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The Economic Impact of Forming a European Company*

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Abstract
Ever since 2004 companies located in Member States of the European Economic Area have been able to opt to incorporate in a supranational legal form, the Societas Europaea. We found that companies located in Member States where the Societas Europaea offers additional legal arbitrage opportunities benefit most. Moreover, our results show that the stock price reaction is positive when the decision to incorporate as an Societas Europaea involves moving the firm's registered office and that firms are moving to jurisdictions with significantly lower corporate tax rates. Finally, we found evidence of uncertainty at the registration date but not at the time of the shareholder meeting.

Keywords: corporate governance; incorporation; board structure; transfer of seat; Societas Europaea

Introduction

The European Company (Societas Europaea or SE) has been an essential element for establishing the Common Market. Ever since 2004 companies located in European Economic Area Member States have the option to reincorporate as an SE. The SE offers new ways to shape firms' corporate governance structure that are not possible under national corporate law in some of the European Economic Area Member States. The two most important differences concern board structure and board-level worker representation. Both options affect the firm's value if they help to mitigate conflicts of interests between management and shareholders (Belot *et al*., 2014). In this article, we examine whether incorporating as an SE affects a firm's value and which factors drive these changes.

While a recent body of academic literature has emerged on the SE, many questions remain open, especially with regard to the economic and financial impact of forming an SE. Without formally testing its impact, legal scholars have argued that an important reason for reincorporating into an SE is legal arbitrage (Eidenmüller *et al*., 2009; Enriques, 2004; Reichert, 2008). Companies located in countries with legal rules that are particularly favourable to worker representation may choose to become an SE as a way to restrict board-level worker participation that is otherwise mandatory under national co-determination laws. By requiring negotiations about worker participation, the SE structure offers greater flexibility in shaping board-level worker participation away from the strict national conditions.

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Little is known about how exploiting the SE as a vehicle for legal arbitrage changes a firm's value. Two early studies by Eidenmüller *et al*. (2009) and Lamp (2011) found no evidence that incorporating under European law overall affects a firm's value. This lack of findings in the previous literature on SE formations may be due to a lack of statistical power (MacKinlay, 1997), since both studies used rather small samples. Moreover, because of the limited usage of the SE in some countries, many hypotheses about legal arbitrage activities could not be tested hitherto. Now, 11 years after Council Regulation (EC) No 2157/2001 on the Statute for a European Company became effective on 8 October 2004, we have access to a larger sample with many more cases of SE reincorporation from a large range of countries, which allows us to extend the previous literature by investigating additional hypotheses on legal arbitrage activities and their effect on a firm's value.

To examine the stock price reaction to public information[1] releases on the reincorporation as an SE, we use data from the European Companies Database maintained by the European Trade Union Institute (ETUI). Our sample spans from 8 October 2004 until 8 October 2015 and is enriched with hand-collected information on announcement dates from Factiva, Google searches and company websites. Based on our final sample of reincorporated publicly listed firms, we obtained the following results. We found that country-level as well as company-level characteristics affect the stock price reaction at the time when the first information about the reincorporation is released. At that time, companies located in countries that allow only the two-tier board structure under national corporate law experience an abnormal stock return of around 2%. Similarly, companies located in countries with high levels of board-level worker participation have larger positive stock price reactions than those located in countries with traditionally low worker participation requirements. Company-specific reasons for opting for an SE also lead to significant abnormal stock returns. Companies that adopt the SE structure in order to relocate the registered office to another European country (which was generally not possible until the merger directive was enacted in 2005) experience a 2–3% abnormal stock price increase at the time when the first public information about the SE incorporation is released.

Interestingly, we document a second significant stock price reaction of equivalent magnitude at the time when the company is formally registered for many of the same factors, consistent with the notion that the first public information about the reincorporation still contains significant uncertainty about the registration of the SE. Our results suggest that this uncertainty is not driven by the fact that the reincorporation needs to be approved by shareholders – we found no evidence of an additional stock price reaction at the time of the shareholder meeting, where shareholders may reject the plan of the management to incorporate as an SE. Instead, it is caused by the uncertainty over the registration, which must be approved by a register court. However, we discuss other reasons for this additional effect on stock prices at the time of registration, as stakeholders such as debt holders and opposing minority shareholders may block the registration in cases where it involves a relocation of the registered office, even though shareholders have (conditionally) approved the decision to do so.

The study that is closest to ours is the one by Eidenmüller *et al*. (2010) that examines whether the market reacts to the announcement of an SE incorporation. We extend this

[1]In this study we use the term *public information* instead of *public announcement* as the information in some cases does not stem from a formal press release or an ad hoc message of companies themselves but from a broad range of other sources through which information was leaked to the market and reported by the news.

study in two important ways. First, while Eidenmüller *et al*. (2010) test the impact of the stock price reaction on average, they do not examine which factors affect changes in the stock price. As we discuss below, we examine the effect of regulatory differences between the SE regulation and national corporate laws to help explain the price reaction. Second, we investigate whether the price reaction is affected by remaining uncertainty after the first information is released by extending the analysis to two further, potentially important events: (1) the shareholder meeting where shareholders vote on the decision to reincorporate as an SE and (2) the formal date of registration.

