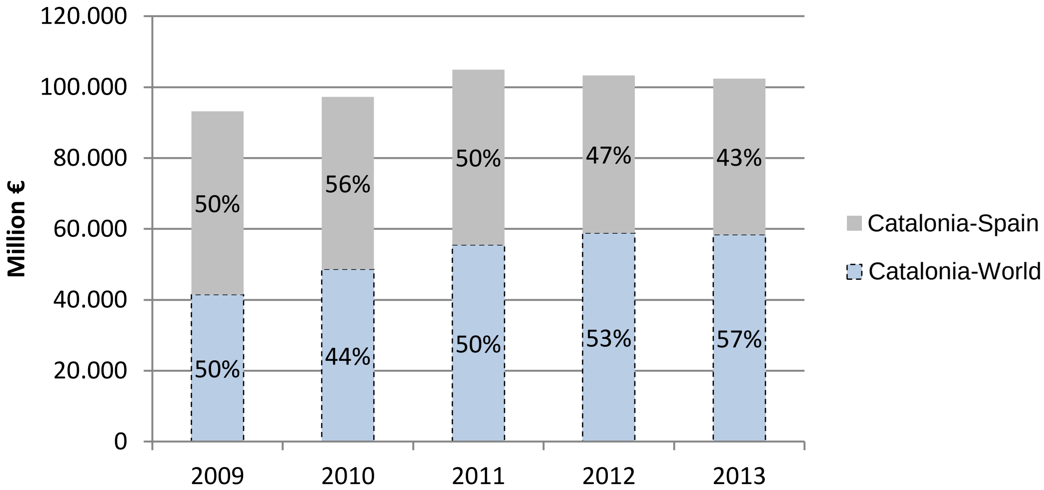
The two first months of **2014** represent the **best start in the historical avalilable data (increase over 2%).**

Source: Idescat

New Socioeconomic context: Economic value of exports (II)

Internationalizacion of trade exchanges

In the **period 2009-2013**, the **economic value of Catalan exports** to the **rest of the world** has **increased 40.8%.** However, the **value** of the **exports to the rest of the Spanish State** has **fallen by 14.8%.**



Economic value of exports. Evolution 2009 - 2013	
Catalonia-Rest of Spain	-14,8%
Catalonia-Rest of the world	+40,8%

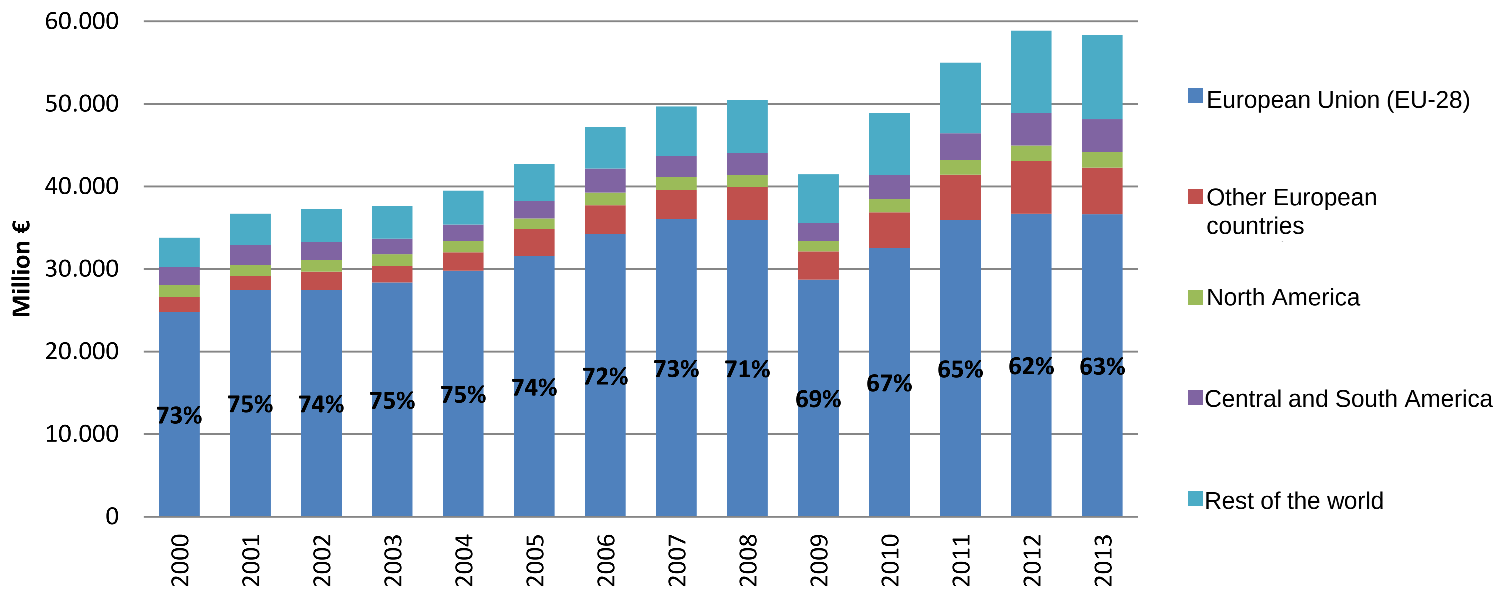
Source: Elaborated fromdata from *Informe Trimestral sobre el comercio interregional en España*, CEPREDE

Socioeconomic context: Economic value of exports (III)

Destinacion of exports

The **European Union** keeps on **concentrating** the **most part** of the **Catalan exports**. However, in the **last years** the **EU** has **lost influence** to **other parts** of the **world**.

Catalan exports by area and country

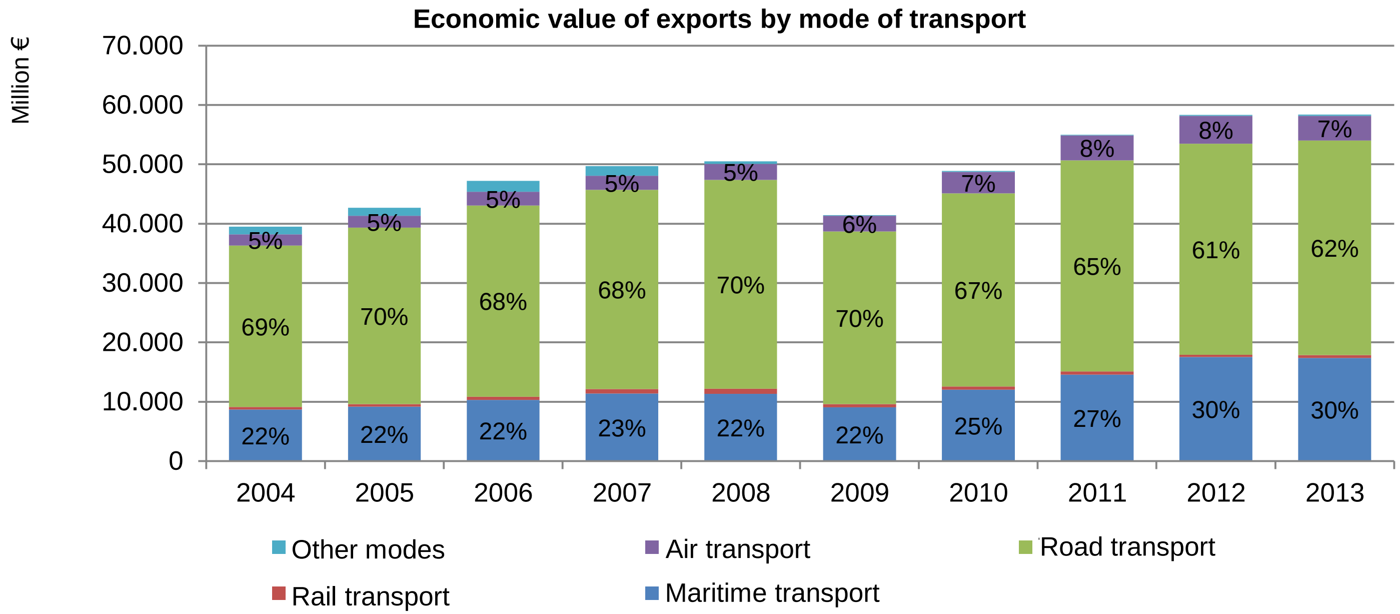


Source: Own preparation based on data from the Catalan Institute of Statistics.

Socioeconomic context: Economic value of exports (IV)

Exports by mode of transport

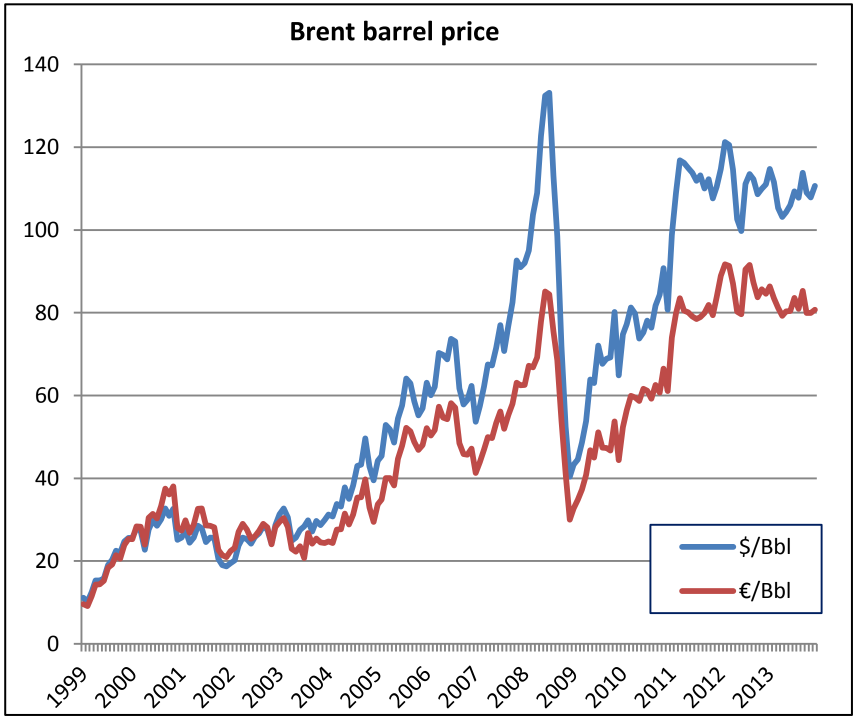
Compared to **2012**, **no relevant changes** can be seen on the **distribution** of the **value** of **exports** by **mode** of **transport**. It can be stated that **road transport** accounts for more than **60%** of the economic value of the Catalan exports, while **sea transport consolidates** its **importance**.



Source: Own preparation based on data form the Catalan Institute of Statistics

Socioeconomic context: Statistical annex

I. SOCIOECONOMIC CONTEXT



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Supply and demand: CONCLUSIONS

- During the year **2013** the **Catalan logistics system** managed **319 millions of tonnes**, which represents **9.5% less than in the previous year**. The **internal traffic** has been the **most affected** by this fall, and **continues to lose share**. Over the last 6 years it has lost 12 points, accounting for **43% of the total transported tonnes in 2013.**

- During the **last year,** the **road flows decreased 10.5% in Catalonia.** Again, the **internal traffic** has been **the most affected.** Furthermore, the **weight of fuel costs within total costs of road transport increased by 27% since 2009.**

- The volume of **freight transported by rail increased by 3.3%** during the period **2012-2013**, accounting for a **3.5% stake in the Catalan logistics chain**. In addition, the **intermodal land transport** has **consolidated its importance** during the recent years.

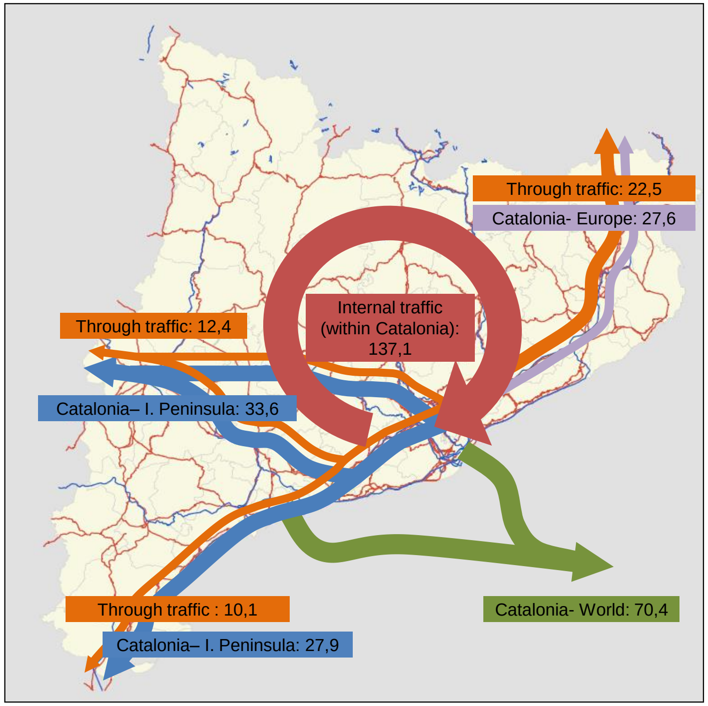
- **Maritime** freight **transport fell by -7.8%. Nevertheless,** the **export profile** of the **Catalan ports** has been **reinforced,** especially on **container cargo.**

- In the **last year**, the total volume of **freight** transported by the **Catalan airport system** has **increased** by **3.2%,** stressing the **70% growth** of the volume **managed from the Barcelona Airport** to the **Middle East.**

Supply and demand: Overall volume (I)

By type of traffic

During the year 2013 the Catalan logistics system continued the decreasing trend started 6 years ago. The overall transported volume has fallen 9.6% compared to 2012.



