Public opinion and issue salience in the actual implementation of the EU railway reform

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Abstract

This paper seeks to explain cross-country variation in the actual implementation of EU rail liberalisation. Notwithstanding its maturity, the literature of implementation and compliance among the EU member states overlooks the implementation stages successive the legal transposition of single market regulatory reforms and member states’ public opinion, policy salience, and administrative capacity have rarely been tested simultaneously.

By relying on the IBM rail liberalisation index, the empirical findings highlight the importance of policy salience. Member states with a comparatively higher rail modal share are most likely to implement EU railway reform extensively. Political and administrative factors do not matter.

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1 Introduction

A normative feature of democracy is to fulfil citizens’ expectations. The opinion-policy link has been depicted through a two-way and dynamic relationship. On the one hand, public responsiveness is about the public opinion’s capacity to react to policy output; on the other hand, policy representation is about whether and to what extent policy is congruent with public preferences (Soroka and Wlezien, 2010).

Numerous longitudinal-quantitative analyses have attested the congruence between public opinion and the level of public spending in several Western countries (see (Burstein, 2003; Wlezien and Soroka, 2007) for a review), also by combining public responsiveness with policy representation (Soroka and Wlezien, 2010; ?).2 Multi-level governance provides an opportunity to explore the extent to which public preferences are congruent with policy making at multiple levels. For instance, empirical results tend to suggest that preferences for Canadian federal policy are also determined by provincial policy changes (Wlezien and Soroka, 2011). Another study demonstrates the dynamic process of representation of education policy across the American states and over time (Pacheco, 2009).

By recognising that the EU is a regulatory governance system, rather than a welfare state with a relevant budget, scholars interested in the democratic legitimacy of the European integration have modelled public responsiveness through a direct link between the average of European citizens’ preference for integration and several measures of EU legislation produced across time (Franklin and Wlezien, 1997; Arnold, Franklin and Wlezien, 2010; Toshkov, 2011). This literature has so far overlooked the role of member states in the actual implementation of EU public policies.

The enactment of legislation is only the most visible aspect of the extent of EU regulatory policy output. Indeed, the European single market reform has several components: i) economic regulation to create a liberalised single market; ii) social regulation to protect consumers; iii) the creation of independent agencies both at the national and supranational level; iv) the trans-

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1There is also an emerging literature that applies the ‘thermostatic model’ in a large-n comparative setting (Wlezien and Soroka, 2012).
position of EU regulation at the national level; v) the actual implementation and enforcement at the national level. Several reviews (Versluis, 2004; Mastenbroek, 2005; Treib, 2008; Hartlapp and Falkner, 2009) of EU implementation and compliance literature correctly lamented that the ‘final’ component of the multi-level governance, i.e., the implementation of legislation that concerns the administrative operations at the practical level, has been often neglected.

This paper fills these two gaps in the European integration literature. It seeks to explain the variation in the actual implementation of the EU railway policy. Through qualitative and quantitative analysis, the EU railway single market has been already analysed by scholars interested in the timeliness and effectiveness of legal transposition (Knill and Lehmkuhl, 2000; Kaeding, 2006; Kaeding, 2008).\[^2\] By relying on the IBM rail liberalisation index across the the EU-15 member states, the paper tests the impact of public opinion on policy implementation in a multi-level governance context: Is the extent of the actual implementation of EU railway reform respondent to the support for the European integration in a specific member state?

In order to answer this question, this paper proposes to combine policy representation (and the high political costs in pursuing an effective implementation in countries with low national public support for the EU) with the policy salience, the size of central government and the quality of regulatory governance. The former determinant completes the willingness of policy actors at the national level to implement, whilst the latter refer to the national institutional capacity and the administrative costs to implement policies once the overall consensus is reached (Lampinen and Uusikylä, 1998, 238).

