Economic globalization and decentralization: A centrifugal or centripetal relationship?

Ignacio Jurado | Sandra León

University of York, UK

Funding information
Spanish Ministerio de Economía, Industria y Competitividad, Grant/Award Number: CSO2017-82881-R

Abstract
One of the most significant economic trends in the last decades has been the integration of countries in international markets. What have been the consequences of global economic integration upon the territorial organization of the states? Has it contributed to centralize powers or to further decentralization? The literature so far has provided inconclusive evidence. In this article we shed new light on the relationship between economic globalization and territorial politics by using a varied source of data such as the Regional Authority Index, and the KOF indices of globalization for the period 1970–2010. Results show that economic globalization is positively associated to decentralization, particularly in those countries with more regionalist parties and where levels of inequality are lower.

1 | INTRODUCTION

In the last decades, two simultaneous trends have taken place that have changed the nature of the nation-state, namely globalization and decentralization. Power has migrated from central governments upward, with the creation of international organizations, and countries have opened up their economies to more global interdependence and participation in global markets, limiting the room to maneuver of national governments (Hellwig, 2014). According to the KOF indices developed by Dreher (2006), the average globalization levels have increased by 51% between 1970 and 2010. At the same time, there is extensive evidence showing that powers have significantly migrated from central government downward. In their seminal study, Marks,
Hooghe, and Schakel (2008a) show that there has been a marked increase in the level of regional authority over the past 70 years. Of the 42 countries that they analyze for the period 1950–2006, 29 of those countries saw an increase in their levels of regional authority, while 11 saw no change, and only two increased the centralization of authority (Marks et al., 2008a, p. 168). Thus, both phenomena—globalization and decentralization—characterize the evolution of politics in the last decades. Although both unfold at the same time, the literature has not yet provided a clear account of how these two processes are related: Are these two separate processes that just happen to take place at the same time, or is there a systematic relationship between the two of them?

This lack of empirical work is even more flagrant because a review of the theories that connect globalization with the vertical distribution of powers within states points to different, even opposite, expectations. On the one hand, globalization may result in higher levels of fiscal centralization. This is the main argument posed by Garrett and Rodden (2006), who state that if globalization makes countries more vulnerable to external shocks, then we may expect a reinforcement of the mechanisms of macroeconomic stabilization and interregional risk sharing via the enhancement of central government’s fiscal authority (Garrett & Rodden, 2006, p. 278).

Alternatively, globalization may result in higher levels of decentralization (Stegarescu, 2009). This may happen through different mechanisms: allocative efficiency, economic competition, and demands for self-determination. Decentralization may represent a more appropriate institutional context to cope with the increase of competition for capital and foreign investment that result from economic globalization. Yet globalization may also increase demands for self-determination by changing the relative costs and benefits for certain territorial units to continue belonging to a nation-state. In this context, decentralization may emerge as an institutional reform implemented to appease secessionist demands.

This article contributes to providing a better understanding of the relationship between globalization and decentralization in advanced democracies in three ways. First, it introduces a nuanced review of the causal mechanisms that, according to different strands of literature (Public Choice School, Welfare Economics, Secessionism, etc.) may drive the relationship between decentralization and globalization. Second, it provides new empirical evidence on the impact of globalization upon decentralization using a large database and new measures of decentralization and globalization. The empirical relationship between globalization and the territorial organization of the state has been largely overlooked, and empirical comparative work based on a large-N analysis exploring this question has been scarce. Using data from 78 countries for the 1970–2010 period, our empirical analyses show that globalization has a positive effect on decentralization. The effect is very robust to alternative specifications and its magnitude is moderate. Third, we provide some evidence of the contextual conditions that can amplify or mitigate this relationship. More specifically, we find that the relationship between globalization and decentralization is stronger in countries where regionalist parties have a larger parliamentary representation. Likewise, the effect of globalization is weaker (or even works in the opposite direction) in contexts of high regional economic inequality. These conditions point to different political and economic incentives to decentralize when countries are exposed to global economic integration.

The article proceeds as follows: The next section reviews the main political and economic arguments that the literature has provided linking globalization with decentralization. In Section 3, we present the data and methodology that we will use to address the research question and discuss how these relate to previous comparative work. Section 4 presents the main
2 | GLOBALIZATION AND DECENTRALIZATION: A CENTRIFUGAL OR CENTRIPETAL RELATIONSHIP?

The literature on the domestic consequences of globalization is extensive. However, this literature has mostly focused on the impact of globalization on national policies and economic institutions. This literature addresses how states react to globalized competition and global economic interdependence and the main expectation is that, in order to attract capital and be more efficient in the global competition, domestic policies converge in spending cuts, lower taxes, balanced budgets, and a general weakening of the state's productive and redistributive capacity (e.g., Hays, 2003; Marshall & Fisher, 2015). The literature has also extensively studied how national institutions support the convergence process through institutional reforms that promote liberalization (Simmons & Elkins, 2004), introducing flexibility in areas such as labor markets (Mosley & Uno, 2007; Pandya, 2010), or banking (Hellmann, Murdock, & Stiglitz, 2000), among many others.

However, support for this hypothesis is mixed and many have argued that the effect of globalization has been to widen the preexisting differences among advanced capitalist political economies (Hellwig, 2019). There is also literature showing evidence that globalization can actually have the reverse effect. The so-called compensation hypothesis predicts that levels of social spending increase to buffer the exposure to international volatility and shocks of economic globalization (Hwang & Lee, 2014; Leibrecht, Klien, & Onaran, 2011; Meinhard & Potrafke, 2012).

Despite this abundant research on how globalization affects domestic politics, the empirical relationship between globalization and the territorial organization of the state has been largely overlooked. Garrett and Rodden’s (2006) analysis perhaps represents the most relevant work testing the direct relationship between globalization and decentralization with a systematic large-N analysis. These authors conclude that there is a small positive effect of globalization on centralization, although they acknowledge that fiscal centralization need not imply other forms of centralization and that it is compatible with cultural and political autonomy (Garrett & Rodden, 2006, pp. 278, 283). Conversely, Stegarescu (2009) finds an effect in the opposite direction: More economic integration can increase levels of fiscal decentralization. Finally, Martínez-Vazquez and Timofeev (2009) do not find any relevant effect of economic globalization on decentralization.