Source: Elaborated from data ofthe Spanish Ministry for Development, Renfe, FGC, the Spanish Ports, Aena (Millions of tonnes)

Overall freight volume:

- **Year 2012: 352.4 Million Tones**
- **Year 2013: 319.2 Million Tones**

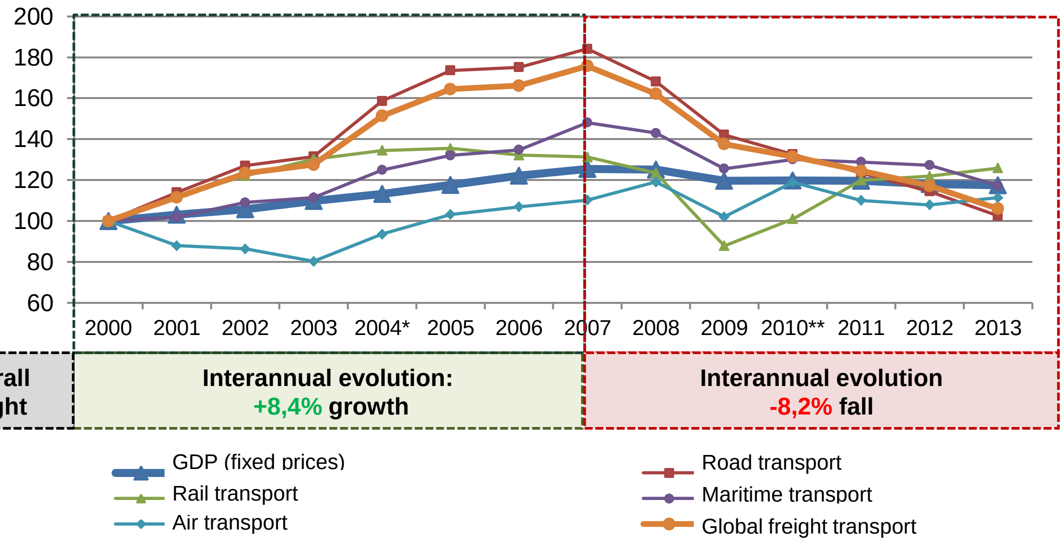
Type of traffic	Weight 2012	Weight 2013
Internal	46,5%	43,0%
Maritime / Air	21,6%	22,0%
With the rest of Spain	17,9%	19,3%
Through traffic	6,3%	7,1%
International land traffic	7,7%	8,7%

Supply and demand: Overall volume (II)

By mode of transport

It is clear that **GDP** has a **multiplier effect** on **freight traffic**, in both times of economic growth and in periods of recession.

Evolution of GDP and evolution of freight transport by mode in Catalonia



Overall freight	**Interannual evolution: +8,4% growth**	**Interannual evolution -8,2% fall**

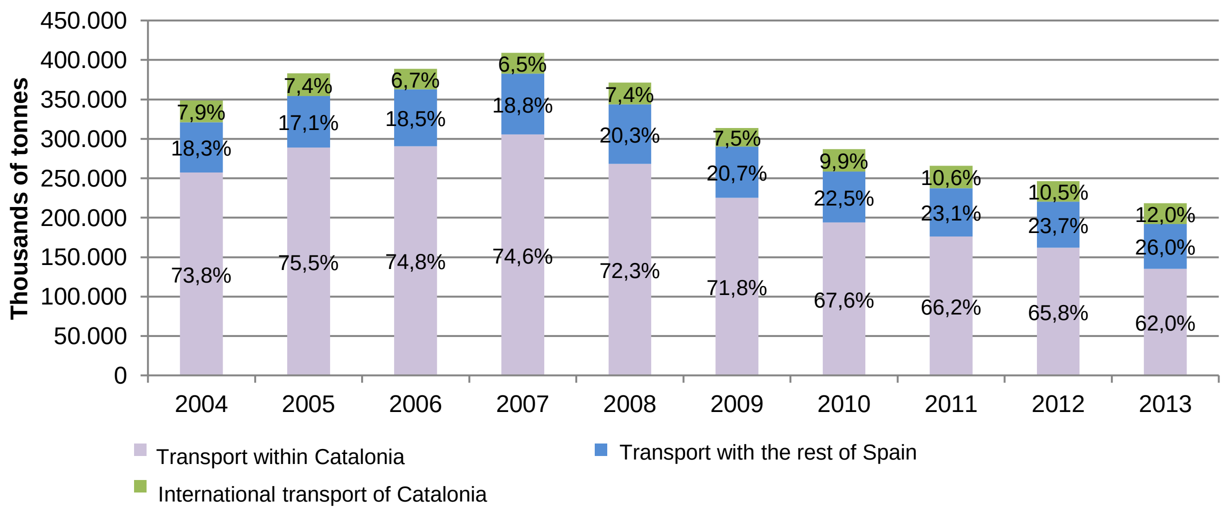
Source: Elaborated from data of the Spanish Ministry for Development, Idescat, Renfe, FGC, private rail operators, Spanish State Harbours. *Since 2004 road through traffic is included. ** Since 2010 private rail operators are included. Data from Comsa corresponding to 2010-2011 is still waiting for confirmation.

Evolution 2012 – 2013 (tonnes)	
GDP (fixed prices)	-0,5%
Road	-10,5%
Rail	+3,3%
Maritime	-7,8%
Air	3,2%
TOTAL	-9,5%

Road transport mode: Flow types

Overall, the road transport flows in Catalonia have fallen by 11,5%.

- **Internal flows** continue to **lose share.**
- Despite the **reduction** in **overall activity**, exchanges **with the rest of Spain** continue to **gain relative importance**.
- **International operations increase** their **share** within **road transport**, both in **absolute** and **relative** terms**.**



Source: Elaborated from data of the Spanish Ministry for Development

Advanced data for 2014

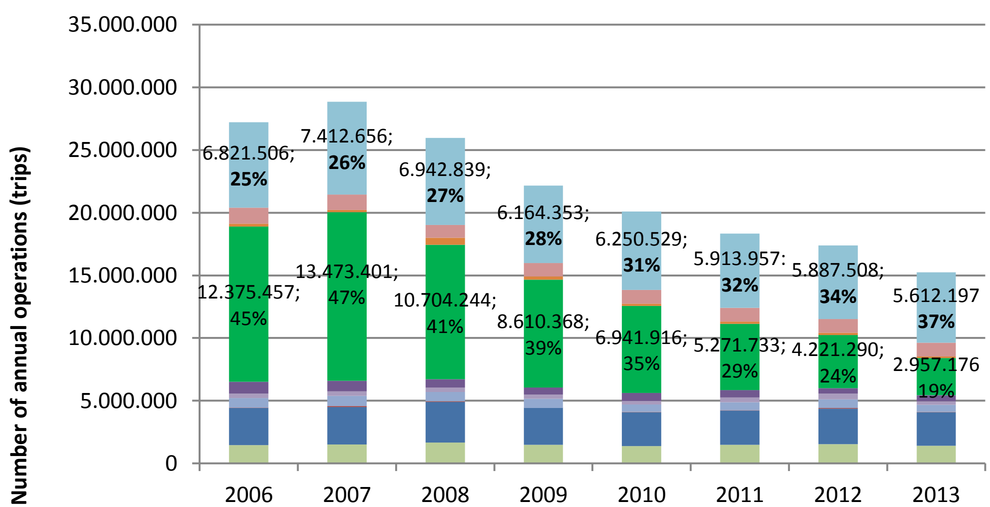
During **the 1st quarter of 2014 international flows increase** by **23%** compared to the **same quarter of 2013.**

Source: EPTMC

Road transport mode: Operations by productive sector

The number of operations within Catalonia has reduced by 50% between 2007 and 2013.

- The **fall** in the **road transport sector** is **caused** mainly by the **burst** of the **real estate bubble**. Therefore, the **road transport** related **operations** have **fallen** by **78% since 2007** (Thus, **more than 80%** of the fall is **due to the construction sector**).



Source: Elaborated from data of the Spanish Ministry for Development

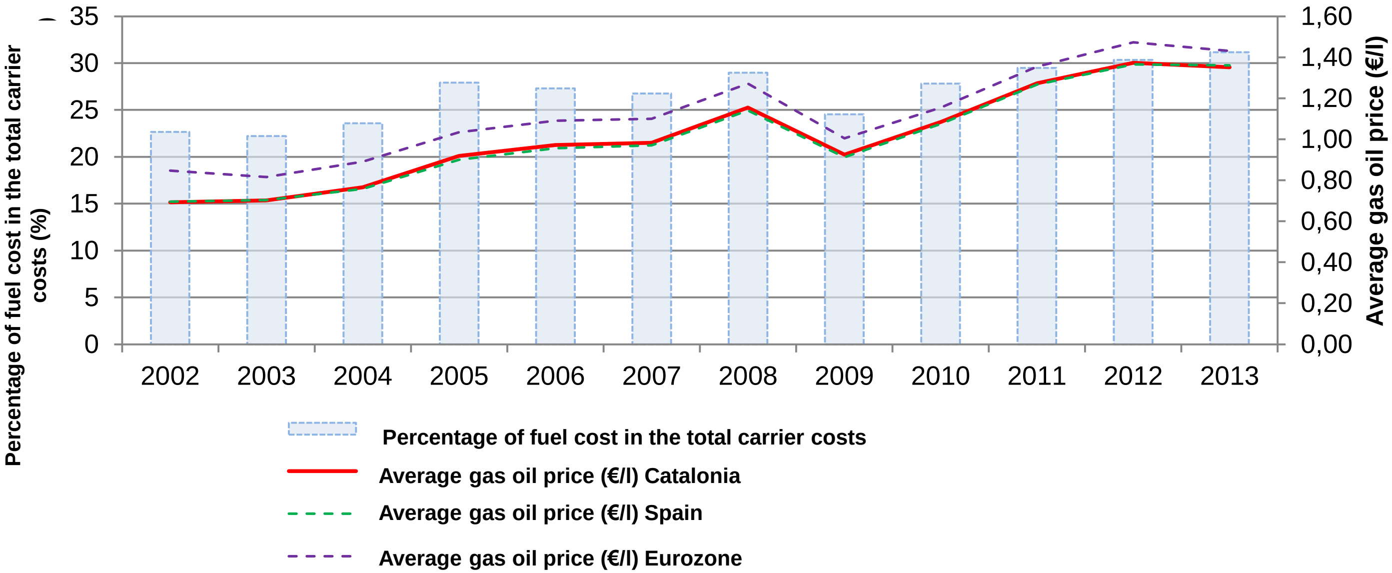
Number of operations (Variation 2012-2013)	
Machines, vehicles and manufactured objects	-4,7%
Chemicals	**-0,1%**
Fertilisers	-24,6%
Minerals and construction materials	-29,9%
Metallurgical products	**+7,1%**
Minerals and melting waste	-35,7%
Oil products	-19,8%
Fuel and solid minerals	-38,7%
Food products and forage	-5,3%
Agricultural products and living animals	-8,6%

New

Road transport mode: Evolution of costs in relation to the price of diesel

During the **last 4 years**, the **relative weight** of **fuel costs** to total costs has **increased** by **27%** for **road transport**.

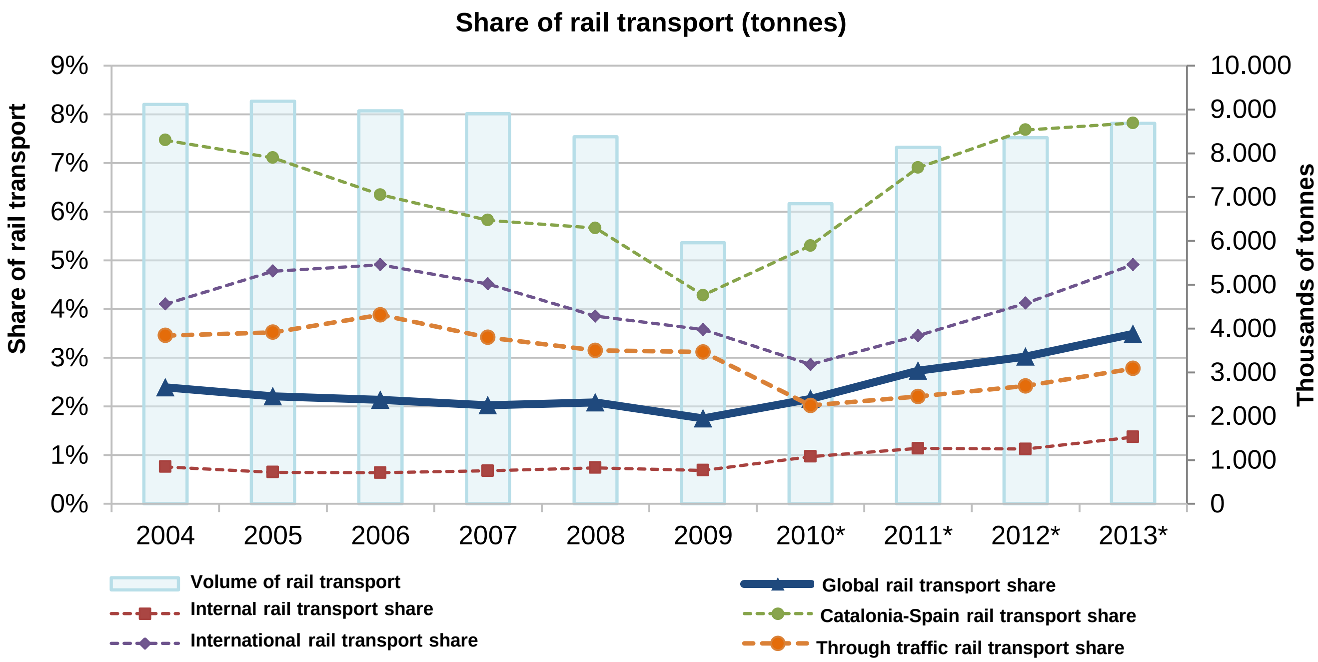
- During **2013** the **average price of diesel has fallen by 1.5%** compared to 2012 values.
- In the **Eurozone** the **cost per liter** is **8 euro cents higher.**



Source: Elaborated from data provided by the Ministry of Industry, Commerce and Tourism and the Observatory of road haulage costs.