The remainder of this paper is structured as follows. The next section summarises the evolution of EU railway regulatory reform and highlights the large variance in its actual implementation. Section 3 provides an overview of the literature of policy representation in the EU and the main hypotheses.

\[^2\]Specifically, Knill and Lehmkuhl (2000) used the EU railway regulation as a case study, in order to solve the puzzle of the process of Europeanisation in which member states either tended to do less than they are required, or went to far beyond the minimum compliance level. Through time-series cross-sectional analysis, Kaeding (2006; 2008) assess the determinants of transposition delay on a set of EU technical, regulatory and harmonising transport directives, including the rail sector.
Section 4 summarises the empirical analysis of policy representation of the national implementation and enforcement of EU railway market liberalisation. Finally, we conclude by identifying further empirical research.

2 The extent of variation in the actual implementation of the EU railway reform

Since the beginning of the 1990s, the EU has been liberalising the railway market. The aim of the EU’s step-by-step and support-building strategy of market opening up has been to (Knill and Lehmkuhl, 2000; Di Pietrantonio and Pelkmans, 2004):

- foster the competitiveness of the rail transport system;
- foster a pattern of sustainable mobility; and
- reduce public expenditure.

After the 1990s initial regulations and directives, the EU has pursued a goal of opening up the European national markets to international competition and forming a single European railway market through three comprehensive railway ‘regulatory packages’.

The initial regulatory measures and the first two regulatory reform packages were aimed at (Di Pietrantonio and Pelkmans, 2004; Kaeding, 2007; Holvad, 2009):

- establishing the accounting separation between infrastructure and operation, as well as ensuring access to the railway infrastructure for railway undertakings operating into the freight service market (Directive 91/440 and Directive 2004/51/EC);
- defining the criteria applicable to the issue, renewal or amendment of licences of railway undertakings (Directive 95/18/EC and 2001/13), on the basis of safety standards (Directive 2004/49/EC), principles and
procedures for the allocation of railway infrastructure capacity, and
the charging of infrastructure fees for railway undertakings (Directive
95/19/EC and 2001/14/EC);

• setting the interoperability of the trans-European high-speed rail
system in terms of its construction, design, service, and operation
(Directive 96/48/EC, 2001/16/EC, and Directive 2004/50), and

• establishing a European transnational network of regulatory agencies,
composed of the European agency (Regulation 881/2004), national en-
forcement agencies (Directive 2001/16/EC) and national railway safety
authority (Directive 2001/14/EC).

These regulatory packages paved the way for the 2007 third reform package
concerning the passenger market. Regulation 1371/2007 on rail passengers’
rights and obligations established the service quality standard. Amending
troduced open access rights for international rail passenger services. Finally,
directive 2007/59/EC required the certification of train drivers operating
within the EU.

Throughout its reforms, the EU planned for a market structure with direct
competition between railway companies (Schmidt, 2012). As a result and
since 2010, the cross-border rail passenger transport has been officially lib-
eralised for all EU countries. Specifically, the EU directive 2007/58/EC al-
lowed international railway companies to pick up national traffic in a country
and drop the same passengers on a further stop in the same country before
crossing borders. The most recent directive, 2012/34/EU of the 21 Novem-
ber 2012 establishing a single European railway area, recasts all the reform
packages so far adopted at the EU level. The regulatory reform process
is still ongoing: the European Commission is proposing the fourth railway
reform package for achieving a standardised competitive managed market
within a single railway system.

Although the national rail markets are not yet fully affected by the EU liber-
alisation, several member states, such as Austria, Czech Republic, Germany,

Italy, Sweden, and the UK, have already opened their national markets for train operating companies (Schmidt, 2012, 22). The IBM Global Business Services has conducted an extensive and qualitative analysis of the liberalisation and transposition of the EU railway reform throughout the 2004–2011. The next section shows that the resulting index satisfies the methodological recommendations for operationalising and data-gathering a measure of member states’ compliance which is often too poorly conceptualised and does not take into account the application on the ground of EU regulatory reforms (Hartlapp and Falkner, 2009).