This empirical uncertainty is also related to ambiguous theoretical expectations. A review of the more specific theoretical literature on the drivers of decentralization reforms and of its associated benefits can point to opposite empirical predictions. One of the reasons why the literature comes up with different expectations on the relationship between decentralization and globalization is that the latter has implications upon multiple dimensions (for instance, inequality, vulnerability to economic shocks or territorial tensions) and each of these dimensions may in turn have different effects upon decentralization or affect the different dimensions of decentralization (fiscal, political) differently. In other words, there are conflicting expectations about what the effect of globalization on decentralization might be, which makes the empirical predictions less straightforward and potentially contingent upon the political or economic context.

In Table 1 we provide a summary of the main theoretical arguments that associate globalization to (de)centralization of power.
The first argument is about globalization increasing jurisdictions' heterogeneity in the demands for public goods. In a globalized context, subnational jurisdictions may interact with a broader range of governmental and nongovernmental actors that participate in the acts of governing (Hueglin, 1999). Higher levels of interdependence between local, regional, national, and international actors may open up opportunities for separated responses, so decentralization may help jurisdictions to respond to interactions in a more differentiated way and according to their specific policy preferences. Decentralization enhances allocative efficiency in a context in which, as a result of globalization and the increasing number of actors, preferences become more heterogeneous. This argument echoes one of the most theorized benefits of decentralization, namely that it brings decisions closer to the preferences of the jurisdiction's population, enhancing allocative efficiency (Oates, 1972). Bringing government closer to the people allows jurisdictions with heterogeneous preferences to manage differentiated demands for public goods by pursuing their own policy and economic strategies (Arze del Granado, Martinez-Vazquez, & McNab, 2018).

The second argument speaks to a recent literature that explores the conditions for subnational jurisdictions to benefit from the globalization of markets. Globalization facilitates access to external sources of finance through economic integration and “as cross-border trade and financial linkages become stronger, and restrictions are removed on international trade and capital flows, subnational governments may have greater access to alternative sources of deficit financing” (De Mello, 2005, p. 2). Borrowing from the Public Choice School (Brennan & Buchanan, 1980) and market-preserving federalism literature (see Qian & Weingast, 1997) we may expect decentralization to contribute to enhance subnational governments’ access to financial markets by promoting a cost-efficient provision of public goods. The mechanism to enhance efficiency in the provision of public goods is competition among jurisdictions: Competition for capital and labor prevents local authorities from pursuing an opportunistic behavior and assures local governments’ fiscal discipline (Filippetti & Sacchi, 2016).

**TABLE 1** Theoretical mechanisms that relate globalization and decentralization

| Argument               | Implications of globalization                                                                 | Benefits of de(centralization)                                                                 | Predicted relationship |
|------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------|
| Allocative efficiency  | Increases heterogeneity in the demand of public goods, due to higher interdependence between governmental and nongovernmental actors | Decentralization allows higher allocative efficiency                                           | Positive               |
| Productive efficiency  | Globalization facilitates access to external sources of finance through economic integration | Decentralization increases higher economic efficiency and enhances fiscal discipline to allow jurisdictions to attract capital | Positive               |
| Ethnic conflict        | Globalization increases the costs and reduces the benefits for minorities to stay in big states | Decentralization allows countries to appease the secessionist demands of ethnic or cultural minorities | Positive (self-rule)   |
| Mutualization of risk  | Globalization increases vulnerability to economic shocks                                       | Centralization of fiscal authority allows for a stronger redistributive role of the central government | Negative               |

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The previous two arguments (allocative efficiency and productive efficiency) have a functionalist nature: Globalization changes the acts of governing in different forms and decentralization may emerge as an institutional reform that allows countries to cope with the challenges posed by the new forms of governance (Jun & Wright, 1996). The third argument is related to the role of decentralization in appeasing territorial conflict in contexts where globalization increases the costs for subnational jurisdictions to remain as part of a big state. Some scholars have argued that under globalization the ideal size of the state decreases because efficiency gains from unification become smaller (Bolton & Roland, 1997). Traditionally, it has been considered that big states provide efficiency gains related to the internalization of markets and defense, while they also involve costs associated with the homogeneity that a centralized state imposes upon heterogeneous populations (Alesina & Spolaore, 1997; Desmet, Le Breton, Ortuño-Ortíñ, & Weber, 2011). When economic integration is low, the size of the country in equilibrium is larger, as bigger countries have bigger markets (assuming that domestic trade is always less costly than international trade). As economic integration increases, the size of the state becomes less important to access larger markets. Where populations are large and diverse, decentralization involves more coordination problems and distance between the average public policy individuals prefer and the actual public policies provided. Using Barro’s (1991) words, as cited in Alesina and Spolaore (1997), “...a large country is also likely to have a diverse population that is difficult for the central government to satisfy.” Hence, as economic integration increases the costs of heterogeneity become more visible and can outweigh the benefits of keeping a larger state together. Pressures to accommodate heterogeneity may result in decentralization reforms as a way to appease conflict among strong cultural or ethnic minorities for whom the costs of staying in a centralized setting are higher.

Globalization may also increase ethnic conflict through its potential asymmetric economic impact across territories. As Sambanis (2006) argues, globalization can have asymmetric shocks in a country and, in large and heterogeneous states with regional ethnic groups, concentrated shocks might intensify conflict between them and the state. The effect of globalization might be conditional on previous levels of conflict. “In those regions where there were positive levels of conflict previously, even if governments try to provide social insurance against globalization-related risks, separatist conflict is likely to increase since the government’s promises and programs are unlikely to be effective or credible” (Sambanis, 2006, p. 224). Thus, the decrease in the efficiency gains associated with large states caused by globalization may spur demands for self-recognition in ethnically and regionally diverse countries (Sambanis & Milanovic, 2011). Political and fiscal decentralization reforms may be implemented as a solution to contain secessionist demands by ethnic minorities. Brancati (2014), however, puts this hypothesis to the test and finds no effect that European economic integration has spurred electoral support for secessionist parties.