Rail transport mode: Rail freight share

During the year **2013**, **rail transport** has **increased by 15.5%** compared to 2012. In addition, the **stake** of **rail transport** in the **Catalan logistic chains** continues to **follow** the **increasing trend** started in 2009, **accounting** now for a **3.5% share.**

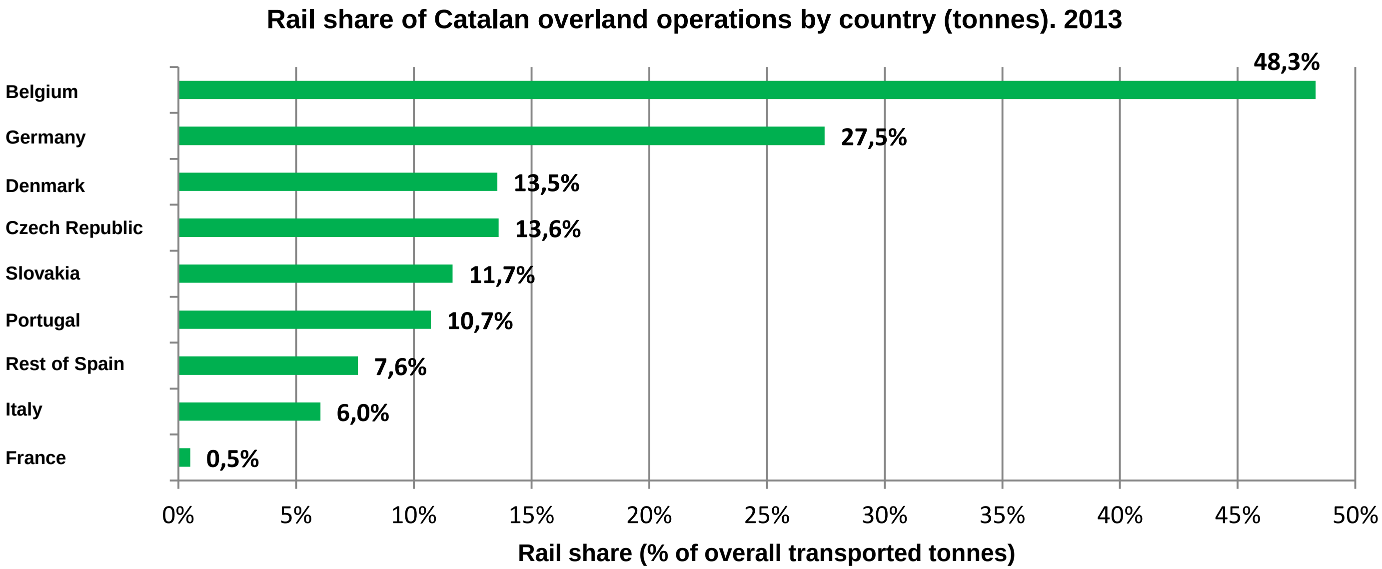


Source: Elaborated from data of the Spanish Ministry for Development, Renfe, FGC, private rail operators, Spanish State Harbours. *Since 2004 road through traffic is included. ** Since 2010 private rail operators are included. Data from Comsa corresponding to 2010-2011 is still waiting for confirmation.

New Rail transport mode : Rail share by country

The rail transport mode has a high competitiveness for long distances.

- The high **rail shares** on the **overland operations** between **Catalonia and Belgium (48.3%)** and **Catalonia and Germany (27.5%) contrast** with the **lower share between Catalonia and France (0.5%)**



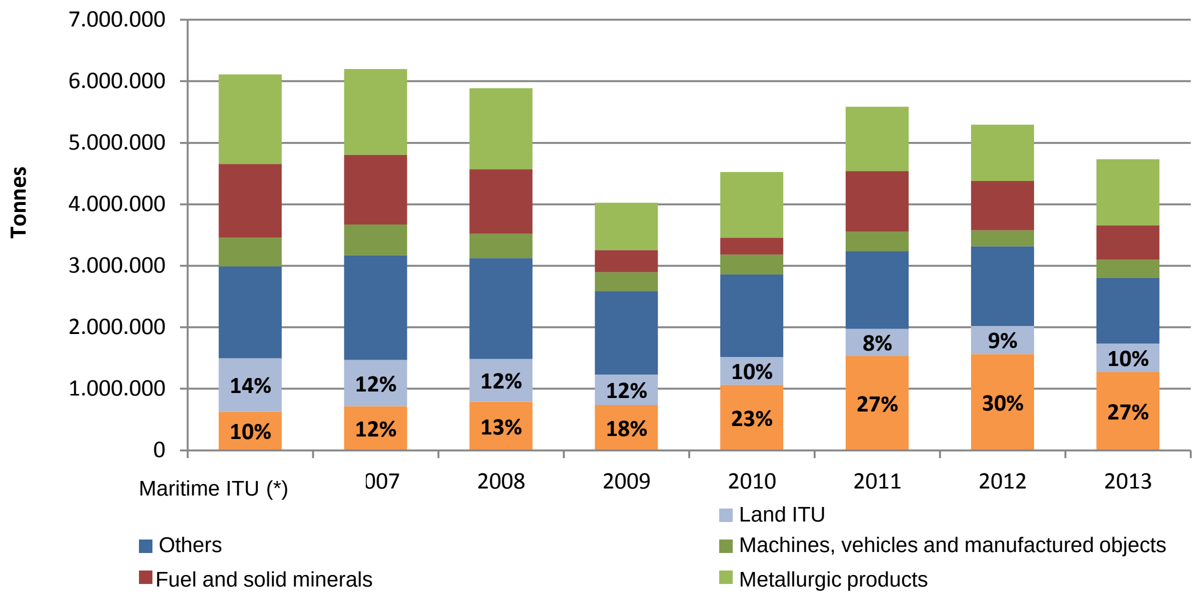
Overland transported tonnes from/to Catalonia to/from:	
Belgium	922.591
Germany	2.509.948
Denmark	85.773
Czech Republic	57.432
Slovakia	2.444
Portugal	480.931
Rest of Spain	**63.159.088**
Italy	1.498.386
France	**9.516.301**

Source: Elaboration from Renfe databases, private rail operadors and Spanish Ministry for Development

Rail transport mode: Type of transported good

The weight of intermodal transport during the last 2 years has remained slightly stable. In the recent years the **intermodal transport** has become **increasingly important**.

RENFE rail transport by type of good (internal and Catalonia-Spain flows)



Weight of internal intermodal transport	
2006	25%
2007	24%
2008	25%
2009	31%
2010	34%
2011	35%
2012	38%
2013	37%

(*) ITU: Intermodal Transport Unit

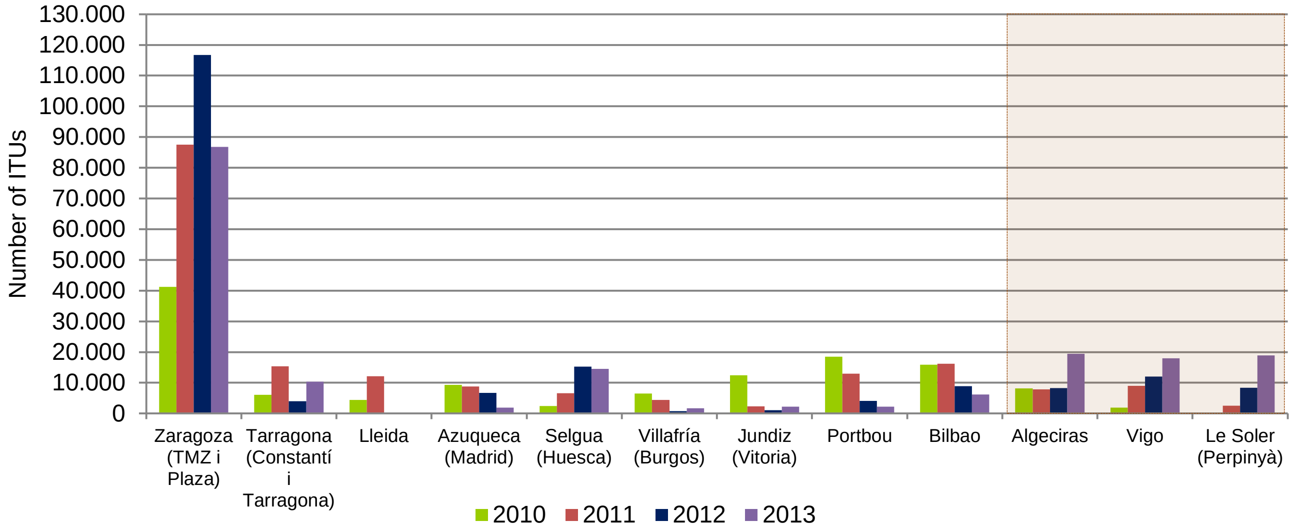
Source: Elaborated from RENFE's database

Rail transport mode: Destinations from the Port of Barcelona

Zaragoza is the origin / destination of 40% of the ITUs sent from or received by rail by the Port of Barcelona, operated by Renfe.

- In addition, during **2013**, the **Port of Barcelona increases its hinterland**, especially in the **container** exchange traffic with **Algeciras**, **Vigo** and the **South** of **France**. .

Number of containers sent / received by the Port of Barcelona (Renfe)



Font: Elaborated from Renfe database.

Evolution 2010-2013

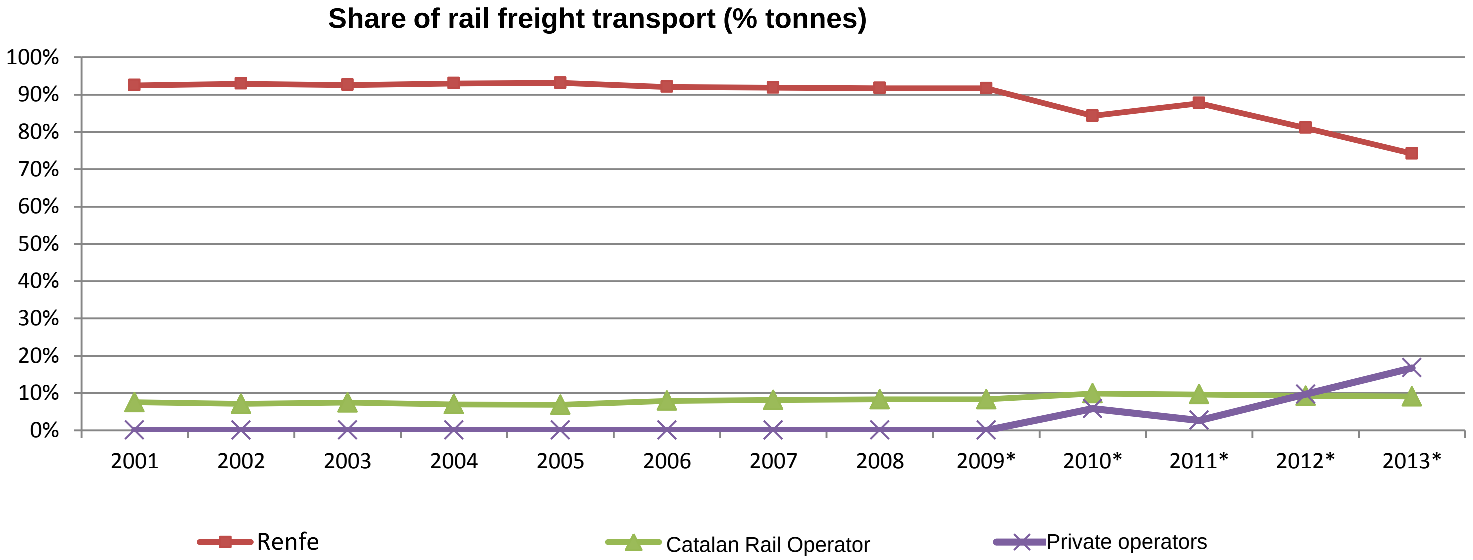
Terminal	∆ 12-13	∆ annual
Zaragoza	-26%	28%
Tarragona	158%	20%
Lleida		-100%
Madrid	-71%	-41%
Osca	-5%	82%
Burgos	120%	-36%
Vitoria	103%	-44%
Portbou	-46%	-51%
Bilbao	-30%	-27%
Algeciras	**134%**	**34%**
Vigo	**50%**	**110%**
Perpignan	**125%**	**540%**

New

Rail transport mode: Activity of private rail operators

During the last years, private rail operators increase its importance in rail freight transport.

- In **2013**, the **percentage** of **tonnes** transported by **private rail operators** rose to **16,7%**. This implies an **increase higher than 70%** compared to 2012.