Figure 1 shows that there is still a lot of variation in both the legal implementation and the actual implementation—respectively measured by two indices collected by the IBM Deutschland GmbH (cf. section 4.2)—for opening up the railway market. Indeed, the EU member states have been categorised in “advanced”, “on schedule”, and “delayed” regulatory reformers (IBM Deutschland GmbH, 2011). We decided to focus only on the ACCESS sub-index because “[a]s the provisions of the railway packages of the European Union have meanwhile largely been transposed into national law of Member States, the relative importance of [the LEX index] has gradually declined in the versions published in 2002, 2004 and 2007.’ (IBM Deutschland GmbH, 2011, 23)

The management compliance approach alone cannot explain such a variance in the implementation. Notwithstanding having a similar administrative tradition and belonging to the same “world of neglect”, Italy is performing relatively better than France, Spain and Greece. In a similar vein, it is surprising to find Ireland among the laggards. A realist power-based compliance approach cannot explain the divergence among the most economically and politically powerful countries such as France and Germany. Constructivism cannot account for, on the one hand, the great rail liberalisation achieved in EU-skeptical countries such as the UK and Denmark and, on the other hand, the lean implementation of the EU market-oriented solution in countries that are supportive of the European integration (Spain for instance).
Figure 1: IBM LEX and ACCESS indexes 2011: Variance of the implementation of rail freight and passenger transport among the EU member states.
3 Policy representation within EU

In representative democracy, public opinion is supposed to determine or at least, influence what governments do. Direct policy representation framework requires the capacity of the public to notice and respond to what policymakers do and therefore policymakers, in order to be re-elected, would have the incentive to represent what the public wants. Accordingly, changes in public opinion preferences are crucial to our understanding of how and to what extent policy is democratically responsive.

In cross-sectional analyses among the most economically advanced and developed countries, the usual unit of analysis for policy responsiveness is the level of spending in social policy (Brooks and Manza, 2006) and the total government spending as a percentage of the GDP (Wlezien and Soroka, 2012). In the case of the EU, a supranational regulatory state with the aim of constructing the single market, several empirical analyses proved the congruence between the aggregate European public preferences and indicator of European institutions’ legislative production (Franklin and Wlezien, 1997; Toshkov, 2011), weighted also by the number of lines of legislation (Arnold, Franklin and Wlezien, 2010).

In order to ensure a level playing field and the rule of law, Europeanisation requires an effective implementation and enforcement at the national level. Implementation of EU policies is a highly decentralised process composed of two distinctive stages to be pursued by national governments:

- transposition or the *legal implementation*; and
- the actual application and enforcement of law.

Accordingly, compliance is the result of all two stages of the implementation process (Hartlapp and Falkner, 2009; Treib, 2008, 4). The European integration is ruled by transnational law which lies in the middle ground between traditional domestic laws on the one hand and traditional international law.

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European citizens’ attitude has been usually captured through survey items such as the support for one’s own country membership of the EU and the support for the level of European unification so far achieved.
on the other. Transnational law is characterised by a relatively high level of legal obligation as compared to international law. This implies that none of these two EU implementation stages is neither automatic nor apolitical (Treib, 2008).

Member state governments have several choices for implementing EU policies, especially the one concerning the single market. They may delay (Kaeding, 2006; Kaeding, 2008) and relax the correct transposition (Thomson, Torenvlied and Arregui, 2007; Zhelyazkova, 2012) and the practical implementation of (Versluis, 2007; Hartlapp and Falkner, 2009) EU single market directives. Notwithstanding the three waves of EU implementation studies, empirical analyses tend to focus on the transposition stage and to neglect issues of enforcement and application. This tendency is even more emphasised in large-n comparative analyses in which the operationalisation of timeliness or correctness of transposition relied on the EU Commission official statistics on notifications and infringements (Hartlapp and Falkner, 2009).

Several reviews of EU compliance research have lamented this narrow operationalisation of implementation (Mastenbroek, 2005; Treib, 2008; Hartlapp and Falkner, 2009). Notwithstanding the implementation of EU legislation cannot relate only to the legal transposition, there are still many challenges in the conceptualisation of the phases after transposition because it is often impossible to establish reliable and representative data on the application of EU norms on the ground in a micro-level analysis (Hartlapp and Falkner, 2009, 285).