Finally, a fourth argument is that the economic effects of globalization may also provide incentives to centralize authority. Higher levels of economic integration may increase a country’s vulnerability to asymmetric regional shocks. These asymmetries may in turn result in reforms aimed at increasing the mutualization of risk through redistribution (Beramendi, 2012). The latter argument—globalization increasing the incentives for centralization of power—is presented by Garrett and Rodden (2006) in their seminal research. They focus on the effect of globalization upon one form of centralization, namely fiscal centralization. These authors state that the institutional response to the increase of economic vulnerability caused by globalization is the creation of mechanisms of macroeconomic stabilization and interregional risk sharing, which involves a more prominent role of the central government in the economy.
through the centralization of fiscal authority. In this case, centralization represents a response to palliate the consequences of globalization upon national economies, although Garrett and Rodden acknowledge that the impact of globalization upon fiscal centralization can be compatible with simultaneous increases in subnational political autonomy (Garrett & Rodden, 2006, p. 282).

In summary, a review of the theoretical mechanisms show that globalization can be both positively and negatively associated with decentralization, although it is the positive correlation that stands out more prominently in a review of the theoretical arguments. In the next sections, we will test the relationship between globalization and decentralization and its contextual conditions using a varied source of data in 78 countries and for the period 1970–2010. The analyses provide an encompassing empirical account of the correlation between economic integration and changes in the vertical distribution of power within states and the contextual factors that may moderate the relationship.

3 | DATA AND METHODS

As we argued in the previous section, the most important contributions to the study of the relationship between decentralization and globalization using a large-N comparative analysis are Garrett and Rodden (2006) and Stegarescu (2009). We advance over previous empirical work by using improved measures of globalization and decentralization; by conducting the analysis over a larger sample of countries and years; and by testing for some of the contextual conditions that may moderate that relationship.

First, we use a different operationalization of globalization. Trade openness and capital account openness have been the standard proxies used to operationalize globalization in early works in the area. However, single measures used as proxies of globalization have been criticized for only tapping into a very specific dimension of the phenomenon (Gygli, Haelg, Potrafke, & Sturm, 2019, p. 544). In this article, we operationalize globalization using the KOF index created by Dreher (2006) and developed further by Dreher et al. (2008), as it combines several variables that measure different aspects of globalization into a single index and has become the most extensively employed index in the literature during the last years. More specifically, we use the updated version of the KOF economic index provided by Gygli et al. (2019), which provides a more nuanced account of economic globalization by distinguishing between trade and financial globalization and differentiating between its de facto and de jure dimensions.

Note that the theoretical arguments presented in Section 2 and summarized in Table 1 are associated to the economic kind of globalization. Two of our arguments (allocative efficiency and productive efficiency) have a functionalist nature, as decentralization emerges as an institutional reform that allows countries to both provide a heterogeneous response to a more varied and increasing interaction with nongovernment actors (allocative efficiency) and increase economic efficiency to allow subnational jurisdictions to attract capital (productive efficiency). The other two arguments (ethnic conflict and mutualization of risk) are also associated to economic openness, which according to “ethnic conflict argument” decreases the benefits for regions of remaining in a big state (so decentralization emerges to prevent ethnic conflict), and in the “mutualization argument” economic globalization is associated to the potential emergence of regionally asymmetric economic shocks (so centralization increases as a way to mutualize risks).
The KOF economic globalization index characterizes globalization as “long distance flows of goods, capital and services as well as information and perceptions that accompany market exchanges” (Dreher, 2006, p. 1092). The index is a composite measure of two subindices: trade globalization and financial globalization. We use the general KOF economic index as the main independent variable. However, as trade and financial openness may have different effects upon some of the theoretical mediating variables between globalization and decentralization (such as economic shocks or interregional inequalities), we also run the analyses separately for the specific components of the general index in order to explore whether the effect varies across different dimensions of economic integration.

A potential limitation of the KOF index, as many other globalization indices, is that it measures globalization at the national level, which overlooks within-country variation in the exposure to and regulation of trade and financial openness and often disregards the geographical distribution of interdependences (Martens et al., 2015, quoted in Gygli et al., 2019, p. 549). National measures of globalization may hinder significant asymmetries in the regional intensity of globalization that are important to understand its impact upon decentralization. However, the advantages of using KOF economic globalization index clearly offset its potential limitations, as it provides data for the largest number of countries and years (it ranges from 1970 to 2010). Descriptive statistics of these indices are presented in Table A.1 in the Appendix S1, alongside all variables employed in the article.

A second empirical advancement of this article over previous analyses in the area is that we explore the association between globalization and the institutional dimensions of decentralization. We operationalize decentralization using Hooghe et al.’s (2016) Regional Authority Index (RAI). This index—initially created by Hooghe, Marks, and Schakel (2008)—measures the authority of regional governments in 81 democracies or quasi-democracies over the period 1950–2010. Regional authority is operationalized along 10 dimensions, so it not only captures the extent to which subnational governments exercise formal authority, but also whether they can effectively exercise those powers (Marks, Hooghe, & Schakel, 2008b). In this article we operationalize decentralization using the RAI index and its two main different components (self-rule and shared-rule). Garrett and Rodden (2006) and Stegarescu (2009) use subnational expenditure and revenues to measure a country’s level of fiscal decentralization. These measures were very popular in the studies on decentralization of the nineties and early 2000s (see, for example, Lane and Ersson (1999), Castles (1999), or Fisman and Gatti (2002), among others). However, as Schakel (2008) argues, fiscal indicators fail to capture subnational authorities’ decision-making powers and they do not differentiate between decision-making authority and subnational powers over policy implementation (Stegarescu, 2005). By using the RAI index we purport to provide a more encompassing operationalization of decentralization.