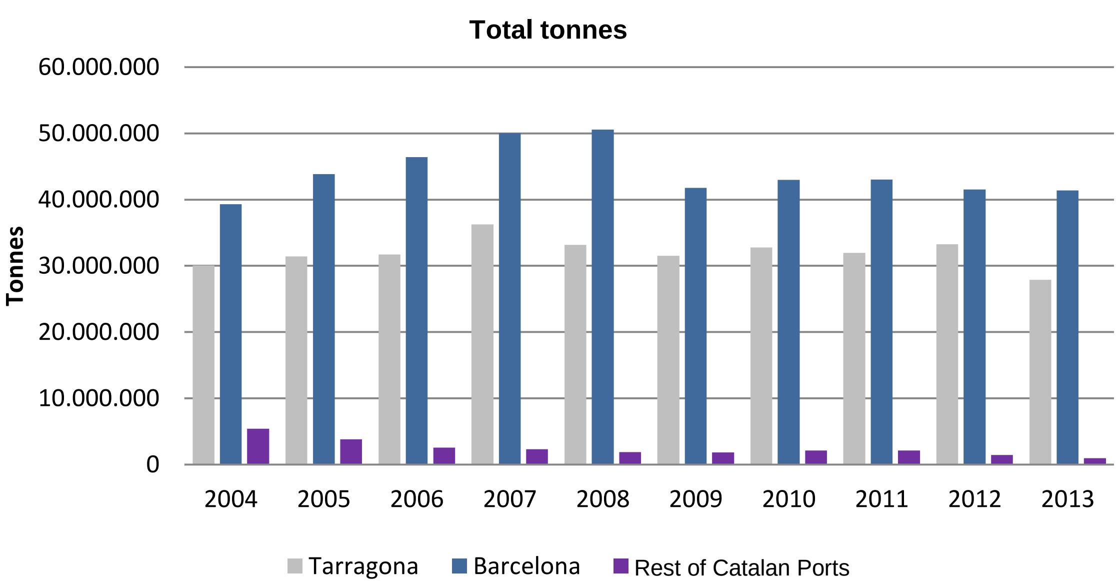


Source: Elaborated from Renfe, private operators and FGC databases.
*Private operators are included since 2010. Data from Comsa corresponding to 2010-2011 is still waiting for resolution.

Maritime transport mode: Overall freight volume

Data from 2013 shows a downward tendency of the total freight volume handled by the Catalan ports.

- In the **Port of Barcelona** the **total managed tonnage** has remained **stable** during the period **2012-2013**. However, the **fall** of the **Port of Tarragona** and the **rest of Catalan ports provokes** an **8% fall** in the **total volume of goods** moved by the **Catalan ports.**



Source: Elaborated from data supplied by Ports of Barcelona, Tarragona and Catalan Ports.

Advanced data for 2014

During the **first 5 months of 2014**, the **total handled tonnage** at the **ports** of **Barcelona** and **Tarragona** has **increased** compared to the same period of 2013. **This could imply** a **start** of a **change in the trend** observed during the recent years.

Source: Ports of Barcelona and Tarragona

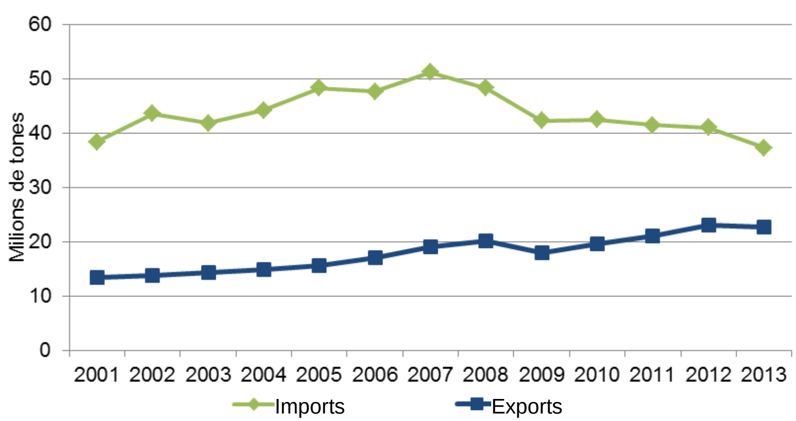
Evolution January-May 2014	
Port of Tarragona	+1,9%
Port of Barcelona	+8,0%

Maritime transport mode: Exports vs. imports

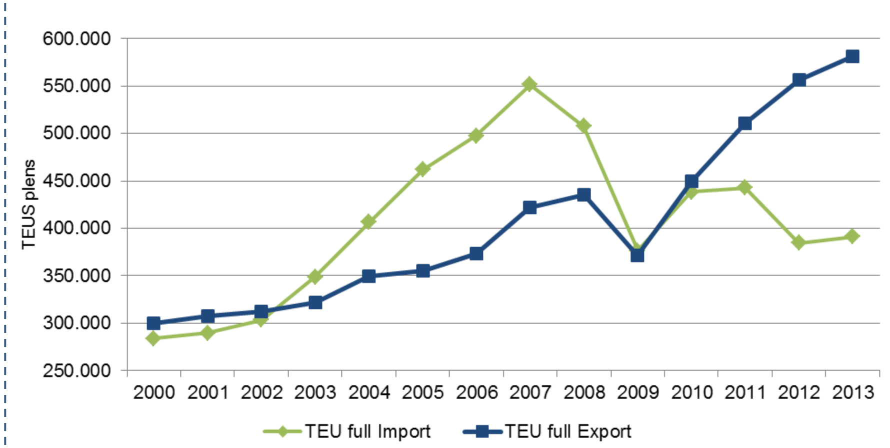
The difference between the volume of goods imported and exported through the ports is reducing, consolidating the growth trend of exports managed by the ports' logistics system

- In the Port of Barcelona, during the last **8 years**, **full containerised exports have gone from being 25% less than the imports to being 50% more than the imports.**

Traffic evolution. Ports of Barcelona and Tarragona



Full container traffic in the Port of Barcelona

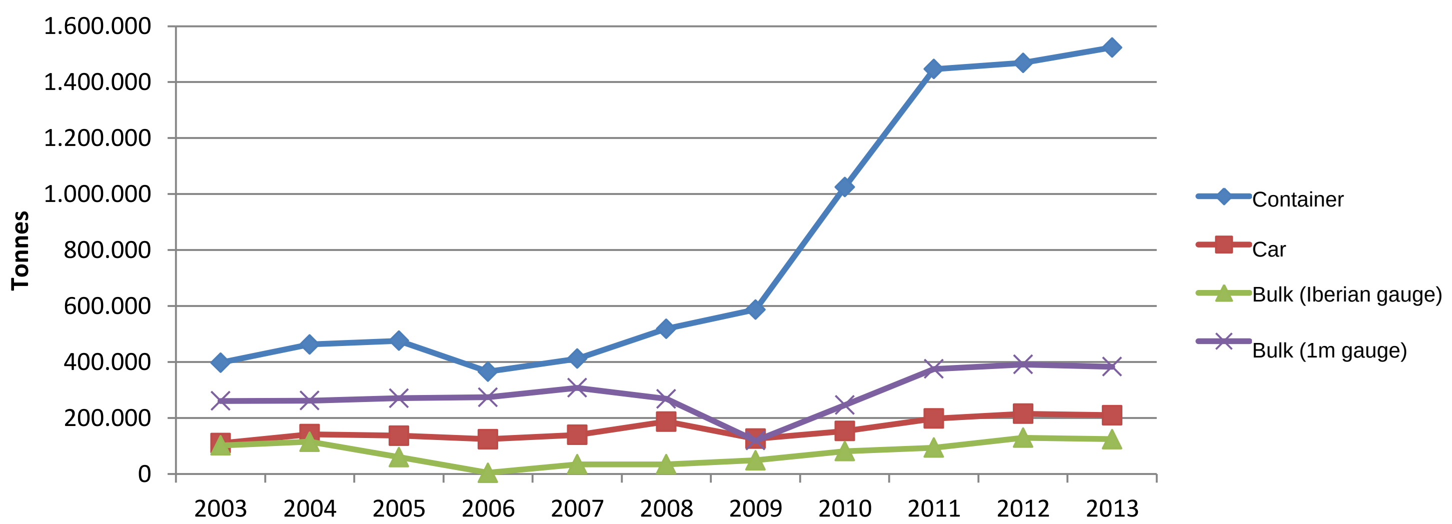


Source: Elaborated from information supplied by the Ports of Barcelona and Tarragona and National Ports

Maritime transport mode: Rail traffic in the Port of Barcelona

During the last 4 years, the total containerised freight handled in the Port of Barcelona has risen by a factor of 2.6.

- Despite the economic crisis, the volume of **freight transported by rail in the Port of Barcelona has grown at the rate of 17% annually between 2007 and 2013**.

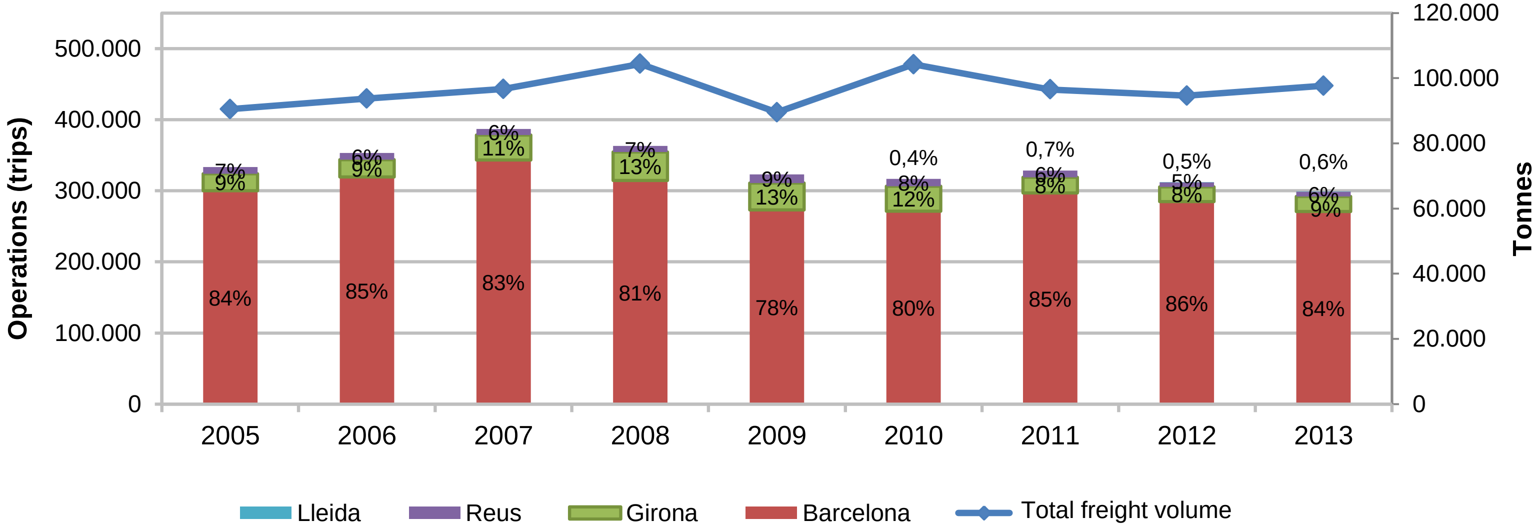


Source: Elaborated from information provided by the Port of Barcelona.

Air transport mode: Catalan air traffic

The number of operations made by Catalan airports fell by **4,2%** during the period 2012-2013.

- However, **during the last period analysed**, the **volume** of **freight** transported through the **Catalan airports increased by 3.2%,** which is **more than twice the growth** of the **world cargo** within the same period.