The most recent comparative analyses on how EU policies are implemented by the member states tend to agree on the three compliance approaches: enforcement, management and legitimacy (Simmons, 1998; Tallberg, 2002; Treib, 2008; Börzel, Hofmann, Panke and Sprungk, 2010). Each of these approaches can be referred to a specific implementation process. Accordingly, it is necessary to reconsider each of the compliance theories according to the political and administrative costs of implementing EU rail liberalisation.

The enforcement approach stresses on sanctions and punishments and the willingness of states to comply with international agreements. Willingness that depends on the domestic costs and benefits of adaptation as well as
the costs of defiance (Hartlapp and Falkner, 2009; Börzel et al., 2010). National policy makers rationally balance costs and benefits of implementing EU policies. Effective monitoring and sanctioning by the EU Commission and Court can increase the losses (stemming from reputational costs and financial sanctions) of an uncorrected and ineffective implementation which in turn must overweight the potential gains obtained from non-compliance. The willingness to implement and to comply with EU policy is also determined by the logic of appropriateness and the normative considerations that drive the perception of interest. Finally the management assumes that all EU member states are willing to implement and the variance is due to the differences in administrative and financial capacities.

3.1 Political willingness, public opinion and policy salience

In several studies public opinion, more specifically the public support for European integration, has been tested as an important determinant of the member states’ willingness to implement (Lampinen and Uusikylä, 1998; Kaeding, 2006; Börzel et al., 2010). The theoretical foundation for including public opinion in an EU implementation study is twofold. Firstly, the public support for the EU rule-setting institutions refers to the normative dimension of implementing and complying with an EU policy: ‘Rules are complied . . . also because the rules are set by institutions, which enjoy a high degree of support (Börzel et al., 2010, 1371)’. In other words, ‘perceived legitimacy of a legal rule or authority heightens the sense of obligation to bring behaviour into compliance with the rule’. (Simmons, 1998, 87). Secondly, the attitude towards the EU can also refer to the national policy makers’ deliberate choice and political calculation to calibrate the implementation of EU policies, in order to represent the electorate who is skeptical about the EU integration (Lampinen and Uusikylä, 1998; Mbaye, 2001; Kaeding, 2006). ‘Since politicians often make policy choices that promote their re-election, it can be assumed that the lower the overall mass support for the country’s membership in the EU, the higher the probability that a member state will face difficulties in implementing European policies.’ (Lampinen and Uusikylä, 1998, 239). Overall, the public support for the European integration has both a positive and a negative attribute which reinforce each
H1: The higher the percentage of respondents who do support the EU, the more extensive the rail liberalisation

Public opinion and its capacity to respond to policy outcome depends on the extent of popular salience of a specific policy issue. In salient domains, a relatively large number of people are expected to respond to policy (Franklin and Wlezien, 1997). Simply put, ‘a salient issue is one that is politically important, one that people care about, and one on which they have meaningful opinions that structure party support and candidate evaluation’. Consequently, ‘policy makers may be more likely to notice and pay attention to public opinion for policy in a particular area when the public views that issue as important’ (Soroka and Wlezien, 2010, 43). In particular, issue salience has been considered an important factor by scholar interested in the actual implementation and enforcement of EU policy (Versluis, 2004; Versluis, 2007). The visibility of and the importance attached to a topic affects the bureaucratic behaviour of EU member states. The argument here is straightforward: the policy salience affects the selective attention of key-actors towards the implementation process administrative enforcement of a specific regulation and policy.

H2: The higher the level of salience of railway, the more extensive the rail liberalisation

3.2 Political willingness and the match of policy objectives

The EU railway reform has the clear objectives to increase the competitiveness of the railway and to reduce public expenditure. A previous comparative qualitative analysis of the implementation of the first package of reform in Germany, the Netherlands and the UK emphasised the importance of the EU reform for providing solutions and legitimacy to national policy champions as well as strategic opportunities to use against opponents of the liberalisation (Knill and Lehmkuhl, 2000). It is clear that the coherence between the European reform objectives and the national ones facilitate an extensive liberalisation. Accordingly, if there is a relevant problem with
the national railway markets, the more national governments are willing to implement, politically appreciating the benefits of the EU regulatory reform.