The second closely related study is one by Belot *et al*. (2014). These authors assess the differential economic impact between one-tier and two-tier boards, using data on France where companies are free to contract on board structure. The SE regulation offers the same choice to companies outside France, even if the respective national corporate law does not offer such a choice. The authors conclude that company characteristics matter. One-tier boards (the primary structure used in the UK) tend to be used by firms prone to significant information asymmetries, while firms with two-tier boards have higher risks of managerial rent extractions (Belot *et al*. 2014). These findings are consistent with the view that two-tier boards provide better monitoring capabilities. They further suggest that a convergence to a unique board system is unlikely, as each board structure has its own costs and merits. Our results are consistent with this conclusion, since we found that only a fraction of the reincorporation leads to changes in board structure. Moreover, our analysis documents corporate governance changes other than board structure, including the relocation of registered office and changes in board-level worker participation. These factors are important and ignoring them could lead to omitted variable problems.

Earlier studies examined the economic impact of worker participation on productivity measures. FitzRoy and Kraft (2005) as well as Renaud (2007) found that worker participation increases corporate productivity, while Gurdon and Rai (1990) and FitzRoy and Kraft (1993) found the opposite to be true. The effect of worker participation on the market value of companies is also mixed (Benelli *et al*., 1987; Gorton and Schmid, 2004). The SE provides a new way to investigate the effect of worker participation because it offers an option for managers and employees to negotiate a firm-specific employee involvement regime, which provides a potentially valuable corporate governance feature (Eidenmüller *et al*., 2012).

The remainder of the article is structured as follows. Section I describes the Regulation on the Statute for a European Company and develops testable hypotheses. Section II presents data and summary statistics on the sample used. The main results are presented in section III and the conclusion follows.

I. Regulation and Hypotheses

The Regulation of the SE

Council Regulation (EC) No 2157/2001 on the Statute for a European Company became effective on 8 October 2004. It enables companies incorporated in one of the European Economic Area Member States to adopt a supranational company structure that partly substitutes and partly supplements the national one. The SE regulation was supplemented by Council Directive 2001/86/EC, which regulates the involvement of employees. Thus, the introduction of the SE has generated a multilayer regulatory situation for corporate law, where companies can now choose between supranational and national law. An important benefit of the SE is that it allows companies to operate across different EU Member States under a single legal statute that is recognized in all Member States.

There exist five different ways to incorporate as an SE, which generally require a transnational link. The new legal form can be achieved through a merger of two companies from two different Member States, where the merged entity can take the structure of an SE. Another way is by creating a European holding company with at least two companies originating from different EU Member States. An SE may also be used in the incorporation of a common subsidiary held by at least two companies from different EU Member States, in which case the subsidiary takes the form of the SE. Moreover, a company may seek a direct transformation into an SE if it held a subsidiary in another Member State for at least 2 years. Finally, established SEs can form a direct SE subsidiary.

A key condition for incorporating as an SE is that an agreement is reached with employees for co-determination (Eidenmüller *et al*., 2012; Rose, 2007). Since the SE offers the possibility of negotiating with employees this can be an attractive legal form in countries with mandatory board-level worker participation. The companies can then negotiate for a more efficient employee representation than the one that exists under national law. Moreover, European Economic Area Member States either impose one-tier or two-tier, or, in some rare cases, both board structures for national companies. The SE generally offers a choice between dualism and monism.

Incorporation as an SE may lead to an increase in the firm's value for at least two different reasons. One is the arbitrage opportunities that arise at the country level when the SE structure enables corporate governance structures that are not allowed under national corporate law. For example, German national corporate law permits only the two-tier board structure, while the SE allows for both. This leads to legal arbitrage opportunities for German companies adopting the SE. The other source of firm value creation results from concrete company-specific decisions that are related to the reincorporation, which may generate a stock market reaction. In the remainder of this section we formulate testable hypotheses on these two sources of stock price reaction.

Country-level Effects

As a first set of determinants we consider country-level effects as a result of the new legal opportunities opened up. Indeed, for companies in many countries the possibility of choosing the supranational legal form enables new corporate governance structures that were not permitted under national corporate law. We expected an increase in the firm's value for companies located in these countries.

As shown above, the SE regulation generally provides additional flexibility in corporate governance structures in some EU Member States. Belot *et al*. (2014) hypothesized and found that the one-tier board offers benefits in terms of mitigating information asymmetry problems, while a two-tier board is more efficient for companies with high risks of managerial rent extractions, because this type of board limits discretion of management in the company. Given that both governance structures may have merits, we expected the value of firms to increase if this option becomes available to them, which we summarize in Hypothesis 1:

Hypothesis 1: (monism only/dualism only): *Companies located in a country that allows only the one-tier or two-tier board structure under national corporate law will experience a positive abnormal return at the time when the first public information about the reincorporation leaks to the market.*

Similarly, we expected the greater flexibility in shaping board-level worker participation to benefit companies that are restricted under national corporate law, as they may now choose what is optimal for them. Before the introduction of the SE, they were constrained on the extent of worker participation, which may have forced many firms to adopt suboptimal solutions:

Hypothesis 2: (board-level worker participation): *Companies located in a country with strong worker participation under national law will experience a positive abnormal return at the time the first public information about the reincorporation leaks to the market.*

Company-level Effects

Besides benefits due to more legal flexibility in the corporate governance structures as a result of the introduction of the supranational legal form, we expect companies to benefit only if they actually make use of these possibilities. In this study, we considered the three arguably most important corporate decisions that are possible under the SE regulation and the impact these corporate governance features have on the newly incorporated SE.