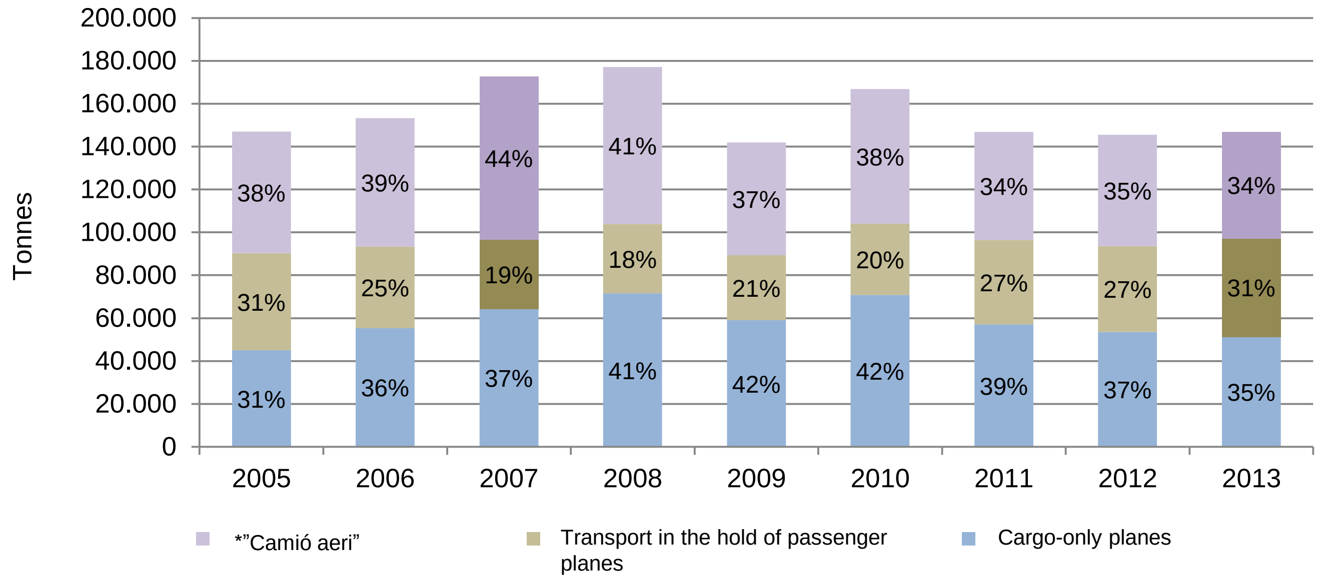


Source: Elaborated from data provided by AENA's Statistics department, Idescat and the Catalan Airports

Air transport mode : Type of air traffic

During the **last two analyzed years**, the total **volume** of **freight transported** by **air mode (plane + camió aeri*)** has **remained** quite **stable**, with an **increase** of **0.7%.**

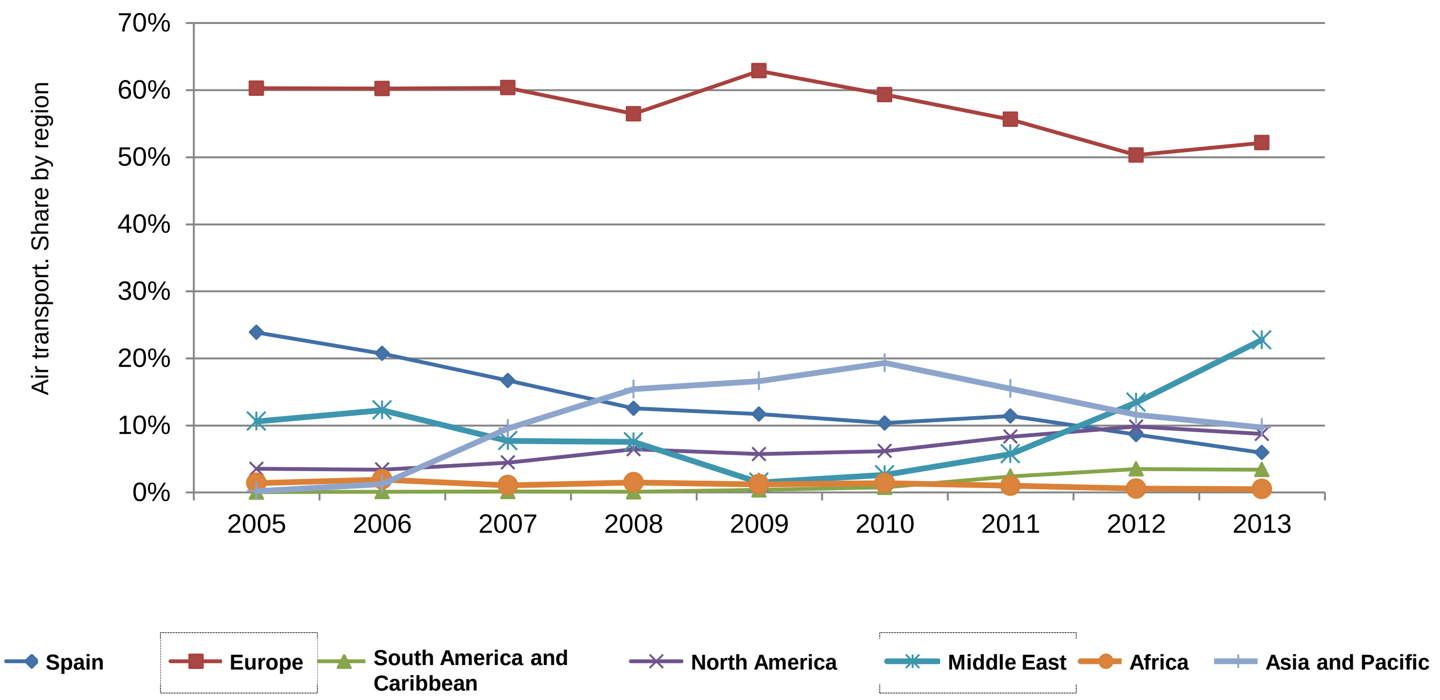
- During the **period 2007-2013** the **share** of **each type of transport** has been **redistributed**. Therefore, the **tonnes transported** in the **hold of passenger planes have increased by 42%,** while **camió aeri* tonnes have fallen by 35%.**



Source: Elaborated from data of AENA's and CLASA's Statistics departments. Data refers to Barcelona Airport
"camió aeri"* goods invoiced as air-freight although in fact transported by road, generally for distances of less than 1.000km

Air transport mode: Air traffic by regions

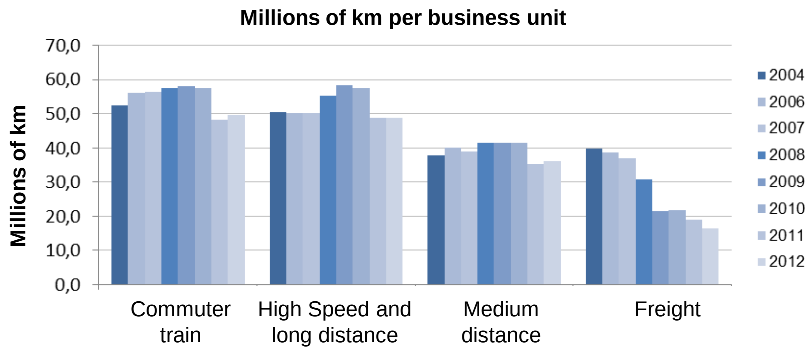
The **volume** handled in the **Barcelona airport increases** by **5.4% in 2013**, especially the **traffic with Europe** and the **Middle East**, which **focus 75% of the total handled tonnes**. **Both regions increase their traffic** with the Barcelona airport **(+3.6% Europe; +69.6% Middle East).**



Source: Elaborated from data of AENA's Statistics department

Supply and demand: Statistical annex

III. SUPPLY AND DEMAND



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Infrastructure supply: CONCLUSIONS

- In the last years the Spanish annual **road infrastructure** growth has been higher than the Catalan. However, **during 2013** the **growth** of **such infrastructures** in **Catalonia has been higher than in Spain.**

- During **2013**, the **involvement** of **heavy vehicles** in **traffic accidents with human casualties** in **Catalonia** has remained **stable** compared to 2012, while within the **Spanish State** it **has fallen by 4.6%.** The **accident rate involving heavy vehicles** in the **Catalan roads accumulates 11% reduction** in the period **2007-2012.**

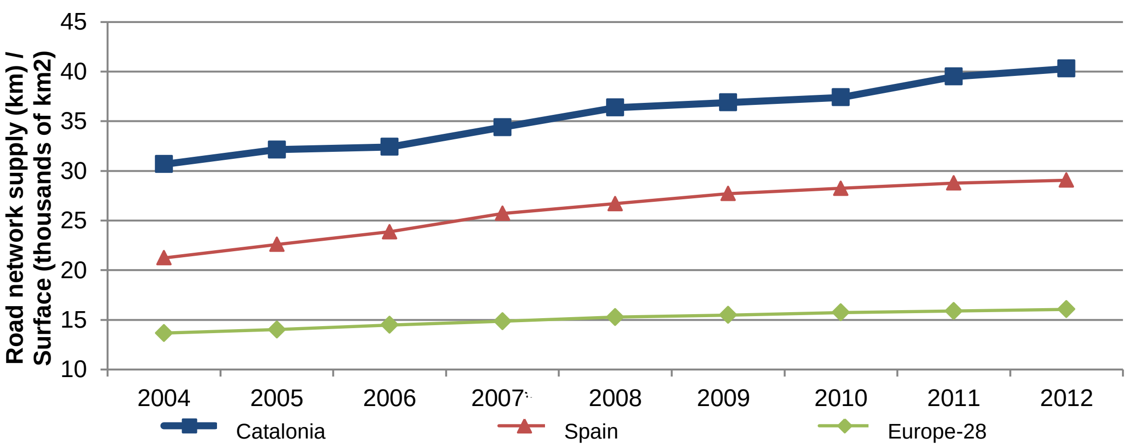
- **Catalonia** has a **better level of railway infrastructure compared to Spain** during the whole analyzed period. **Europe** remains in a **close position to Catalonia**, even though **since 2011 Catalonia takes distance** thanks to the inauguration of the **high speed line.**

- Between **2007 and 2013**, the **rail share** in the accesses to the **Port of Barcelona** has **increased fourfold,** while the one corresponging to the **Port of Tarragona has fallen by 11%.**

Infrastructure supply : Road infrastructure provision

During the year **2012** the total high capacity **(4 or more lanes) road infrastructure** has **increased** by **2.1%**, while in **Spain** this growth has been **1.0%**.

- The evolution over the whole time series (**2004-2012**) shows that the **Spanish** inter-annual **growth** over this period has been **higher** than in **Catalonia (4.0% and 3.5% respectively).**
- The **growth** in **road infrastructure** during the **last period analyzed** is due to the **upgrading** of the **Congost axis (C-17) and Coastal (C-31).** Data corresponding to **2013** will show a new **turning point**, as a result of the upgrading of the **Transversal axis.**



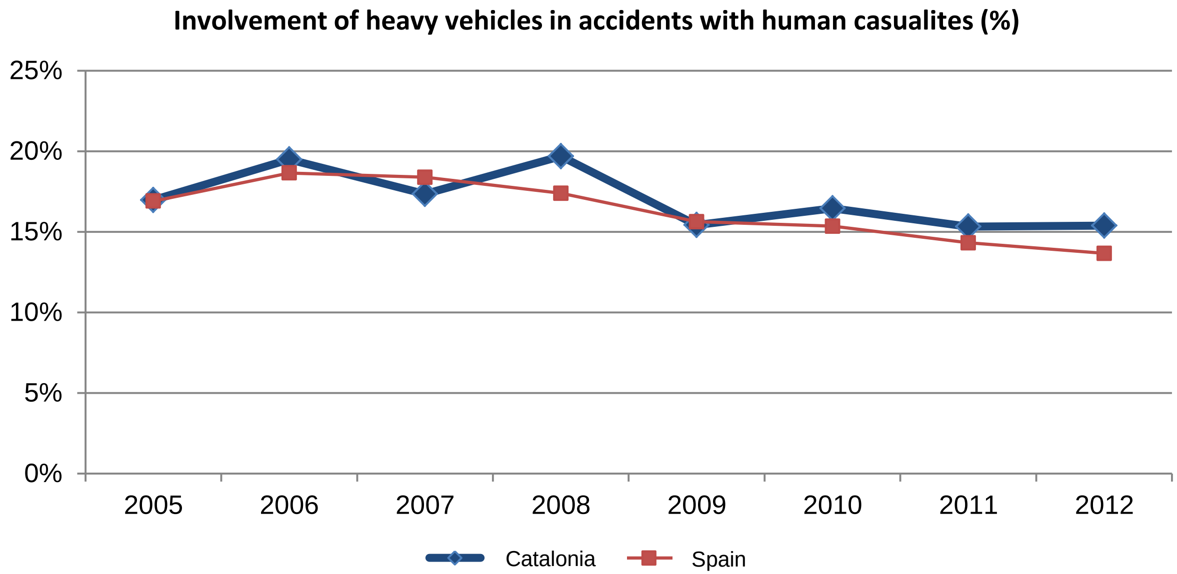
Km/population	2012
Catalonia	170,8
Spain	311,0
Europe-28	139,5

Source: Elaborated from data of the annual statistics of the Spanish Ministry for Development, INE and Eurostat)

Infrastructure supply: Evolution of accident rates

The **involvement** of **heavy vehicles** in the total number of **accidents with human casualties** has **remained stable** in **Catalonia**, while in **Spain** has **fallen by 4.6%.**

- The **ban** for **heavy vehicles** to **circulate** along the **N-II road** in the **Girona province** has brought a **73% reduction** in the **fatal accident rate** in this stretch during **2013.**



Advanced data for 2014

The number of **fatal accidents** in the **Gironian stretch** of the **N-II** road during the **first quarter** of **2014** is **zero** (April 2014).

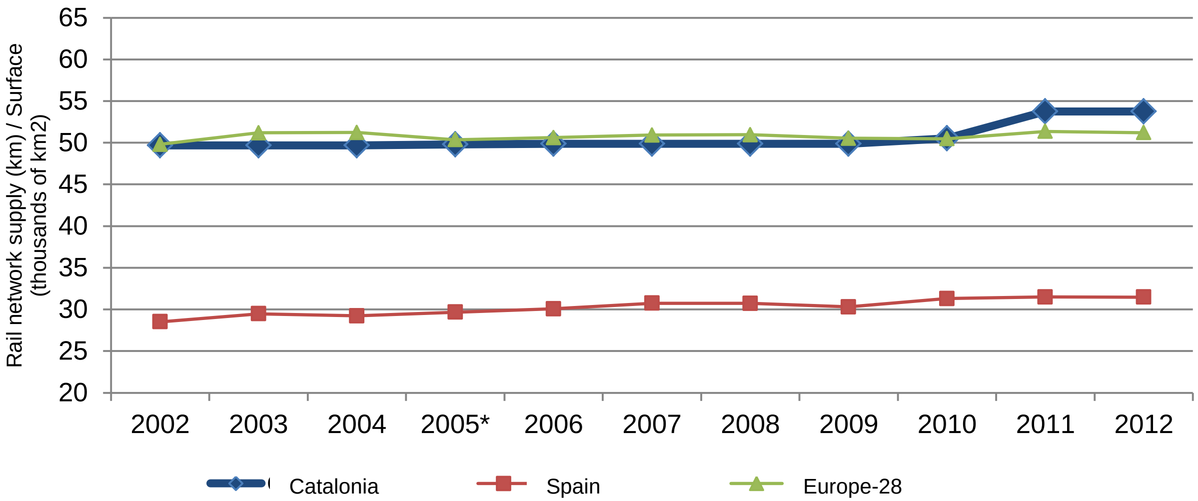
Source: Catalan Government

Source: Elaborated from data of the annual accident statistics of the National Traffic Department (DGT) and the Catalan Government

Infrastructure supply: Rail infrastructure provision

In relative terms, the level of **rail infrastructure** in **Catalonia** is **significantly better** than in **Spain** in the whole time series. **Europe** keeps on being in a **close position to Catalonia,** although **since 2011 Catalonia takes distance** thanks to the inauguration of the **high speed line.**

- In relation to the **population**, in **2012 Catalonia** had an **Index** of **227.8 km** of **railway** per **million inhabitants** (0.4% more than the previous year).
- Note that the **comparison** in **terms of population reverses** the **position** of **Catalonia with respect to Spain** and **Europe**.