**H3: The higher the public subsidies for railway, the more extensive the rail liberalisation**

**H4: The poorer the market efficiency, the more extensive the rail liberalisation**

### 3.3 Administrative capacity and regulatory governance

The management approach to implementation and compliance is about the administrative capacity of a given country to pursue with the implementation of complex tasks. Bureaucratic inefficiency has been proved as an important determinants of noncompliance (Mbaye, 2001; Kaeding, 2006; Thomson, Torelvied and Arregui, 2007; Steunenberg and Rhinard, 2010). The literature has identified two causal mechanisms to explain variation in state capacity that is defined by either the financial and human resources (the resource-centred approach) or the domestic institutional quality (the neoinstitutional approach). The latter approach refers also to the insight that implementation effectiveness of EU policies would be low if the extent of institutional adaptations required at the national level is high, i.e., the institutional mismatch (Knill and Lenschow, 1998). In the context of EU regulatory reform aimed at liberalising and creating a single market, the institutional match concerns the political-administrative tradition of a country to allow a pro-market regulatory governance.

**H5: The greater the financial resources of a government, the more extensive the actual implementation**

**H6: The more a country’s regulatory governance is pro-market oriented, the more extensive the actual implementation**
4 Operationalisation and data sources

The previous Section 2 has shown that the EU policy implementation is highly decentralised: Decisions taken by the EU institutions need to be implemented and enforced at the national level. Several distinct research strands have nevertheless facilitated our attempt to model the extent of the actual implementation of the EU railway reform. Practical justifications guide us in selecting the variables in a careful and parsimonious way. For instance, mass opinion data should also be based from items that employ identical question-wording across surveys (Brooks and Manza, 2006, 480) and the other selected indicators should allow us to ensure the highest number of observations as possible for the cross-sectional analysis.

4.1 The actual implementation of EU railway reform: The Rail Access Liberalisation Index

The operationalisation of the extent of actual implementation of the EU rail liberalisation at the national level relies on the IBM Rail Liberalisation (LIB) index. Since 2002 the IBM Global Business Service has been gathering data, in order to compare the market openness among the 27 EU member states, as well as Norway and Switzerland. Rather than relying on the concept of absolute market opening, the single market programme for the European rail transport and the compatibility of national liberalisation measures with the provisions of EU law have been used as the point of reference for defining the relative degree of market openness (IBM Deutschland GmbH, 2011, 16, 20).\[5\] The LIB index has four editions (2002, 2004, 2007, and 2011) which are in concomitance with the EU reform packages. Accordingly, the index is dynamic in following the actual transposition and implementation of EU member states according to the continuous changes of the EU rail legislation.

Methodologically, ‘[t]he study adopts the viewpoint of a railway undertaking which intends to enter a market as a newcomer… The central issues for the