The first such effect may come from the decision to relocate the registered office to another Member State, something that was not permitted before the SE regulation became effective. Companies may transfer their registered office for various reasons. Enriques (2004) argues that two motives may be to shop for a more favourable corporate law or tax law regime. Regardless of the ultimate reason, we assume that companies change their registered office only when it is optimal to do so. In the empirical analysis in section III, we explored the tax motive in more detail. Generally, we expected the transfer of the registered office to increase performance; otherwise such decision has no value to the firms and thus firms would not undertake this step in the first place:

Hypothesis 3: (transfer of registered office): *Companies transferring their registered office will experience a positive abnormal return at the time the first public information about the reincorporation leaks to the market.*

Two other important changes in corporate governance that can be absorbed when incorporating as an SE are changes in the board structure and freezing worker participation. While only few European jurisdictions provide companies with the option to choose between the one-tier and the two-tier board structure, the SE regulation offers companies a choice between the two systems. This additional choice may increase the value of companies that now find a better fit regarding their board structure. Given that we were not aware of a single firm in our sample that has changed their board structure from the one-tier to the two-tier board, we focused only on the new legal possibility to change the board structure from the two-tier to the one-tier board. This finding is in line with

Eidenmüller *et al*. (2009), who conjecture that companies that can choose the one-tier board structure should incur lower direct costs because only a single corporate body is involved. Moreover, the level of board-level worker participation not only has to be negotiated ex ante under the legal form of the SE, the pre-existing level of worker participation most often also remains unchanged ex post because the SE is not subject to the enhanced worker participation requirements stipulated under national law (Eidenmüller *et al*., 2009; Reichert, 2008). Hence, companies just below a certain national size threshold to be eligible for enhanced worker participation may freeze the current extent or even the non-existence of worker participation at the board level by using the SE.

Again, we expected only companies for which it was optimal to undertake these transformations to do so. This leads to the following two additional hypotheses:

> *Hypothesis* 4: (from dualism to monism): *Companies changing their board structure from a two-tier to a one-tier board will experience a positive abnormal return at the time the first public information about the reincorporation leaks to the market*.

> *Hypothesis* 5: (freezing worker participation): *Companies deciding to freeze worker participation will experience a positive abnormal return at the time the first public information about the reincorporation leaks to the market*.

Corporate and Legal Uncertainty Resolution

A worthwhile follow-up question that we investigate is whether there is a second stock price reaction either at the time of the shareholder meeting or at the time of the formal registration, as the first public information about the reincorporation may still entail uncertainty about whether the firm will indeed eventually incorporate as an SE. Moreover, Bratton *et al*. (2009) argue that the benefits of the SE itself are generally uncertain, since they involve indirect costs and other legal barriers. This is particularly true for a change of the registered office, which may trigger taxes on hidden reserves and confront management with different legal cultures. Therefore, shareholders may vote against such a change of the registered office at the shareholder meeting.

Similarly, the SE incorporation may be blocked at the time of formal registration. For example, the almost first German SE incorporation, Zoll Pool Hafen Hamburg SE, was ultimately not registered under the new legal form following a protest by the register judge who argued that, although the SE presumably would not have had any employees, negotiations on the employee involvement regime had to take place (Seibt, 2005). Likewise, after 13 investors of Allianz SE filed a lawsuit challenging the reincorporation and the merger with the Italian RAS Holding, the firm had to pay almost €1 million and had to explain publicly the legal differences between the traditional German AG and the SE to investors.[2] A final example concerns opposing minority shareholders, who may under national law have the right to be paid out if the company transfers its

[2]http://notizen.duslaw.de/das-teuerste-juraskript-aller-zeiten-allianz-erlautert-die-se/ (last accessed 8 September 2016).

registered office. For example, shareholders of Eurofins Scientific SE, a French pharmaceutical testing company that moved to Luxembourg in 2012, approved the transfer of the registered office on condition that the overall volume of payouts to opposing minority shareholders resulting from the SE reincorporation remained reasonable.[3] If the company ran into liquidity problems, management would have had the responsibility to reconsider the reincorporation decision before the SE was formally registered. While shareholders had not specified what a reasonable volume of payout was, in some other cases shareholders set clear limits on the volume of payouts that was acceptable.

If no uncertainty remained after the first public information about the reincorporation leaks to the market, in efficient markets no further stock price reaction should occur at the time of the shareholder meeting or formal registration. In contrast, any significant stock price reaction at the time of the shareholder meeting or formal registration would be attributed to the resolution of remaining uncertainty. In the analysis below we therefore performed statistical tests on three events: first public information, the shareholder meeting and incorporation.

II. Data and Summary Statistics

To examine our research question, we used the European companies (SE) database of the European Trade Union Institute, which provides the full population of SEs from 2004 to today. The data were extracted on 15 October 2015 and cover the period from 8 October 2004 to 8 October 2015. The database includes not only established SEs but also announced ones. Due to the nature of our research design and the fact that we calculated the cumulative abnormal returns (CARs) using three different event dates, we restrict our analysis to publicly traded firms that had been SE candidates.

To be included in the sample, we required that (1) the date of the first public information about the reincorporation could be identified and (2) stock prices data were available to calculate the CARs for a minimum of 46 days prior to the first public information about the reincorporation. Thus, we manually searched for the international securities identification number (ISIN) code of each company or its predecessors in our database. From the ISIN code we then extracted stock prices and accounting data from Thomson Reuters' Datastream. After we applied this filter, 159 companies remained, of which 75 were from Germany, 28 from the Czech Republic, 21 from France, eight from the Netherlands, six from Luxemburg, four from Hungary and 10 from other European countries including the UK.[4]

We manually searched for each company's first public information about their reincorporation using the Factiva database. Factiva collects information worldwide from nearly 200 countries using a large variety of leading newspapers, magazines, trade press, newswires, press releases, web media, social media and multimedia. We also use a Google search and company websites to identify news releases that might not be covered by the database. We treat an SE incorporation as public information if news on Factiva, Deutsche Gesellschaft für Ad-hoc-Publizität, a Google search or the company website mentioned an SE incorporation or the clear intention to do so. We further hand-collected