We estimate three different types of econometric models. First, our main specification is a time series cross-sectional (TSCS) model with fixed effects, in which we explore within-country variation. This model allows us to capture whether changes in levels of exposure to economic globalization are associated with variation in levels of regional authority. Second, we replicate this model using panel-corrected-standard-errors (PCSE) and country fixed-effects, as Beck and Katz (1996) propose. This model corrects for the problems that might arise in panels with time and panel correlated errors. Third, we use TSCS with random effects that allow us to explore between-country variation. These models capture whether countries that are more globalized are also the ones that have higher levels of regional authority, as opposed to within-country increases in (de)centralization that are captured in the fixed-effects models. We also run a series
of robustness checks, described later, by including a first-order autoregressive term and lagged dependent variables.

We also run the models with and without covariates. Although models with covariates represent our baseline specification, by running the models without covariates we can test how parsimonious the results are and show that our results do not depend on the inclusion of a specific set of covariates. This is even more important as we have included a set of covariates similar to Garrett and Rodden’s models. Accordingly, we can more confidently state that any difference between their conclusions and ours is essentially the result of our improved measures of decentralization and globalization and are not driven by the addition of spurious third variables. Specifically, our models include the area of the country, the total population, the urban population, the level of GDP per capita (in its logged form), and a measure of how democratic the country is.6

Finally, the mechanisms whereby globalization may have an effect upon decentralization are processes that may take some time to unfold. In order to capture these dynamics, avoid endogeneity concerns, and show that this is a sequential process, we use a lagged measure of globalization.7

4 THE RELATION BETWEEN ECONOMIC GLOBALIZATION AND DECENTRALIZATION

In this article we explore whether levels of economic globalization, defined as countries’ degree of integration in the global economy, is associated to their level of (de)centralization. Countries might face an institutional dilemma. According to the theoretical arguments reviewed earlier, they may have incentives to decentralize as the devolution of power to smaller units may allow for a more flexible specialization to compete in the global economy, alongside satisfying political incentives for self-determination and demands for secession. Yet the increase in volatility in the global economy might also give national governments incentives to centralize fiscal authority in order to mutualize risks through redistribution. We have remained neutral in terms of which effect can be stronger and left it as an empirical question that we address in this analysis.

Table 2 presents the main results of the article by regressing the Regional Authority Index on the KOF Economic Globalization index. We include the three types of estimations described earlier: TSCS with fixed-effects, panel-corrected-standard-errors with country effects, and TSCS with random effects models. In addition, to show that the results are not driven by the inclusion of specific covariates, we present the results with and without control variables. Finally, as we argued earlier, we expect the effect of globalization to unfold over time, so we introduce the KOF Economic Globalization index in the models with a lag of a year. A lagged independent variable allows us to rule out whether the potential relationship between decentralization and globalization is spurious (due to the fact that the two processes could take place simultaneously due to an omitted variable). In addition, the temporal lag also reduces the risk of endogeneity and reverse causality.8

Results show a remarkable positive effect of globalization upon decentralization: When countries open up and integrate globally, the Regional Authority Index exhibits a significant increase. The effect is robust to the inclusion of fixed effects and covariates. Table 2 shows that the results hold in all specifications. The inclusion of control variables reduces the magnitude of the effect of globalization, but there are no relevant changes in the results between models.
# TABLE 2  Economic globalization and regional authority

|                | (2.1)               | (2.2)               | (2.3)               | (2.4)               | (2.5)               | (2.6)               |
|----------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                | TSCS random-effects  | TSCS fixed-effects  | PCSE + country dummies | TSCS random-effects  | TSCS fixed-effects  | PCSE + country dummies |
| KOF Economic Globalization Index | 0.151*** (0.00642) | 0.152*** (0.00644) | 0.152*** (0.00645) | 0.0379*** (0.00950) | 0.0385*** (0.00957) | 0.0385*** (0.00785) |
| Covariates     | No                   | No                   | No                   | Yes                  | Yes                  | Yes                  |
| Observations   | 2,381                | 2,381                | 2,381                | 1,408                | 1,408                | 1,408                |
| R-squared      | 0.194                | 0.942                | 0.942                | 0.233                | 0.977                | 0.977                |
| Number of countries | 77                   | 77                   | 77                   | 74                   | 74                   | 74                   |

Note: Standard errors in parentheses.

*p < .1.; **p < .05.; ***p < .01.
with and without covariates. The coefficients of the lagged globalization variables suggest that the institutional effects of globalization unfold over a period of time. In other words, changes in the vertical distribution of powers follow after countries open up and integrate in the global economy.

Next, we explore the magnitude of the effect of economic globalization upon decentralization. Figure 1 plots the variation of Regional Authority Index for different levels of Economic Globalization. Based on model 2.5 (TSCS with fixed effects and covariates), Figure 1 exhibits the predicted Regional Authority Index values for a range of economic globalization levels. The effects are highly significant, but of a moderate magnitude: A transition from a country with low levels of economic globalization such as Colombia in 2010 (KOF index = 42, a standard deviation below the sample's mean), to a country with high levels of economic globalization such as New Zealand in 2010 (KOF index = 72, a standard deviation above the sample's mean) predicts an increase in the level of Regional authority of around 1.5. This is equivalent to the differences in the levels of Regional Authority between Australia and Argentina or the United States and Italy in that same year. As previously said, these are modest effects, which acknowledge that decentralization is a complex process that might be caused by a variety of factors, with globalization being just one of them.

The theoretical arguments that connect decentralization with globalization essentially refer to the implications of economic global integration. However, integration can be both in global markets of goods and services or in global financial markets. To explore whether the impact of globalization on decentralization is driven by a specific dimension, Table 3 extends the analyses by using the KOF Trade Globalization index and the KOF Financial Globalization Index. Table 3 shows that both dimensions of economic integration have a significant impact on regional authority. Results seem to support that trade globalization has a somewhat larger impact, as the coefficient is higher, but we cannot conclude that the effect of globalization is channeled through a particular dimension of economic globalization.