\footnote{\textsuperscript{5}Specifically, marketing opening as operationalised by the LIB index revolves around the economic and law doctrine and of non-discriminatory access for railway undertakings to essential facilities—which requires specific regulation of the service sector and administrative practices—and the transposition of EU railway reform.}
newcomer are the actual existing barriers which prevent or impede market entry’ (IBM Deutschland GmbH, 2011, 21). Accordingly, the index captures two dimensions: the legal (that through the LEX sub-index account for 20 percent of the LIB index) and the actual (ACCESS sub-index account for 80 percent) access conditions. Although the LIB index distinguishes between the access requirements for rail passenger and freight transport, in this paper, we rely on the overall ACCESS index, which is composed of all \textit{de facto} barriers to market access\footnote{The latter index varies between 0 and 1000: the highest the scores, the lowest the \textit{de facto} barriers in a given country. Specifically, the ACCESS sub-index compares the easiness of market entry, looking at the time and costs necessary for an external railway undertakings (RU) to acquire licences and to operate.\footnote{This theoretical insight in defining and quantifying the extent of rail market liberalisation at the national level allows the data to be truly comparable across the EU-15.}}. The index is a result of an extensive and accurate data collection of 250 items for each country. IBM claims that it was impossible to obtain information only for 2.1 percent of the questions composing the index. In order to verify the data, the information-gathering process also encompassed the analysis of secondary materials such as legislative texts, network statements, websites of the relevant undertakings and institutions or other existing studies (IBM Deutschland GmbH, 2011, 10). The data used for the empirical analysis has been downloaded from the CESifo Group dataset website\footnote{http://www.cesifo-group.de/ifoHome/facts/DICE/Infrastructure/Transportation/Railways/IBM-rail-lib-ind_02-11.html}"}
4.2 Operationalising public support for EU, salience and regulatory governance

Finding measures of public opinion and preference with regard to the EU railway liberalisation is a daunting task, due to the fact that several useful survey items have not been replicated across a sufficient period of time. However, empirical analyses of the public preference for the EU attest that support for membership is associated with the outcome of market liberalisation policy (Gabel and Palmer, 1995; Gabel and Whitten, 1997; Gabel, 1998). The former, we argue, is an indication of the public preference towards the EU market liberalisation reforms. Furthermore and as already mentioned, the implementation literature indicates that a high support for EU membership is a factor for compliance with European policies.

We draw our measure of public support for the EU form the following question of the Eurobarometer Standard (No. 57.1, 61, 67.2, and 75.3): “Generally speaking, do you think that (your country’s) membership of the European Community is...?” The possible answers: “a good thing”, “neither good nor bad thing”, “a bad thing” or “don’t know”. We choose to not recode the three categories of this variable, in order to have a “real” trend measures of public opinion support for the EU membership.

We also argue that the attention of public preferences to and the visibility of a policy issue depend on the specific salience of the national policy and the rail market. Policy issue salience is however a concept that is hard to operationalise. It is generally measured by the extent of news coverage that however does not reflect the triggering element that determines the salience. The extent of use of the train as a mean of transport is a better proxy of policy salience it determines both the media coverage and the political implication of direct attention of the citizens to the quality of railway service. The more the railway is used in a given country, measured by the modal split of rail transport, the higher the attention towards the liberalisation of railway market, given the fact that consumers tend to prefer a larger choice.

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9This measure describes the relative share of each mode of transport, for example by road, rail or sea. It is based on passenger-kilometres (p-km) for passenger transport and tonne-kilometres (t-km) for freight or goods transport. The modal split is usually defined for a specific geographic area and/or time period.
among competitors.

An impact assessment conducted by the European Commission in 2013 (Commission, 2013) is our data source for the operationalisation of political benefits stemming from the match between European and national railway reforms. The average of 2000-2008 subsidies (constant 2008 price) to public service obligations is a measure of the extent of public intervention in rail service. Furthermore, several differences in the harmonised price index for railway transport between 2000 and 2011 captures the market efficiency.

Finally, in order to capture the regulatory institutional capacity and the pro-market stance of each EU member state we rely on two World Bank indicators: General government final consumption expenditure as % of GDP and ‘Regulatory Quality’. The former has been widely used in the literature of EU implementation as a proxy of the financial capacity of a government. The latter is a sub-index of the World Bank’s Good Governance indicator. Regulatory Quality depicts the economic elites perception of the governments’ capacity to formulate and implement regulations efficient for development of the private sector.

Regulatory quality variables are aggregated into an overall index that varies between -2.5 and 2.5. High scores mean positive perception of regulatory governance outcomes. High level of competitiveness are associated with lower production costs for the rail operating companies that in turn can offer lower price for achieving a certain level of profit.

The following presents the descriptive statistics of the variables.