Km/population	2012
Catalonia	227,8
Spain	336,9
Europe-28	439,3

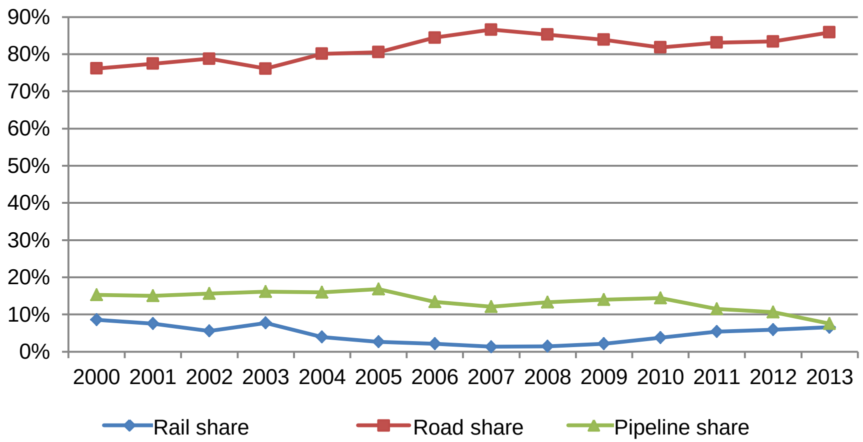
Source: Elaborated from data of the Spanish Ministry for Development, Idescat and Eurostat

Infrastructure supply: Share of Port acces by mode

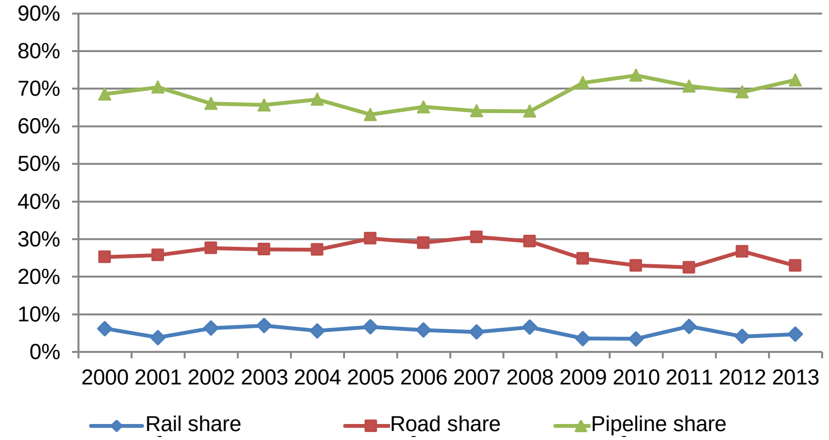
During the **last year**, the share of **Port access** by **rail** has **increased** significantly in the **Ports of Barcelona and Tarragona** (**+11.4%** and +**14,6%** respectively).

- During the period **2007-2013**, the **share** of **port access** in the **Port of Barcelona** by **rail** has **increased fourfold**, while in the **Port of Tarragona** has **fallen by 11%.**

Port of Barcelona



Port of Tarragona



Font: Elaborated from Ports and National Ports information

Infrastructure supply: Statistical annex

II. INFRASTRUCTURE SUPPLY

ROAD INFRASTRUCTURE

II.1. Average daily intensity of heavy lorries at the borders

II.2. Percentage of heavy lorries compared to the average daily intensity at the borders

II.3. Traffic accident rate in Catalonia and Spain over time

RAIL INFRASTRUCTURE

II.4. Late arrivals

MARITIME INFRASTRUCTURE

II.5. Port of Barcelona border control point

AIR TRANSPORT

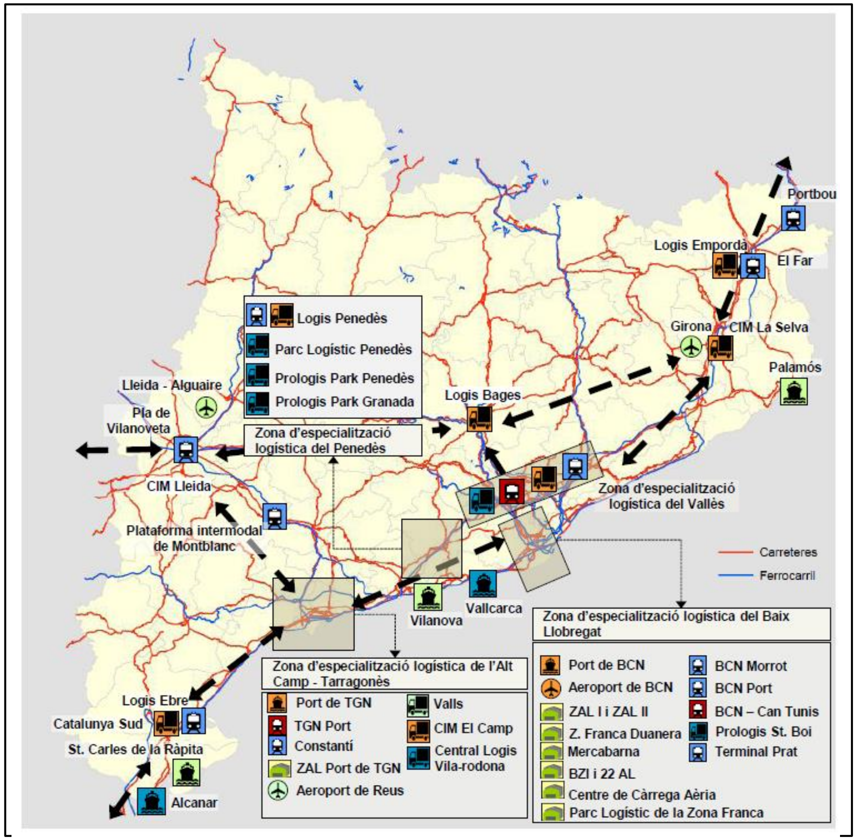
II.6. Growth of the number of border crossing inspections (PIF) at Barcelona airport

LOGISTIC LAND

II.7. Logistics platforms in Catalonia

II.8. Surface area for storage in Spain

II.9. Surface area for storage in Catalonia



Institut Cerdà

CIMALSA Centres logístics de Catalunya

Generalitat de Catalunya Departament de Territori i Sostenibilitat

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Logistics real estate market: CONCLUSIONS

- **Catalonia reinforces** its **leadership** within the **Spanish State** on the **offer** of **storage surface area**, with almost **24% of the total** offered surface, and **0.5% growth** between **2012-2013.**

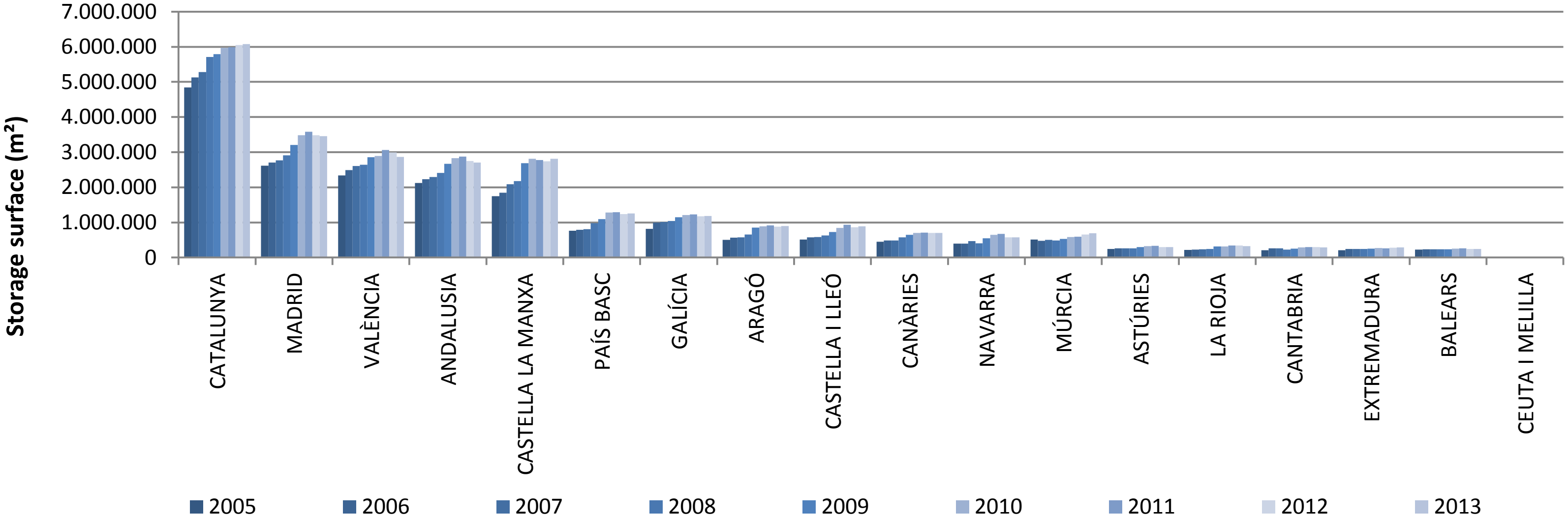
- During the last two analyzed years, the **fall** in the **logistics warehouse rental price** has been **3.7%**, being **now** in **3.6€/m²/month**, slightly **lower** than the **European average** (**5.6€/m²/month).**

- Due to a consumption, industrial and logistics **privileged scene**, the Delta logistic platform **leads** the **price list** within the **Spanish State** (**5.6€/m²/month**), being **close** to the **European average**.

Logistics real estate market: provision of logistics area (I)

The total Spanish logistics storage surface supply is now more than 25.5 million m².

- **Catalonia** keeps on **leading this supply,** with almost **24% of the overall surface,** and **0.5% growth** between **2012-2013,** which contrasts with the **stagnation** of the **rest of Spain.**



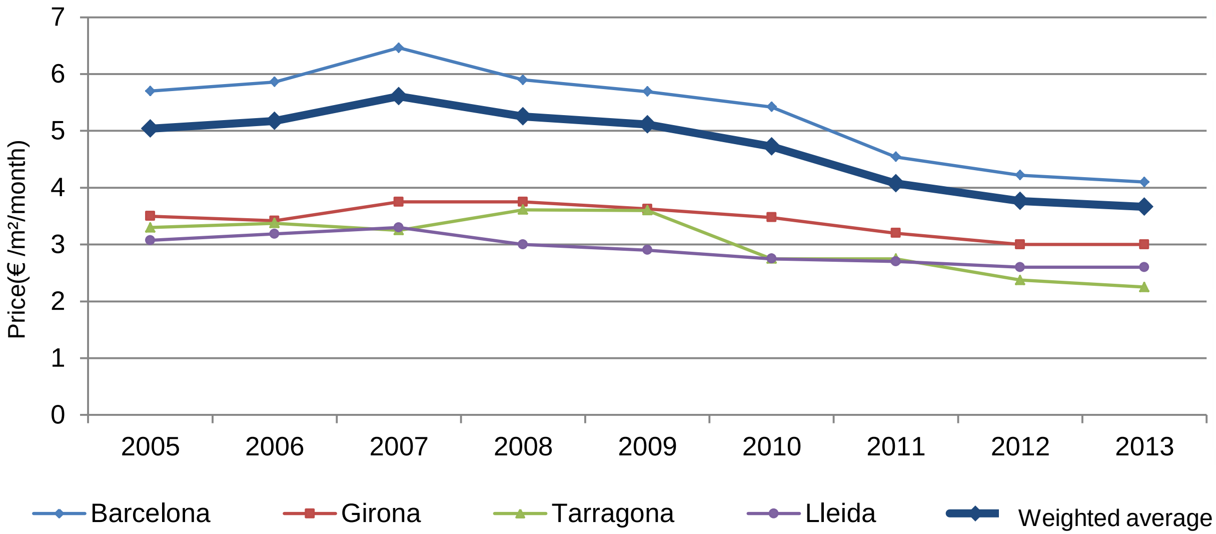
Font: Elaborated from Alimarket's warehouses and logistics platforms census

Logistics real estate market: Logistics warehouse price (I)

Catalonia

Following the **trend started in 2007,** the **fall** in the **average logistics warehouse rental price** has been **3.7%** during the last two analyzed years**,** being now **3.63€/m²/month.**

Since 2007 the average price has **fallen** by **more than 35%.**



Advanced data for 2014

The **logistics warehouse rental price** has **increased** by **16%** during the **first quarter** of **2014** compared to the close of 2013.