To improve the robustness of the results, we run further analyses including autoregressive error terms and a lagged dependent variable. Table 4 displays the first set of robustness checks. Although Fisher tests rule out the presence of unit roots, the table shows that the results are robust to the inclusion of an autoregressive error term. The economic globalization variable keeps its magnitude and levels of significance in all models. Table A.3 in the Appendix S1 also shows that results hold if the series are presented in first differences.
| Dependent variable: Regional Authority Index | (3.1) | (3.2) | (3.3) | (3.4) | (3.5) | (3.6) |
|-----------------------------------------------|------|------|------|------|------|------|
| KOF Economic Globalization (trade) Index | 0.0903*** | 0.0932*** | 0.0932*** | 0.0342*** | 0.0360*** | 0.0360** |
| Covariates | No | No | No | Yes | Yes | Yes |
| Observations | 2,696 | 2,696 | 2,696 | 1,898 | 1,898 | 1,898 |
| R-squared | 0.108 | 0.926 | 1.898 | 0.305 | 0.968 | 0.968 |
| Number of countries | 78 | 78 | 78 | 74 | 74 | 74 |

| KOF Economic Globalization (finance) Index | 0.0765*** | 0.0768*** | 0.0768*** | 0.0201*** | 0.0206*** | 0.0206*** |
| Covariates | NO | NO | NO | YES | YES | YES |
| Observations | 2,619 | 2,619 | 2,619 | 1,869 | 1,869 | 1,869 |
| R-squared | 0.154 | 0.928 | 1.869 | 0.301 | 0.967 | 0.967 |
| Number of countries | 76 | 76 | 76 | 73 | 73 | 73 |

Note: Standard errors in parentheses. 
*p < .1.; **p < .05.; ***p < .01.
### TABLE 4  Models with AR(1)

|                      | (4.1)                  | (4.2)                  | (4.3)                  | (4.4)                  | (4.5)                  | (4.6)                  |
|----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|                      | TSCS random-effects    | TSCS fixed-effects     | PCSE + country dummies | TSCS random-effects    | TSCS fixed-effects     | PCSE + country dummies |
| KOF Economic Globalization Index | 0.0516*** (0.00838)    | 0.0206** (0.00906)     | 0.0496*** (0.00976)    | 0.0330*** (0.00940)    | 0.0248*** (0.00816)    | 0.0214** (0.00972)     |
| AR1                  | Yes                    | Yes                    | Yes                    | Yes                    | Yes                    | Yes                    |
| Covariates           | No                     | No                     | No                     | Yes                    | Yes                    | Yes                    |
| Observations         | 2,656                  | 2,579                  | 2,656                  | 1,898                  | 1,824                  | 1,898                  |
| R-squared            | 0.636                  |                         |                         |                         |                         | 0.843                  |
| Number of countries  | 77                     | 77                     | 77                     | 74                     | 74                     | 74                     |

*Note: Standard errors in parentheses.  
*p < .1.; **p < .05.; ***p < .01.*
Table 5 displays the second set of robustness checks, which introduce the lagged Regional Authority Index. The inclusion of lagged dependent variables does not modify the conclusions of the previous tables. As expected, the size of the coefficient decreases, as the lagged dependent variable absorbs part of the effect of the globalization variable, and the significance of the coefficients also decreases slightly. Nonetheless, levels of significance remain in the fixed-effects and panel-corrected-standard-errors models, and only lose significance in the random-effects models. This reinforces the robustness of the results. We also address the possibility of reverse causality and omitted variable bias in Appendix S1.

Results so far have shown that economic globalization has a positive effect on average levels of regional authority. We now disaggregate our dependent variable and account for the impact of globalization on its two dimensions: self-rule and shared-rule. The self-rule index measures the authority exercised by a regional government exclusively over those who live in its territory, whereas the shared-rule index measures the authority exercised by subnational governments (or their representatives) in the country as a whole (Marks et al., 2008b). While the former captures the level of independent authority of subnational governments to rule over their territory without the interference and participation of the central government (consistent with layer-cake models of federalism such as the American model), the latter captures the ability of regional governments of coexercising power at the national level and getting involved in the national political life. By replicating the previous models using each specific submeasure, we aim to explore separately the effect of globalization upon increasing or decreasing regional authority to self-govern and its effect upon the level of co-decision by subnational authorities.

Table 6 displays the results. The most important conclusion is that we find positive and significant effects of globalization on both dimensions of decentralization. Perhaps this is not very surprising, given that the correlation between the two dimensions (self-rule and shared-rule) is large. However, the magnitude of the effects shows that globalization has a stronger impact on the self-rule dimension than on the shared-rule. This follows from the review of the theoretical arguments, as some of the benefits associated with decentralization—such as allowing subnational governments to manage differentiated demands for public goods or compete for capital—require significant levels of independent subnational authority (self-rule).

5 | TESTING FOR THE CONTEXTUAL CONDITIONS

Once we have shown that there is a robust positive relationship between globalization and decentralization, in this section we explore empirically two variables that may moderate that relationship: demands for regional authority and regional inequalities.

First, and consistent with our theoretical framework, if globalization has an impact on decentralization by spurring self-determination demands, we should observe that globalization has a stronger effect on decentralization in those countries where regionalist demands for authority are more intense. To test this we operationalize demands for regional authority as the electoral vote share of regionalist parties, taken from Teorell et al. (2018). By interacting this variable with the Economic Globalization measure, we will explore whether the effect of globalization upon decentralization is moderated by demands for regional authority. We replicate this interaction in the three models that we have introduced in the previous empirical section.