[3]https://www.boursorama.com/bourse/actualites/eurofins-scientific-l-assemblee-generale-des-actionnaires-d-eurofins-scientific-se-a-approuve-le-projet-de-transfert-du-siege-social-au-luxembourg-12149cd9732a40e972e4ac08c3390294 (last accessed 7 December 2018)

[4]See Eidenmüller and Lasák (2012) showing that the large number of Czech SEs is mainly driven by the desire to reduce board size and to benefit from the European image of the SE.

data on the actual board structure from the company websites and annual reports. Data on national corporate and worker participation laws was obtained from Conchon *et al.* (2015). All variables are defined in Appendix A. The data on the date of the shareholder meeting were first retrieved from the company websites and annual reports. In some cases, we also had to rely on news reports on the shareholders meeting date. For the date of registration, we used the official gazettes in the respective country as our main data source and in rare cases also relied on the sources just mentioned.

We rely on the CAR methodology to assess the stock price reaction, using the market model for calculating abnormal returns (Brown and Warner, 1985). This methodology is widely used in event studies, which is also the empirical framework we use in the current study. Following the literature (Brown and Warner, 1985), we used the (−3,+3) window for calculating CAR values, but also performed robustness checks with different windows. The parameters of the market model are estimated over a 214-trading day window, ending 16 trading days before the event day. We used the MSCI Europe index as a benchmark market portfolio. This index captures firms with large and medium market capitalization in Europe. We required at least 30 daily stock returns in the estimation period to estimate the parameters used to calculate CARs. We stopped our estimation period 16 days before the day of the first public information about the reincorporation. The same procedure was used to calculate CARs for the shareholders meeting and the formal registration. We did this to avoid bias in the parameters estimations due to changes in the firm's characteristics around the event date. This approach is consistent with previous studies that follow this methodology (Brown and Warner, 1985).

As a first step to investigate the stock price reactions with regard to the SE formation, we first calculated average CARs around the time the first information leaked to the market. The CARs are estimated over different sequences, as reported in Table 1, Panel A. Our first set of tests shows that the market reacts positively around the SE formation, specifically 10 days (−5,+5) around the event date. Although the reaction is generally positive in a short window such as (−1,+1) or (−2,+2), the results are statistically significant over a long window (−5,+5) only. The second set of results shows that the CARs are on average positive, but only weakly statistically significant at day 0. The third set of the results shows that the CARs are on average positive and significant for the window (0,+5). Finally, we found that in the long run the CARs are on average positive and statistically significant after the event date for the first 100-day window but not the 200-day window.

Together the results show that the market reacts positively to SE formation at the time the first public information about the reincorporation leaks to the market. However, the reactions are mainly statistically significant for the days following the first public information, although no specific day stands out as driving the stock price reaction. This suggests that there is no information leakage or rumours on the SE formation prior to the first formal information about the reincorporation becomes public knowledge, but also that there is strong heterogeneity in the companies in our sample.

Incorporation as an SE requires that shareholders approve the change in legal form. Given that shareholders might reject the proposal, some uncertainty persists, so that we might observe a second stock price reaction at the time of the shareholder meeting. We do not report the statistics for the days around the shareholder meeting where the formal decision to reincorporate is made, because no event window is statistically significant.

Table 1: Average Cumulative Abnormal Returns (CARs) Around the First Public Information and the Date of Registration

	Panel A: First public information					*Panel B: Date of registration*				
		t-test		*Wilcoxon rank–sum test*			*t*-test		*Wilcoxon rank–sum test*	
	Average CAR	*t*-value	*p*-value	*z-value*	*p*-value	*Average CAR*	*t*-value	*p*-value	*z-value*	*p*-value
−1 to +1	0.0020	0.934	(0.267)	0.878	(0.238)	0.0023	0.820	(0.527)	0.836	(0.284)
−2 to +2	0.0013	0.621	(0.322)	0.715	(0.311)	0.0018	0.504	(0.470)	0.535	(0.365)
−3 to +3	0.0024	1.092	(0.344)	1.052	(0.311)	0.0022	0.637	(0.320)	0.533	(0.394)
−4 to +4	0.0060	1.450	(0.142)	1.499	(0.115)	0.0037	1.126	(0.370)	0.584	(0.358)
−5 to +5	0.0045	1.951	(0.041)	1.980	(0.042)	0.0092	2.590	(0.030)	2.660	(0.022)
−5 to 0	0.0030	1.308	(0.341)	1.311	(0.324)	0.0057	1.683	(0.070)	1.684	(0.081)
−4 to 0	0.0020	0.822	(0.431)	0.898	(0.344)	0.0027	0.818	(0.251)	0.545	(0.151)
−3 to 0	0.0025	1.314	(0.351)	1.190	(0.343)	0.0048	1.359	(0.141)	1.403	(0.133)
−2 to 0	0.0007	0.367	(0.514)	0.353	(0.419)	0.0039	1.168	(0.290)	1.165	(0.261)
−1 to 0	0.0026	1.475	(0.161)	1.395	(0.178)	0.0074	2.177	(0.031)	2.537	(0.031)
0	0.0060	1.672	(0.079)	1.653	(0.052)	0.0024	0.690	(0.396)	0.889	(0.329)
0 to 1	0.0030	0.863	(0.590)	0.522	(0.410)	0.0080	2.080	(0.038)	2.693	(0.025)
0 to 2	0.0054	1.643	(0.102)	0.488	(0.481)	0.0041	1.242	(0.227)	1.160	(0.272)
0 to 3	0.0016	0.452	(0.521)	0.611	(0.392)	0.0045	1.515	(0.174)	1.589	(0.183)
0 to 4	0.0045	1.152	(0.410)	0.711	(0.385)	0.0091	2.397	(0.037)	2.845	(0.016)
0 to 5	0.0091	2.375	(0.030)	2.799	(0.040)	0.0033	0.986	(0.543)	0.770	(0.621)
0 to 100	0.0030	1.983	(0.042)	2.104	(0.027)	0.0055	1.954	(0.046)	1.956	(0.048)
0 to 200	0.0029	1.631	(0.117)	1.611	(0.110)	0.0031	1.463	(0.161)	1.521	(0.136)