Source: BNP Paribas

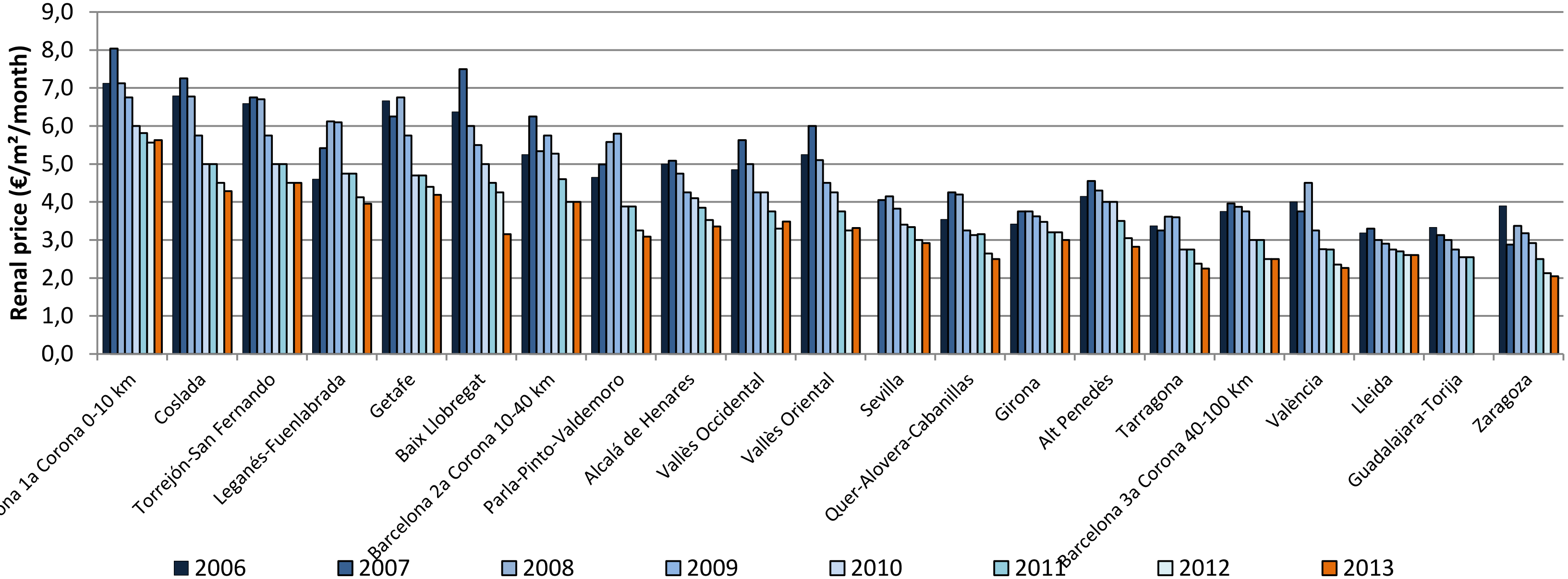
Source: Elaborated from data of Atisreal, Richard Ellis, Jones Lang LaSalle, Aguirre Newman, BNP Paribas and King Sturge

Logistics real estate market: Logistics warehouse price (II)

Spain

During 2013**, the average warehouse rental price** keeps on **reducing** in **all the Spanish cities.**

- **Barcelona** maintains the **1st position** in the **price list**, with a price of **5.6 €/m²/month** in 2013.



Source: Elaborated from data of BNP Paribas Real Estate, Richard Ellis, Jones Lang LaSalle, Aguirre Newman, Cushman & Wakefield and CBRE

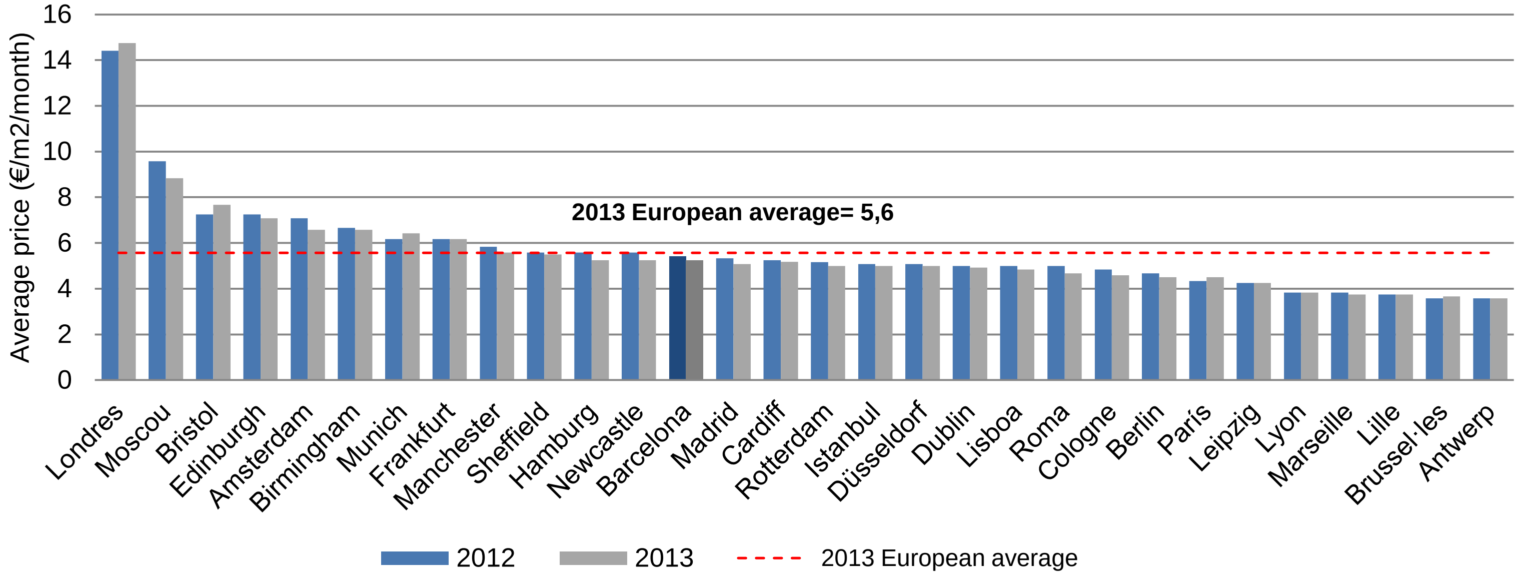
Logistics real estate market: Logistics warehouse price (III)

Europe

The **average warehouse rental price** in **Barcelona** is **close** to the **European average**.

- **London** is the European city with the **highest price,** going **beyond 14€/m²/month.**

Average logistics warehouse rental price at the main European cities (2012-2013)



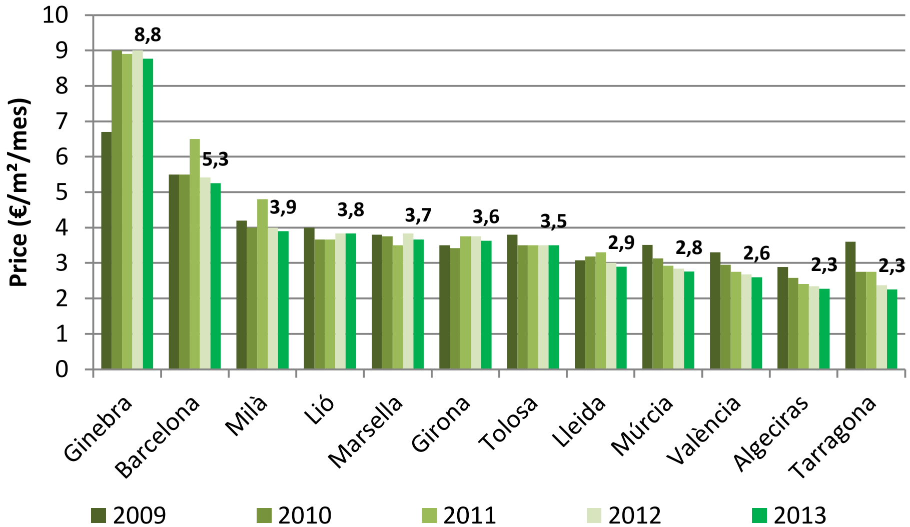
Font: Elaboratded from data of BNP Paribas Estate (2013)

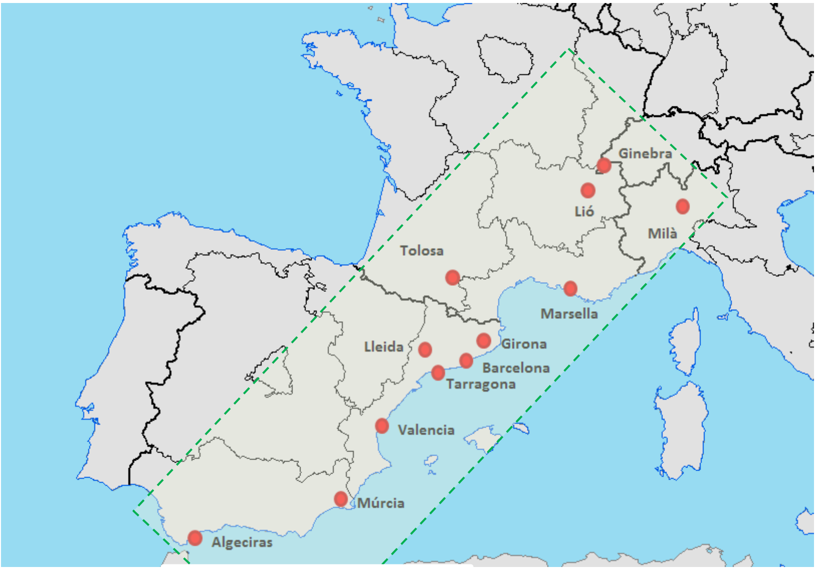
New Logistics real estate market: Logistics warehouse price (IV)

Mediterranean corridor

Barcelona lies in the second position in the logistics warehouse rental price list, just after Geneva.

Logistics warehouse average rental price in the Mediterranean Corridor main cities





Source: Elaborated form data of Colliers International, BNP Paribas Estate and CB Richard Ellis

Logistics real estate market: Statistical Annex

IV. LOGISTICS REAL ESTATE MARKET

IV.1. Ranking of land prices for the main logistics zones in Spain

IV.2. Ranking of land prices for the main logistics zones in Europe

IV.3. Ranking of land prices for the main logistics zones in the Mediterranean Corridor

Dades en € / m² / mes	2006	2007	2008	2009	2010	2011	2012	Var 11-12	anual
Barcelona 1a Corona 0-10 km	7,1	8,0	7,1	6,8	6,0	5,8	5,6	-4,3%	-4,0%
Coslada	6,8	7,3	6,8	5,8	5,0	5,0	4,5	-10,0%	-6,6%
Torrejón-San Fernando	6,6	6,8	6,7	5,8	5,0	5,0	-	-	-5,4%
Leganés-Fuenlabrada	4,6	5,4	6,1	6,1	4,8	4,8	-	-	0,6%
Getafe	6,7	6,3	6,8	5,8	4,7	4,7	4,4	-6,4%	-6,7%
Baix Llobregat	6,4	7,5	6,0	5,5	5,0	4,5	4,3	-5,6%	-6,5%
Barcelona 2a Corona 10-40 km	5,3	6,3	5,3	5,8	5,3	4,6	4,0	-13,0%	-4,4%
Parla-Pinto-Valdemoro	4,7	5,0	5,6	5,8	3,9	3,9	3,5	-11,1%	-4,9%
Alcalá de Henares	5,0	5,1	4,8	4,3	4,1	3,9	3,5	-8,4%	-5,7%
Vallès Occidental	4,9	5,6	5,0	4,3	4,3	3,8	3,3	-12,0%	-6,2%
Vallès Oriental	5,3	6,0	5,1	4,5	4,3	3,8	3,3	-13,3%	-7,7%
Sevilla	-	4,1	4,2	3,8	3,4	3,3	3,0	-10,2%	-5,8%
Quer-Alovera-Cabanillas	3,5	4,3	4,2	3,3	3,1	3,2	2,8	-11,1%	-3,8%
Girona	3,4	3,8	3,8	3,6	3,5	3,2	3,2	0,0%	-1,3%
Alt Penedès	4,2	4,6	4,3	4,0	4,0	3,5	2,3	-35,7%	-9,7%
Tarragona	3,4	3,3	3,6	3,6	2,8	2,8	2,8	0,0%	-3,4%
Barcelona 3a Corona 40-100 Km	3,8	4,0	3,9	3,8	3,0	3,0	2,5	-16,7%	-6,5%
València	4,0	3,8	4,5	3,3	2,8	2,8	2,4	-14,5%	-8,5%
Lleida	3,2	3,3	3,0	2,9	2,8	2,7	2,6	-3,7%	-3,3%
Guadalajara-Torija	3,3	3,1	3,0	2,8	2,6	2,6	-	-	-5,2%
Zaragoza	3,9	2,9	3,4	3,2	2,9	2,5	2,1	-15,0%	-9,6%

Source: Elaborated from data of: BNP Paribas Real Estate, Richard Ellis, Jones Lang LaSalle, Aguirre Newman, Cushman & Wakefield and CBRE

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Efficiency: CONCLUSIONS

- **Intermodal chains** wave **increased by 8.5%** since the **start** of the **economic crisis**. The **rail-road**, **rail-maritime** and **air-road combinations** have **increased** during **2013 (+1.7%, +5.8% and + 3.8% respectively).**

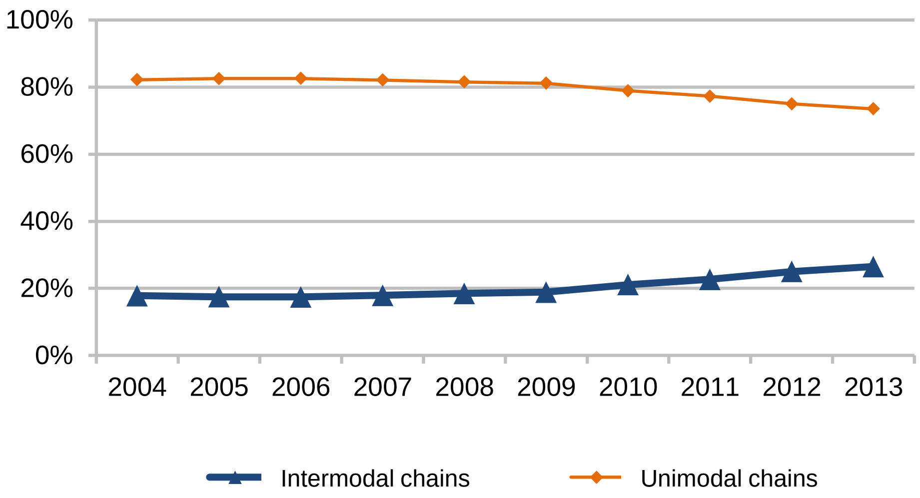
- The **percentage** of **empty journeys** stabilizes **around 41%.** This ratio is **46.5%** in **internal trips**, while in **internacional** and **the rest of Spain trips** is **21%.**

- **Fuel consumption** and **gas and particulate emissions** caused by the **road freight transport** have **fallen** by **26-48%** during the **period 2006-2012**.