Second, we test whether economic contextual conditions may moderate the effect of globalization upon decentralization. In the theoretical section we argued that globalization facilitates access to external sources of finance and decentralization could facilitate subnational jurisdictions’
### Table 5: Models with lagged dependent variable

|                      | Dependent variable: Regional Authority Index |
|----------------------|---------------------------------------------|
|                      | (5.1)                                      |
|                      | TSCS random-effects                        |
| KOF Economic Globalization Index | -0.000248                               |
|                      | (0.00152)                                 |
|                      | (5.2)                                      |
|                      | TSCS fixed-effects                         |
|                      | 0.0121***                                  |
|                      | (0.00264)                                 |
|                      | (5.3)                                      |
|                      | PCSE + country dummies                     |
|                      | 0.0121***                                  |
|                      | (0.00153)                                 |
|                      | (5.4)                                      |
|                      | TSCS random-effects                        |
|                      | 0.00288                                   |
|                      | (0.00379)                                 |
|                      | (5.5)                                      |
|                      | TSCS fixed-effects                         |
|                      | 0.00895**                                 |
|                      | (0.00441)                                 |
|                      | (5.6)                                      |
|                      | PCSE + country dummies                     |
|                      | 0.00895*                                  |
|                      | (0.00506)                                 |
| LDV                  | Yes                                        |
| Covariates           | No                                         |
| Observations         | 2,645                                      |
| R-squared            | 0.871                                      |
| Number of countries  | 77                                         |

Note: Standard errors in parentheses.

*p < .1.; **p < .05.; ***p < .01.
**TABLE 6** Globalization and dimensions of regional authority

| Dependent variable: Self-rule Index | (6.1) TSCS random-effects | (6.2) TSCS fixed-effects | (6.3) PCSE + country dummies | (6.4) TSCS random-effects | (6.5) TSCS fixed-effects | (6.6) PCSE + country dummies |
|------------------------------------|--------------------------|-------------------------|-----------------------------|--------------------------|-------------------------|-----------------------------|
| KOF Economic Globalization Index   | 0.123***                 | 0.124***                | 0.124***                    | 0.0537***                | 0.0540***               | 0.0540***                   |
| Covariates                        | No                       | No                      | No                          | Yes                      | Yes                     | Yes                         |
| Observations                      | 2,656                    | 2,656                   | 2,656                       | 1,898                    | 1,898                   | 1,898                       |
| R-squared                         | 0.217                    | 0.921                   | 0.299                       | 0.954                    |                         |                             |
| Number of countries               | 77                       | 77                      | 74                          | 74                       | 74                      | 74                          |

| Dependent variable: Shared-rule Index | (6.7) TSCS random-effects | (6.8) TSCS fixed-effects | (6.9) PCSE + country dummies | (6.10) TSCS random-effects | (6.11) TSCS fixed-effects | (6.12) PCSE + country dummies |
|--------------------------------------|--------------------------|-------------------------|-----------------------------|--------------------------|-------------------------|-----------------------------|
| KOF Economic Globalization Index     | 0.0250***                | 0.0250***               | 0.0250***                   | 0.0108***                | 0.0113***               | 0.0113***                   |
| Covariates                          | No                       | No                      | No                          | Yes                      | Yes                     | Yes                         |
| Observations                        | 2,656                    | 2,656                   | 2,656                       | 1,898                    | 1,898                   | 1,898                       |
| R-squared                           | 0.045                    | 0.915                   | 0.086                       | 0.964                    |                         |                             |
| Number of countries                 | 77                       | 77                      | 77                          | 74                       | 74                      | 74                          |

*Note: Standard errors in parentheses.*

*p < .1.; **p < .05; ***p < .01.*
access to capital by promoting higher economic efficiency and competition. Yet globalization may also expose countries to a more volatile economic environment and provide incentives for centralization of fiscal authority that allows for a redistributive mechanism to be implemented. Accordingly, we expect the relationship between globalization and decentralization to be moderated by the country's potential regional economic vulnerability. Globalization might provide certain benefits that are better achieved if territorial inequality is low. However, the positive effect of globalization upon decentralization should be mitigated where levels of regional inequality are high, as regional inequalities may increase the need for centralized redistributive institutions (and in turn for centralized fiscal authority).

To test this second contextual argument we include in our econometric models Selway's measure of cross-cuttingness between income and geography (income–geography overlap). This measure was developed by Selway (2011) using survey data and it captures the extent to which the income cleavage overlaps with geography in each country. We use this variable as a proxy of regional economic inequality: When the index score is low it means that the distribution of income is independent from the territory (so regional inequality is low), whereas the index score is high if income and geography cleavages overlap, meaning that the distribution of income is not independent from geography (so regional inequalities are more pronounced). Income is correlated with demand for social spending, and this is why we use Selway's measure to operationalize regional variation in demand for social policy and redistribution. In this case, as the variable is time-unvarying, we cannot run models with fixed effects, so we run the panel-corrected-standard-errors (without unit effects), and a cross-sectional time-series feasible generalized least squares (FGLS) regression, alongside the TSCS random-effects model that we have already been using in previous analyses.

Table 7 displays the results of the empirical test of the contextual arguments. In the panel above, it can be seen that the interaction between globalization and regionalist vote is positive and significant across the six models. As the interactions do not show the significance for different levels of the independent variable (Brambor, Clark, & Golder, 2006), Figure 2 presents the marginal effect of globalization for different values of regionalist vote share (simulations taken from model 7.5). It can be seen that globalization has a positive impact on decentralization across the whole range of regionalization levels. The default effect of globalization is positive, even in contexts with low levels of regionalism. However, as regionalist vote increases, the positive impact of globalization upon decentralization is amplified. On average, the effect of globalization upon decentralization is twice as much in a country where regionalist parties are strong compared to one where there are no regionalist parties.

Table 7 also displays in the panel below the models that include the interactions of the income–geography overlap variable with the globalization measures. The interactions between regional inequality and globalization is negative and highly significant in the fixed effects and the time series cross-sectional models (only the random-effects models yield insignificant effects). This result provides indicative evidence that in contexts of high levels of regional inequality globalization is associated to centralization.