5 Empirical analysis and findings

The empirical analysis relies on panel data in which the unit of analysis is the EU-15 country-year (2002, 2004, 2007, and 2011). Panel data sets

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10 The impact assessment is an economic analysis of the predictable impact of the reform of the market for domestic passenger transport services by rail (Commission, 2013).

11 The impact assessment presents a harmonised consumer price index for railway transport between 2000 and 2011. The impact assessment attests that the prices of railway transport tickets have on average increased by the 23% since the 2000.
Table 1: Summary statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM ACCESS index</td>
<td>60</td>
<td>589.817</td>
<td>209.484</td>
<td>100</td>
<td>850</td>
</tr>
<tr>
<td>Membership as good thing</td>
<td>60</td>
<td>0.569</td>
<td>0.144</td>
<td>0.29</td>
<td>0.83</td>
</tr>
<tr>
<td>Membership as bad thing</td>
<td>60</td>
<td>0.179</td>
<td>0.098</td>
<td>0.03</td>
<td>0.38</td>
</tr>
<tr>
<td>Modal split of railway</td>
<td>60</td>
<td>6.268</td>
<td>2.485</td>
<td>0.8</td>
<td>11</td>
</tr>
<tr>
<td>Train fare differences ($t_i - 2000$)</td>
<td>60</td>
<td>19.204</td>
<td>15.132</td>
<td>0.7</td>
<td>64.56</td>
</tr>
<tr>
<td>Average of subsidies (2000–2008)</td>
<td>60</td>
<td>1247.967</td>
<td>1845.146</td>
<td>10.55</td>
<td>5704.2</td>
</tr>
<tr>
<td>Gov’t expenditure</td>
<td>60</td>
<td>21.008</td>
<td>3.415</td>
<td>14.78</td>
<td>28.36</td>
</tr>
<tr>
<td>Regulatory quality</td>
<td>60</td>
<td>1.464333</td>
<td>0.363758</td>
<td>0.51</td>
<td>1.93</td>
</tr>
</tbody>
</table>

are at risk of correlated errors and the violation of the assumption of the independence of errors across observations, leading to biased estimates and misleading significant test. We opted for a robust-cluster OLS method, in order to address correlated and non-identically distributed errors in the analysis.\footnote{A statistical approach used by Borzel et al. (2010) in their time-series EU-12 compliance analysis.} We include year fixed effects to control for period effects and unobserved temporal heterogeneity, but we do not opt for country fixed-effect specification, in order to have in the model time-constant covariates and to take into account the cross-country information in the data (Plümper, Troeger and Manow, 2005).

Table 2 summarises the statistical results: Model 1 takes into account public support for the EU and policy salience; Model 2 refers to hypotheses of political objectives match; Model 3 concerns the administrative capacity and regulatory quality. Due to the small size of our sample, the complete model comprehends only previously tested statistically significant variables.

Is the public attitude towards EU membership a strong predictor of implementation of rail market liberalisation? To recall, we expect that the extent of liberalisation is positively associated with the supportive attitude towards the EU membership. Furthermore, the political costs of implementing an EU policy are higher in the countries with a high level of Euroskepticism, implying a less extensive liberalisation. Public support for the EU is tested together with the proxy of issue salience. This choice allows to probe the explanatory power of policy representation vis-à-vis the importance of the
railway reform in a given country.

Turning to the empirical results, in the first model of policy representation, the railway modal split is statistically significant and in the expected direction. In contrast, the public opinion variable is in the opposite direction of what we expected: countries with higher level of euroskepticism implement extensively the liberalisation of their national railway.

Turning to the other models, the two indicators of of political benefit, i.e., train fares differences and the average of subsidies are not statistically significant. Among the two variables of administrative capacity, only the size of government is statistically significant \( (p < .5) \)\(^{13}\). Accordingly, model 4 includes only the proxy of size of government, public opinion and issue salience. In this model what matters is the railway modal split which is the only variable to be statistically significant. It is important to note that the 2007 and 2011 year dummy variables are statistically significant across several models. This can be explained by the effect of the creation of the European Railway Agency that has effectively supported member states administrations in complying and implementing the EU railway reform (Versluis and Tarr, 2013).