Note: Average CARs for different windows around the first public information of reincorporation and registration date, following the calculation presented in section II. The values reported are based on the full sample of 101 cases where the date of the shareholder meeting could be identified. *t*-tests and Wilcoxon rank–sum tests are based on whether the CAR values are significantly different from 0.

Since there is almost no overlap with the first public information (fewer than 5% of the events overlap), this suggests that the market reacts mostly at the time of first public information and that there is little uncertainty left due to the risk of shareholders blocking the management plan to reincorporate as an SE. Our multivariate analysis confirms this view, which is therefore also not reported in this article but is available upon request.

Table 1, Panel B shows the results around the official incorporation date, which allows us to examine whether reincorporations suffer from uncertainty. We again used the same set of tests to investigate the price reactions around the incorporation date. We found that the CARs are on average positive and statistically significant 10 days (−5,+5) around the incorporation date, consistent with the stock market reaction around the first public information. For the periods before and after the incorporation date, we find that the market often reacts positively and mostly statistically significantly over the periods following the date of SE incorporation. One possible reason for a second stock price reaction at the incorporation date could be a partial overlap with the first public information about the reincorporation. While these overlaps are extremely rare (only a single case), in some cases public information about the SE incorporation is only announced after the firm had changed its legal form. As these cases are not completely unusual, we directly control for this fact in our multivariate analysis. Finally, we found positive and significant CARs over a long window after the SE incorporation.

Table 2 shows summary statistics of our final sample. Due to missing data for the event date and some of the explanatory variables, our sample for the multivariate analysis on the first public information contains 118 observations. The average CAR for the first public information about the SE incorporation is 0.001 for the (−3,+3) window, with large variation around the mean. Overall, 14.4% of the incorporations involve a merger, which often involved a shell company to fulfil the cross-border requirements of the SE regulation. German companies represent 51.7% of the sample. In terms of firm-level characteristics, we found that 16.9% of the incorporations involve a change in the registered office. Moreover, 18.6% change their board structure from the two-tier structure to the one-tier structure, and 36.4% potentially freeze worker participation. Note that most of these companies do not appear to be close to the employee threshold level that requires board-level worker participation or enhanced board-level worker participation. Moreover, these factors are not mutually exclusive, as an incorporation may be driven by more than one factor.

III. Main Results

Our main objective was to study which factors affect the stock price reaction to the first public information related to the SE incorporation. Further, we aimed to investigate whether any follow-up stock price reaction occurs at the time of the shareholder meeting or the formal registration. To this extent, we ran ordinary least squares regressions on our financial performance measure CAR(−3,+3). Note that this approach captures only the stock market reaction of firms that decided to reincorporate as an SE. Thus, we considered a selective sample of firms for which the decision to reincorporate was apparently

Table 2: Summary Statistics of Main Variables

Variable	*No. of obs.*	*Mean*	*SD*	*Min.*	*Max.*
Dependent variable					
(1) CAR −3 to +3	118	0.001	0.045	−0.092	0.184
Control variables					
(2) Ln (employees)	118	7.167	2.760	0	12.284
(3) Merger dummy	118	0.144	0.353	0	1
Country-level variables					
(4) Dualism only dummy	118	0.559	0.499	0	1
(5) Monism only dummy	118	0.059	0.237	0	1
(6) Extent worker participation	118	0.365	0.165	0	0.500
(7) Previous incorporations of publicly listed SEs	118	21.322	22.624	0	72
Firm-level variables					
(8) Change of seat dummy	118	0.169	0.377	0	1
(9) Dualism to monism dummy	118	0.186	0.391	0	1
(10) Worker participation below highest threshold dummy	118	0.364	0.483	0	1

Note: Variables reported are based on the full sample of 118 cases. CAR, cumulative abnormal returns; Obs, observations; SD, standard deviation; SE, Societas Europaea.

valuable. Moreover, we cannot disentangle whether the legal form of the SE or whether the fact that the market has learned something about the nature of the firm is driving the CARs. Given these caveats, our analyses still enable us to determine what the factors of value creation are, although these factors may not hold for all firms alike.

The results are reported in Table 3, Panel A for CARs based on the first public information about the incorporation. Our initial results show that country-level regulation affects stock performance. The stock price reaction is positive when the company is located in a country that allows only a two-tier board structure under national corporate law, such as Germany and Austria.[5] By contrast, we do not find evidence that the new flexibility to choose the one-tier board structure affects a firm's value in a statistically significant manner. Furthermore, investors react positively when the company is located in a country with higher levels of mandatory board-level worker participation, although this relationship is not statistically significant in Model 6.