Following again Brambor et al.’s (2006) guidelines, in Figure 3 we plot the marginal effect of economic globalization for the whole range of regional inequality values (model 7.10). It can be seen that, consistently with the theoretical expectations, if regional inequality is low (when the income–geography overlap is low) globalization does encourage decentralization. However, as inequality increases, the effect changes. In contexts with high levels of inequality, globalization is negatively associated to decentralization, a finding that corresponds with the expectation that where regional inequalities are high, countries will have more incentives to centralize fiscal
authority in order to alleviate the potential negative economic effects of globalization. The results provide a more nuanced picture of the impact of globalization on decentralization: Depending on levels of regional inequality, global economic integration is associated to centrifugal, but also centripetal, dynamics. Beramendi's work (2007, 2012) has provided evidence showing that interregional inequality may result in the development of more decentralized systems of redistribution, so the empirical findings of the article suggest that further empirical research is needed to provide a more nuanced account of the relationship between globalization, regional inequalities and decentralization.

| Dependent variable: Regional Authority Index | (7.1) | (7.2) | (7.3) | (7.4) | (7.5) | (7.6) |
|---------------------------------------------|-------|-------|-------|-------|-------|-------|
| Economic globalization                      | 0.132*** | (0.00711) | 0.133*** | (0.00711) | 0.133*** | (0.00514) | 0.126*** | (0.0130) | 0.130*** | (0.0130) | 0.130*** | (0.0123) |
| Regionalist parties vote share              | −0.744*** | (0.161) | −0.741*** | (0.162) | −0.741*** | (0.116) | −0.574*** | (0.158) | −0.576*** | (0.157) | −0.576*** | (0.118) |
| Interaction                                 | 0.00842*** | (0.00214) | 0.00838*** | (0.00215) | 0.00838*** | (0.00157) | 0.00765*** | (0.00208) | 0.00774*** | (0.00208) | 0.00774*** | (0.00159) |
| Covariates                                  | No | No | No | Yes | Yes | Yes |
| Observations                                | 1,153 | 1,153 | 1,153 | 878 | 878 | 878 |
| R-squared                                   | 0.304 | 0.971 | 0.295 | 0.979 |
| Number of countries                         | 35 | 35 | 35 | 35 | 35 | 35 |

| (7.7) | (7.8) | (7.9) | (7.10) | (7.11) | (7.12) |
|-------|-------|-------|-------|-------|-------|
| TSCS random-effects                         | Economic globalization | 0.328*** | (0.0515) | 0.328*** | (0.0330) | 0.175*** | (0.0248) | 0.399*** | (0.0596) | 0.399*** | (0.0309) | 0.102*** | (0.0244) |
| PCSE  | Income-geography overlap | −17.41 | (17.81) | −17.41* | (9.509) | −71.95*** | (27.99) | 71.19*** | (20.50) | 71.19*** | (9.063) | −37.29 |
| FGLS  | Interaction               | −1.228*** | (0.307) | −1.228*** | (0.174) | −0.0962 | (0.143) | −1.698*** | (0.336) | −1.698*** | (0.148) | −0.204 |
| Covariates                                  | No | No | No | Yes | Yes | Yes |
| Observations                                | 2,139 | 2,139 | 2,139 | 1,536 | 1,536 | 1,536 |
| R-squared                                   | 0.228 | 0.443 |
| Number of countries                         | 60 | 60 | 60 | 58 | 58 | 58 |

Note: Standard errors in parentheses. 
*p < .1.; **p < .05.; ***p < .01.
SUMMARY AND CONCLUDING REMARKS

Globalization and decentralization probably represent the most important sources of transformation of the nation-state during the last decades. Power has migrated from central governments upward, with the creation of international organizations and economic integration, as well as downward, with the worldwide devolution of decision-making powers to regional and local governments. Although these two processes have unfolded simultaneously, the literature has not yet provided a clear account of how they are related: Do they just happen to take place at the same time or is there a systematic relationship between the two of them? This article examines this question by providing a systematic theoretical review of the arguments that connect globalization with (de)centralization and by developing an encompassing empirical analysis of the relationship between the two. In doing so, it contributes to advancing a literature in which the empirical comparative work has been scarce.

Using data from 78 countries for the 1970–2010 period, our empirical findings show that integration in global markets encourages a process of institutional adaptation whereby countries are more likely to devolve decision-making powers to regions. Second, we have explored empirically the contextual conditions whereby globalization can yield the aforementioned

**FIGURE 2** Average marginal effect of economic globalization on regional authority by regionalist vote share

**FIGURE 3** Average marginal effect of economic globalization on regional authority by income-geography overlap
results. We find that while regionalism and ethnic diversity can spur demands for decentralization in the face of globalization, high levels of (regional) inequality can actually generate the reverse effect, as inequality is associated to more centralized territorial structures.

Further research can build on the results presented here and expand the theoretical and empirical analysis in several ways. First, future theoretical work should try to provide a more systematic and parsimonious account of the different ways in which globalization might be related to decentralization, including a separate set of mechanisms for each type of decentralization (political vs. fiscal) and different dimensions of economic globalization. Second, further empirical tests of the theoretical mechanisms would help us to have a better understanding of whether, for instance, it is allocative efficiency or productive efficiency which drives the positive relation between globalization and regional authority.

Third, in our analysis we have tested separately two contextual variables—the demand for regional authority and regional inequalities—as moderating variables of the effect of globalization upon decentralization. Yet further analysis could explore the way in which both variables reinforce each other. Additional contextual and institutional variables that can amplify or mitigate the effects of globalization on the territorial structure of the state could also be explored in future work. Of particular interest would be the analysis of the effects of the so-called Great Recession upon decentralization in a context of hyperglobalization, as qualitative analyses show that the economic crisis has resulted in the recentralization of certain policy areas and the establishment of limits to subnational units’ deficit and debt.

Altogether, this article has shed light on the relationship between two of the most important processes of the last four decades in world politics. States have increasingly integrated in global markets, allowing power to either migrate to international organizations or simply to be constrained by international economic dynamics. At the same time, many countries have transferred power downward and increased fiscal authority of regional governments. This article has shown that globalization and decentralization are more than just two simultaneous processes that unfold during the same period. They are two dynamic processes that are positively correlated.