- **LPG raises** its **importance** as an **automotive fuel** between **2005** and **2013.**

Efficiency: Unimodality vs. Intermodality

Intermodal chains have **increased during** the **crisis**. During the **last two years (2012-2013),** the **weight** of **intermodal chains** based on **rail-road**, **rail-maritime** and **air-road** combinations have **increased** by **1.7%, 5.8%** and **3.8%** respectively.



- **Intermodal chains** have **increased** by **8.5% since** the **start** of the **crisis.**

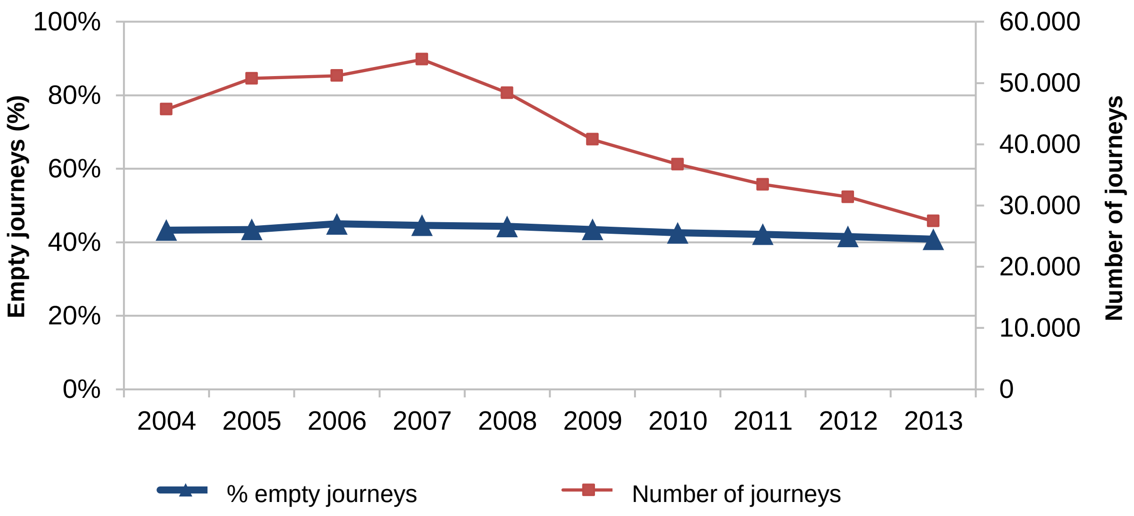
Share %	2007	2008	2009	2010	2011	2012	2013
Unimodals	82,1	81,5	80,9	78,9	77,3	75,0	73,5
Intermodals	17,9	18,5	19,1	21,1	22,7	25,0	26,5

Font: Elaborated from data of the Spanish Ministry for Develepment, Renfe, FGC, National Ports and Aena

Efficiency: empty journeys

The **percentage** of **empty trips** has **reduced** by **1.5%** interannual during the **period 2007-2013**, and now is **around 41%.**

- This **ratio** is **higher** in the **internal journeys (46.5%).**
- For **international** and **rest of Spain related trips** this **ratio** is around **21%.**

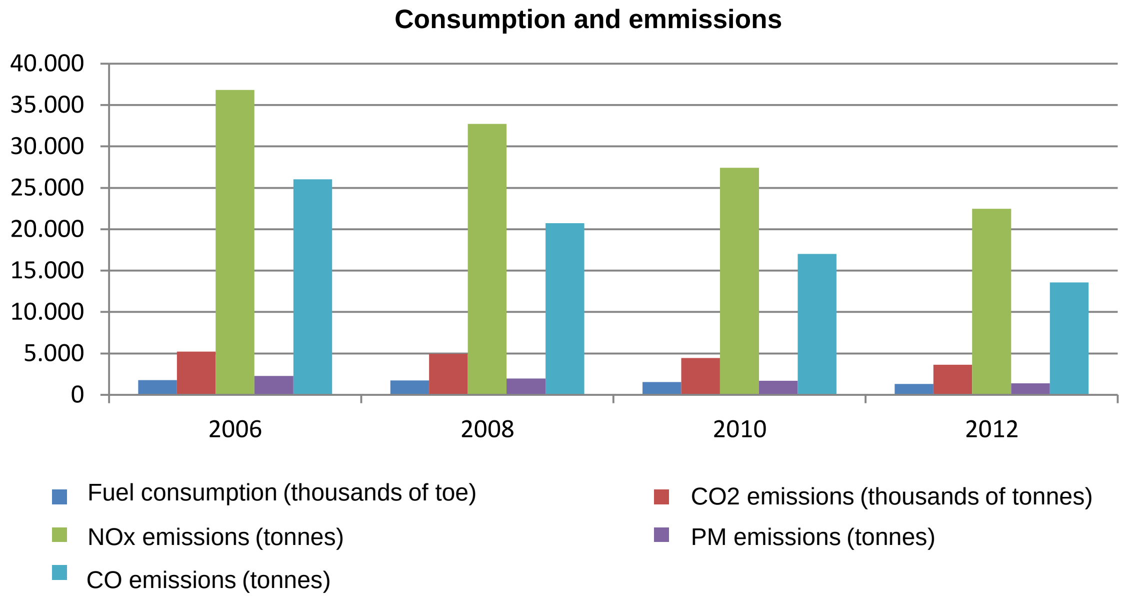


Source: Elaborated from EPTMC

New

Efficiency: Road freight transport emisions

Fuel consumption and **gas** and **particulate emissions** caused by the **road freight transport** have been **reduced** during the **period 2006-2012**, due to the **reduction** of **mobility** and **technological improvements** on the vehicles.



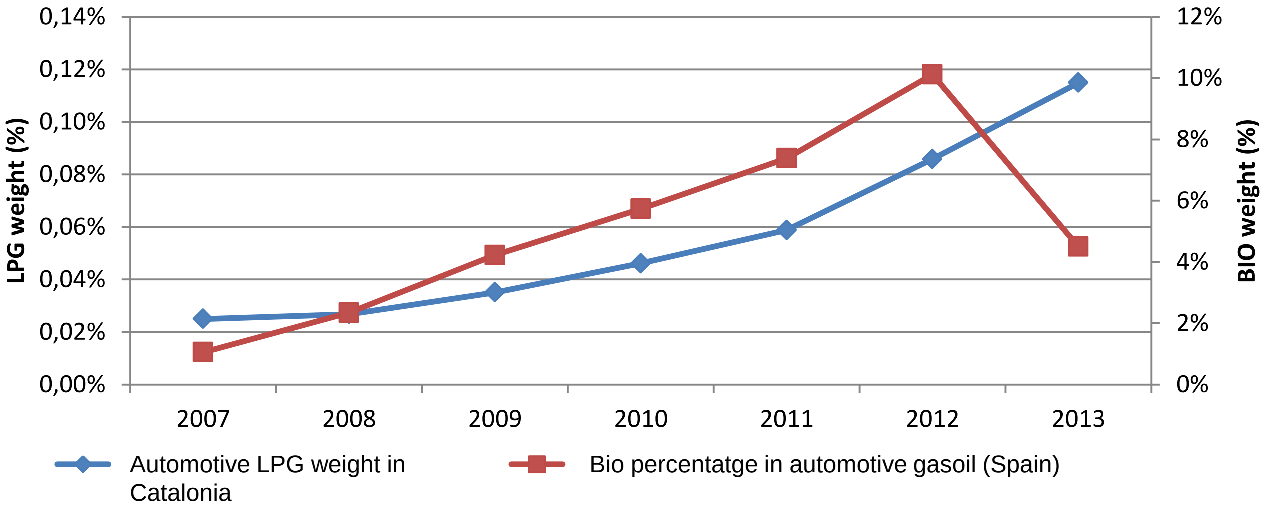
Variation 2006 - 2012	
Consumption	-26%
CO2	-30%
NOx	-39%
PM	-39%
CO	-48%

Source: Elaborated from data of EPTMC and the following reports: *Estudi de seguiment de l'evolució de la mobilitat i les emissions de gasos d'efecte hivernacle i contaminants a Catalunya per l'any 2010 (Institut Cerdà)*; *Avaluació de l'efectivitat en la reducció dels consums energètics i les emissions en els escenaris prospectius i subàmbits de les mesures proposades en el Pla director de mobilitat de la Regió Metropolitana (Institut Cerdà)*

New Efficiency: Weight of alternative fuels

In spite of still being in a **preliminary stage**, during the last years **LPG** has risen importance as an **automotive fuel**, with an **interannual growth** of **18%** between **2005** and **2013.**

- Regarding **biodiesel**, the **application of the hydrocarbon tax** and the **loose** on its **mandatory use** have turned into a **reduction** of its **weight** during **2013.**



Interannual evolution of the alternative fuels weight (2007-2013)	
LPG	+36%
Bio fuels	+34%

Source: Elaborated from CORES and ICAEN data.

Efficiency: Statistical annex

V. EFFICIENCY

V.1. Estimate of the development of intermodal and unimodal transport

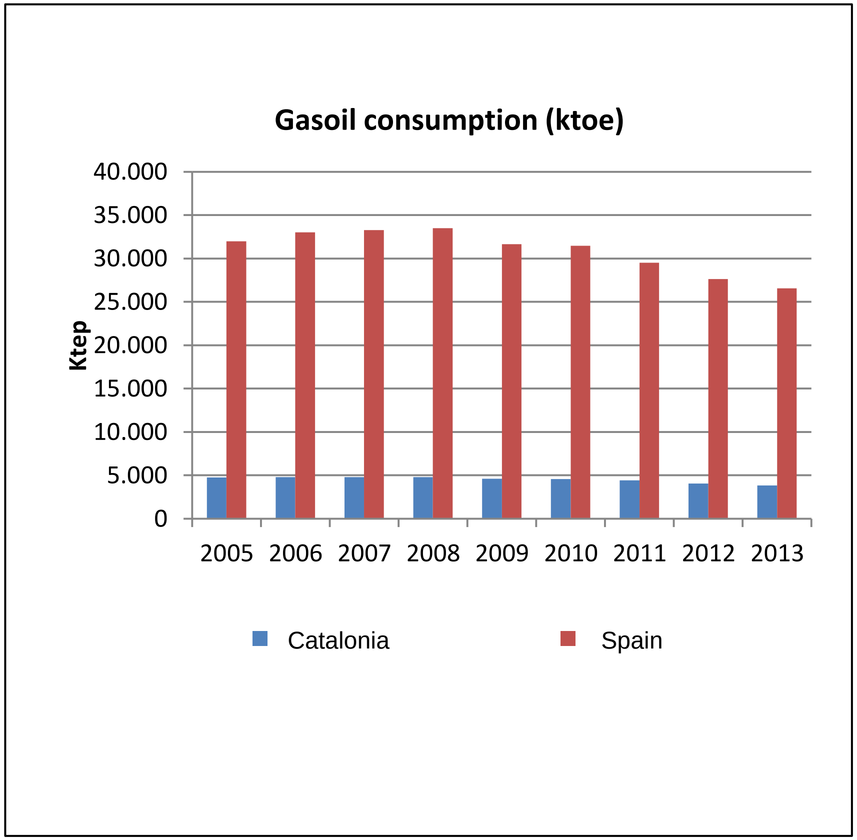
V.2. Transport operations and empty journeys percentage, by type of operation

V.3. Average antiquity of the van and lorry fleet

V.4. Freight vehicle fleet in Catalonia

V.5. Mobility of the freight vehicle fleet in Catalonia

V.6. Gasoline and gasoil consumption in Catalonia and Spain



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