At the firm level, a strong factor affecting stock price reaction is a transfer of the registered office, which is also economically significant. Controlling for other factors, the change of the registered office increases CARs by 2.0–3.3%, depending on the specification considered. As mentioned earlier, there may be different motives for changing the registered office. Below we examine some of these factors in more detail. Other reasons for incorporating as an SE, such as changing to a one-tier board structure and freezing worker participation, have no meaningful impact on stock prices. One possible reason why freezing worker participation is not significant is that most companies in our sample are not close to the employee threshold level that requires board-level worker participation or enhanced board-level worker participation under national co-determination laws. Similarly, firm size (*ln [employees]*) and incorporation as a result of a merger (the dummy *merger*) also have no impact.[6]

Next, we investigated whether there was a second stock price reaction either at the time of the shareholder meeting or the formal incorporation, since the first public information may still entail uncertainty whether the firm eventually gets registered. As pointed out earlier, both events may lead to the resolution of remaining uncertainty about the final structure of the SE and whether the transformation actually takes place. Our data enabled us to disentangle both factors. To investigate the effect of uncertainty surrounding the shareholder meeting, we ran the same regressions as before but now with CARs centred around the shareholder meeting date. None of the variables are statistically significant in any of the specifications. These findings suggest that the absence of uncertainty related to shareholder support. This result is consistent with the fact that we observed very few companies in our sample that announced the reincorporation, but did not put it on the agenda of an upcoming shareholder meeting. The fact that we found no effect suggests that shareholders are unlikely to reject the reincorporation.

To investigate the effect of the remaining uncertainty at the time of formal registration we used CARs centred on the formal incorporation date. The results are provided in

[5]This effect disappears once we include a dummy variable for Germany or take Germany out of the sample. Whilst this finding indicates that the positive effect of a one-tier board structure is mostly driven by German firms, the lack of statistical significance may also stem from a lack of statistical power as a result of the small number of observations.

[6]In unreported regressions we included firm-level controls such as *total assets, market capitalization, shares outstanding, Tobin's Q, total liabilities* and *shareholder equity*. None of these variables was significant for the first public information and only *Tobin's Q* was significant for the date of registration. Importantly, our previous results remain unaffected.

Table 3: Determinants of Stock Price Reaction Following the First Public Information and the Date of Registration

	Panel A: First public information						Panel B: Date of registration					
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*	*(12)*
Ln (employees)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.000	0.002
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Merger	0.004	−0.002	0.005	−0.002	0.001	0.002	0.017	0.008	0.016	0.008	0.012	0.011
	(0.008)	(0.008)	(0.008)	(0.008)	(0.009)	(0.008)	(0.014)	(0.013)	(0.015)	(0.014)	(0.014)	(0.015)
Dualism only	0.027**		0.027**			0.021	0.012		0.011			−0.001
	(0.012)		(0.012)			(0.013)	(0.011)		(0.011)			(0.013)
Monism only	−0.021		−0.022			−0.017	−0.035*		−0.028			−0.018
	(0.014)		(0.014)			(0.013)	(0.020)		(0.021)			(0.021)
Extent worker participation		0.105***		0.109**		0.058		0.134***		0.119**		0.107*
		(0.039)		(0.042)		(0.045)		(0.045)		(0.050)		(0.057)
Previous SE incorporations	−0.000	−0.001*	−0.000	−0.001*	0.000	−0.001*	−0.000	−0.001*	0.000	−0.001	0.000	−0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Change of seat	0.031***	0.030***	0.031***	0.030***	0.020*	0.033***	0.036**	0.040***	0.037**	0.040***	0.027*	0.041***
	(0.011)	(0.011)	(0.011)	(0.011)	(0.010)	(0.011)	(0.015)	(0.014)	(0.015)	(0.015)	(0.014)	(0.015)
Dualism to monism					0.004						0.004	
					(0.013)						(0.010)	
Freeze of workers participation			−0.001	−0.003		−0.004			0.014	0.011		0.009
			(0.011)	(0.011)		(0.011)			(0.011)	(0.011)		(0.012)
Constant	−0.074**	−0.086**	−0.072**	−0.084**	−0.051	−0.082**	−0.042	−0.077**	−0.058*	−0.085**	−0.030	−0.079**
	(0.032)	(0.038)	(0.035)	(0.039)	(0.038)	(0.038)	(0.029)	(0.033)	(0.031)	(0.033)	(0.031)	(0.035)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean VIF	1.96	2.45	2.10	2.64	1.48	2.96	1.96	2.45	2.10	2.64	1.48	2.96
Maximum VIF	3.45	4.45	3.46	4.79	1.81	5.89	3.45	4.45	3.46	4.79	1.81	5.89
Observations	118	118	118	118	118	118	118	118	118	118	118	118
R^2	17.6	15.7	17.6	15.8	10.2	18.8	16.3	18.9	17.5	19.6	12.6	20.2

Note: The dependent variable is the CAR(−3,+3) around the date of first public announcement and date of registration. All the variables are defined in Appendix Table 1. Values in brackets are robust standard errors. Significance levels: *, **, *** for 10%, 5%, and 1%. CAR, cumulative abnormal returns; VIF, variance inflation factor.

Table 4: Change of Registered Office and Tax Differentials (no. of companies)

Origin		*Destination*	
France	6	Luxembourg	6
Netherlands	4	UK	4
Luxembourg	3	Austria	2
Norway	2	Cyprus	2
UK	2	Malta	2
Finland	1	Belgium	1
Germany	1	Czech Republic	1
Hungary	1	Germany	1
Ireland	1	Hungary	1
Poland	1	Ireland	1
		Poland	1
Average corporate income tax rate	27.5%	Average corporate income tax rate	21.8%
Difference	5.7%	($P = 0.013$)	

Note: Jurisdiction of origin and destination of Societas Europaeas that changed their registered office. For each column (origin, destination), we report the average corporate income tax rate in the year the registered office was transferred. The last row reports the result of a difference-in-mean test between the two average corporate income tax rates (p-value in brackets).