ACKNOWLEDGMENTS
We would like to thank the editors of Governance, the guest editors of the special issue, as well as the reviewers for their comments that have allowed us to improve the article. We also thank the Spanish Ministerio de Economía, Industria y Competitividad for generous funding through grant CSO2017-82881-R.

ENDNOTES
1 The average KOF globalization index was 39.74 in 1970 and 60.11 in 2010, on a scale from 0 to 100.
2 These authors do find an effect of social globalization on decentralization.
3 Even without the requirement of heterogeneity, evidence shows that as societies have become more affluent and states have grown, regional authority has also increased (Hooghe & Marks, 2016).
4 Their argument echoes Katzenstein’s (1985) foundational study on small states in open economies, which states that globalization was made politically possible in small democracies because their response to globalization was a system based on cooperation, centralized politics and generous social protection.
5 Trade globalization aggregates de facto trade globalization, which measures the exchange of goods and services over long distances (exports and imports of goods and exports and imports of services, both measured as a share of GDP) and de jure trade globalization, which captures policies that promote trade exchange between countries. Financial globalization encompasses de facto financial globalization measured by capital flows and
stocks of foreign assets and liabilities and de jure financial globalization, measured by the openness of a country to international financial flows and investments (Gygli et al. (2019)).

6 We take this variable from Teorell et al. (2018), which combine Freedom House and Polity indices and create a democracy measure that ranges from 0 to 10.

7 Tests using the STATA command varsoc that provide the Akaike Information Criterion (AIC), the Schwartz-Bayesian Information Criterion (SBIC), the final prediction error (FPE), and the Hannan and Quinn information criterion (HQIC) show overwhelmingly that for most panels the most efficient structure is to use one lag. Notwithstanding this, we have run robustness tests using larger lags, such as five and 10 years, that would capture an impact of globalization on decentralization that takes longer to deploy its effects, and the results remain significant.

8 In Appendix S1, we explore further the causality concerns. We run an instrumental variable analysis where we use as instruments of globalization the geographic distance to London and the British colonial past. Results remain robust to this specification.

9 In both cases we use the “de facto” versions. For more details, see Gygli et al. (2019).

10 Dickey-Fuller tests reported in Appendix S1 (Table A.2) reject the null hypothesis of all panels containing unit roots.

11 The correlation is 0.67 for the sample of our analysis.

12 The results are robust to the use of electoral share of ethnic parties or ethnic fractionalization.

13 Selway’s index is in fact a measure of cross-cuttingness between income and geography. In other words, the original variable measures, in a range from 0 to 1, the extent to which the distribution of income is independent from the geographic distribution of citizens. To ease the interpretation, we have taken the additive inverse of the measure (1-crosscuttingness) to have a measure of overlap between both.

REFERENCES

Alesina, A., & Spolaore, E. (1997). On the number and size of nations. The Quarterly Journal of Economics, 112(4), 1027–1056.

Arze del Granado, F. J., Martinez-Vazquez, J., & McNab, R. M. (2018). Decentralized governance, expenditure composition, and preferences for public goods. Public Finance Review, 46, 359–388.

Beck, N., & Katz, J. N. (1996). Nuisance vs. substance: Specifying and estimating time-series-cross-section models. Political Analysis, 6, 1–36.

Beramendi, P. (2007). Inequality and the territorial fragmentation of solidarity. International Organization, 61(4), 783–820.

Beramendi, P. (2012). The political geography of inequality: Regions and redistribution. Cambridge University Press.

Bolton, P., & Roland, G. (1997). The breakup of nations: A political economy analysis. The Quarterly Journal of Economics, 112(4), 1057–1090.

Brambor, T., Clark, W. R., & Golder, M. (2006). Understanding interaction models: Improving empirical analyses. Political Analysis, 14, 63–82.

Brancati, D. (2014). Another great illusion: The advancement of separatism through economic integration. Political Science Research and Methods, 2(1), 69–95.

Brennan, G., & Buchanan, J. M. (1980). The power to tax: Analytic foundations of a fiscal constitution. Cambridge University Press.

Castles, F. G. (1999). Decentralization and the post-war economy. European Journal of Political Research, 36(1), 27–53.

de Mello, L. R. (2005). Globalization and fiscal federalism: Does openness constrain subnational budget imbalances? Public Budgeting & Finance, 25(1), 1–14.

Desmet, K., Le Breton, M., Ortuno-Ortín, I., & Weber, S. (2011). The stability and breakup of nations: A quantitative analysis. Journal of Economic Growth, 16(3), 183–213.

Dreher, A. (2006). Does globalization affect growth? Empirical evidence from a new index. Applied Economics, 38, 1091–1110.

Dreher, A., Gaston, N., & Martens, P. (2008). Measuring globalization: Gauging its consequences. New York: Springer.
Schakel, A. H. (2008). Validation of the regional authority index. *Regional and Federal Studies, 18*(2–3), 143–166.

Selway, J. S. (2011). The measurement of cross-cutting cleavages and other multidimensional cleavage structures. *Political Analysis, 19*(1), 48–65.

Simmons, B. A., & Elkins, Z. (2004). The globalization of liberalization: Policy diffusion in the international political economy. *American Political Science Review, 98*(1), 171–189.

Stegarescu, D. (2005). Public sector decentralization: Measurement, concepts and recent international trends. *Fiscal Studies, 26*(3), 301–333.

Stegarescu, D. (2009). The effects of economic and political integration on fiscal decentralization: Evidence from OECD countries. *Canadian Journal of Economics/Revue Canadienne d’Économique, 42*(2), 694–718.

Teorell, J., Dahlberg, S., Holmberg, S., Rothstein, B., Pachon, N. A., & Svensson, R. (2018). *The quality of government standard dataset, version Jan18*. The Quality of Government Institute: University of Gothenburg.

**SUPPORTING INFORMATION**

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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**How to cite this article:** Jurado I, León S. Economic globalization and decentralization: A centrifugal or centripetal relationship? *Governance*. 2020;1–22. [https://doi.org/10.1111/gove.12496](https://doi.org/10.1111/gove.12496)