6 Discussion and conclusions

This paper attempts to evaluate the extent of policy representation across 15 European countries on a specific policy domain, that is the national administrative implementation and enforcement of EU rail liberalisation. It takes into account the national public opinion (by employing the support for the EU), policy salience (modal split of rail transport), the match of political objectives (increases of rail fares and averages of subsidies), and administrative and regulatory capacity governance (government expenditure and Regulatory Quality Index).

\(^{13}\)We also controlled for two EU-specific proxies of political and economical power such as the Shapley Subik Index and the GDP per capita. Furthermore, we controlled for the time elapsed since the creation of the sectorial independent regulatory agencies and the country legal origins as other measures of regulatory quality. These control variables are not significantly significant when regressed with the ACCESS index.
Table 2: Pooled (time-series cross-sectional) analysis of implementation of EU rail market reform across 15 European countries: ACCESS Index as dependent variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU support</td>
<td>-291.665</td>
<td>-281.177</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(209.752)</td>
<td>(177.110)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modal split</td>
<td>38.324**</td>
<td>26.782*</td>
<td>14.482</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(13.512)</td>
<td>(14.482)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price diff.</td>
<td>-2.254</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.246)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aver. subs.</td>
<td>0.017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.026)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gov’t exp.</td>
<td></td>
<td>26.120**</td>
<td>14.823</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(9.609)</td>
<td>(8.540)</td>
<td></td>
</tr>
<tr>
<td>Reg. qual.</td>
<td>84.466</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(94.506)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004 year</td>
<td>-16.528</td>
<td>12.627</td>
<td>-10.107</td>
<td>-20.331</td>
</tr>
<tr>
<td></td>
<td>(46.686)</td>
<td>(36.307)</td>
<td>(42.825)</td>
<td>(45.835)</td>
</tr>
<tr>
<td>2007 year</td>
<td>150.025*</td>
<td>199.837***</td>
<td>166.706***</td>
<td>155.224**</td>
</tr>
<tr>
<td></td>
<td>(50.009)</td>
<td>(46.745)</td>
<td>(51.605)</td>
<td>(51.301)</td>
</tr>
<tr>
<td>2011 year</td>
<td>148.372**</td>
<td>270.637***</td>
<td>168.034***</td>
<td>135.768**</td>
</tr>
<tr>
<td></td>
<td>(47.997)</td>
<td>(67.855)</td>
<td>(47.616)</td>
<td>(46.580)</td>
</tr>
<tr>
<td>Constant</td>
<td>445.130***</td>
<td>490.747***</td>
<td>-154.453</td>
<td>202.909</td>
</tr>
<tr>
<td></td>
<td>(142.296)</td>
<td>(77.513)</td>
<td>(192.152)</td>
<td>(194.382)</td>
</tr>
<tr>
<td>No.</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>R²</td>
<td>0.4884</td>
<td>0.2286</td>
<td>0.4057</td>
<td>0.5259</td>
</tr>
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Sign. levels: *** p < 0.01; ** p < 0.05; * p < 0.1
OLS regression coefficients with robust standard errors (clustered on member states) in parentheses.
We can draw three main conclusions from our very preliminary empirical results. Firstly, there is no evidence of policy representation in the actual administrative implementation of the EU railway reform. Secondly, the relative importance of the railway as a means of transport (in comparison to the other member states) is the only predictor of the actual implementation of railway reforms. This can be explained by the following logic: the higher the salience of railway in a given country, the higher the willingness of policy makers to liberalise the market. Thirdly, the indicators of policy objectives and of administrative capacity are not statistically significant, except for the government expenditure as % of GDP in model 3. On the contrary, the actual implementation of EU railway reform requires a certain amount of time to be entrenched, as evidenced by the statistically significance of the year dummy variables.

Future researches are necessary to model possible interaction effects among the independent variables as well as to identify other proxies of public opinion and economic and institutional features which may effect the actual implementation of the EU liberalisation of railway markets.
References