Table 3, Panel B. We found that the impact of *extent of worker participation* and *change of seat* was even stronger than at the time of the first public information about the reincorporation.

As mentioned in Section II, the stock price reactions can be attributed to the confounding effect of both the first public information about the reincorporation and the effective incorporation, since in some cases both events occur with a few days. To separate the two effects, we re-ran the analysis for the subsample of companies where the two events did not overlap and the incorporation follows the first public information about the reincorporation. This allowed to estimate the impact of uncertainty resolution at the time of effective incorporation. We obtained very similar results, which are available upon request. Thus, while the market reacts positively to companies transferring their registered office and in countries with strong worker participation, the simple announcement of incorporating as an SE still entails significant uncertainty in these cases.

Furthermore, we extended our analysis by investigating the actual content of the first public information of the SE incorporation. We found that companies frequently gave four different reasons for an SE reincorporation: an intention to change the board structure (12%), which in all cases aimed at a one-tier board structure, a change of seat (8%), simplifying the legal structure (11%) and the Europeanization/internationalization strategy of the company (26%). However, none of these statements showed a statistically significant effect in our regressions. Also, none changed our original findings.[7]

The fact that *change of seat* is also significant at the time of formal registration is striking and warrants extra analysis. As mentioned in Section I, transferring the registered office to another country may be driven by various arbitrage opportunities, including corporate income taxes.[8] Table 4 shows the origin and destination of seat transfers for the

[7]The regressions are available upon request from the authors.

[8]For some firms, like Norwegian Prosafe SE, very specific taxes such as national tonnage tax system for shipping companies may have been essential for transferring the registered office.

SEs included in our sample and analysis. Many companies come from France and the largest fraction relocates to Luxembourg or the UK. To assess whether tax differentials could be a motive, we also show in Table 4 average corporate income tax rates (KPMG, 2015; OECD, 2016) in the respective jurisdictions of origin and destination. The evidence suggests that corporate taxes in the countries of origin were significantly higher (27.5%) relative to the destination countries (21.8%) and the difference of 5.7% is statistically significant at the 5% level ($P = 0.013$). Likewise, we found the corporate income tax differential as calculated for each individual transfer of the registered office separately (that is, the difference between the tax rate in the country of origin and destination) was significantly different from zero ($P = 0.017$).

An alternative possibility that could explain value creation during the transfer of the registered office is improvements due to better corporate control or a better corporate law. After inspecting annual reports and corporate documentations specific to the SE reincorporation and transfer of registered office, we found that some companies argue that the choice to transfer the registered office is due to the location of the operations, which is not (or no longer) in their current home jurisdiction. Hence, companies attempt to relocate their registered office closer to their operational facilities. Thus, some of the transfers may indeed be driven by incentives to optimize the structure of international operations and improving corporate control to expand the company internationally. The data available to us do not allow to test this motive but future research could shed light on this alternative driver of value creation.

Conclusions

This study examined the economic impact of Council Regulation (EC) No 2157/2001 that allows companies located in one of the European Economic Area Member States to adopt an SE as a supranational corporate form. The corporate benefits of the SE depend largely on whether arbitrage opportunities exist relative to the existing national corporate law with regard to board structure and worker participation, or whether the management planned to transfer the registered office. While we document stock price reactions at the time of first public information about the reincorporation, we also document some stock price reactions at the time of the formal incorporation but not at the time of the shareholder meeting where shareholders approve the decision. This suggests that uncertainty remains at the time managers decide to promote the reincorporation as an SE and that this uncertainty is resolved only when the company formally registers.

Future research could explore the impact on how reincorporating as an SE affects operating activities, the locations of subsidiaries and, ultimately, operating performance. While our investigation has uncovered anecdotal evidence that operating activities may be affected and that this may influence the decision to relocate the registered office to another jurisdiction, future research could quantify the economic impact. This may shed light on the long-term impact of SE reincorporations. Finally, the SE regulation offers one option to existing European firms to change their registered office, while the Merger Directive is another alternative. Future research could investigate which of the two options provides the more efficient alternative for European firms to transfer their registered office.

Appendix A: List and Definitions of Variables

Dependent variable:
CAR − 3 to + 3: The cumulative abnormal return for the event window $t = -3$ to $t = 3$. Events constitute the first public announcement on the SE reincorporation or alternatively the day of the register entry.
Explanatory variables – controls:
ln (employees): The natural logarithm of the current number of employees of the firm reincorporating as an SE. Source: European Trade Union Institute database, Thomson Reuters and company websites.
Merger: Dummy variable equal to 1 if the SE was established by means of a merger, and 0 otherwise. Source: European Trade Union Institute database (2015).
Explanatory variables – country level:
Dualism only: Dummy variable equal to 1 if the firm converting to an SE had its originally initial registered office in a jurisdiction that allows for the two-tier board structure only, and 0 otherwise. Source: Conchon *et al*. (August 2015).
Extent of worker participation: Highest level of legally imposed board-level worker participation for private companies in jurisdiction of initial registered office in percent. Source: Conchon *et al*. (August 2015).
Monism only: Dummy variable equal to 1 if the firm converting to an SE had its originally initial registered office in a jurisdiction that allows for the one-tier board structure only, and 0 otherwise. Source: Conchon *et al*. (August 2015).
Previous SE incorporations: Number of publicly listed SEs incorporated in a given country before the focal SE incorporation.
Explanatory variables – firm level:
Change of seat: Dummy variable equal to 1 if the firm converting to an SE transferred its registered office to a different country, and 0 otherwise. Source: European Trade Union Institute database and company websites.
Dualism to monism: Dummy variable equal to 1 if the firm converting to an SE changed its board structure from a two-tier board to a one-tier board, and 0 otherwise. Source: European Trade Union Institute database and company websites.
Worker participation below highest threshold: Dummy variable equal to 1 if the firm converting to an SE had less employees than under the highest threshold requiring worker participation at the board-level, and 0 otherwise. Source: Conchon *et al*. (August 2015), European Trade Union Institute database, Thomson Reuters and company websites.

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References

Belot, F., Ginglinger, E., Slovin, M.B. and Sushka, M.E. (2014) 'Freedom of Choice Between Unitary and Two-Tier Boards: An Empirical Analysis'. *Journal of Financial Economics*, Vol. 112, No. 3, pp. 364–85.

Benelli, G., Loderer, C. and Lys, T. (1987) 'Labor Participation in Corporate Policy-Making Decisions: West Germany's Experience with Codetermination'. *Journal of Business*, Vol. 60, No. 4, pp. 553–75.

Bratton, W.W., McCahery, J. and Vermeulen, E. (2009) 'How Does Corporate Mobility Affect Lawmaking? A Comparative Analysis'. *American Journal of Comparative Law*, Vol. 57, No. 2, pp. 501–49.

Brown, S.J. and Warner, J.B. (1985) 'Using Daily Stock Returns: The Case of Event Studies'. *Journal of Financial Economics*, Vol. 14, No. 1, pp. 3–31.

Conchon, A., Kluge, N. and Stollt, M. (2015) 'Worker Board-Level Participation in the 31 European Economic Area Countries'. Available online at: http://de.worker-participation.eu/National-Industrial-Relations/Across-Europe/Board-level-Representation2/TABLE-Worker-board-level-participation-in-the-31-European-Economic-Area-countries. Last accessed: 23 November 2018.

Eidenmüller, H. and Lasák, J. (2012) 'The Czech Societas Europaea Puzzle'. *Journal of Corporate Law Studies*, Vol. 12, No. 2, pp. 237–54.

Eidenmüller, H., Engert, A. and Hornuf, L. (2009) 'Incorporating under European law: The Societas Europaea as a Vehicle for Legal Arbitrage'. *European Business Law Review*, Vol. 10, No. 01, pp. 1–33.

Eidenmüller, H., Engert, A. and Hornuf, L. (2010) 'How Does the Market React to the Societas Europaea?' *European Business Law Review*, Vol. 11, No. 1, pp. 35–50.

Eidenmüller, H., Hornuf, L. and Reps, M. (2012) 'Contracting Employee Involvement: An Analysis of Bargaining over Employee Involvement Rules for a Societas Europaea'. *Journal of Corporate Law Studies*, Vol. 12, No. 2, pp. 201–35.

Enriques, L. (2004) 'Silence Is Golden: The European Company Statute As a Catalyst for Company Law Arbitrage'. *Journal of Corporate Law Studies*, Vol. 4, No. 1, pp. 77–80.

FitzRoy, F.R. and Kraft, K. (1993) 'Economic Effects of Codetermination'. *Scandinavian Journal of Economics*, Vol. 95, No. 3, pp. 365–75.

FitzRoy, F.R. and Kraft, K. (2005) 'Co-Determination, Efficiency and Productivity'. *British Journal of Industrial Relations*, Vol. 43, No. 2, pp. 233–47.

Gorton, G. and Schmid, F.A. (2004) 'Capital, Labor, and the Firm: A Study of German Codetermination'. *Journal of the European Economic Association*, Vol. 2, No. 5, pp. 863–905.

Gurdon, M.A. and Rai, A. (1990) 'Codetermination and Enterprise Performance: Empirical Evidence from West Germany'. *Journal of Economics and Business*, Vol. 42, No. 4, pp. 289–302.

KPMG (2015) 'Global Tax Rate Survey'. Available online at: https://assets.kpmg/content/dam/kpmg/pe/pdf/global-tax-rate-survey-2015.pdf. Last accessed 23 January 2019.

Lamp, F. (2011) 'Value Creation and Value Destruction in the Societas Europaea: Evidence from the New Legal Form'. SSRN Working Paper. Available online at: https://doi.org/10.2139/ssrn.1728162

MacKinlay, A.C. (1997) 'Event Studies in Economics and Finance'. *Journal of Economic Literature*, Vol. 35, No. 1, pp. 13–39.

OECD (2016) 'OECD Tax Database: Taxation of Corporate and Capital Income Table II.1'. Available online at: http://www.oecd.org/tax/tax-policy/tax-database.htm#C_Corporate Captial. Last accessed 23 November 2018.

Reichert, J. (2008) 'Experience with the SE in Germany'. *Utrecht Law Review*, Vol. 4, No. 1, pp. 22–33.

Renaud, S. (2007) 'Dynamic Efficiency of Supervisory Board Codetermination in Germany'. *Labour*, Vol. 21, No. 4–5, pp. 689–712.

Rose, C. (2007) 'The New Corporate Vehicle Societas Europaea (SE): Consequences for European Corporate Governance'. *Corporate Governance*, Vol. 15, No. 2, pp. 112–21.

Seibt, C.H. (2005) 'Arbeitnehmerlose Societas Europaea'. *Zeitschrift für Wirtschaftsrecht*, Vol. 26, No. 50, pp. 2248–50.