Import Competition and Policy Diffusion

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Abstract: The existing literature often assumes that the target of global interstate economic competition is the overseas market, that is, the markets in third, export destination countries. However, for many countries, domestic industries also compete fiercely for domestic market shares with imports from other countries in the world. Such import competition creates policy diffusion between a country and its import competitor countries. Such policy diffusion can be observed in policy areas that affect production costs of domestic industries. We focus on import competition’s effect on social welfare policies in developing countries and test our theory in two broad types of policies: social insurance spending and progressive social spending. We find strong evidence for import-competition-induced policy diffusion in both policy areas. Moreover, in the case of social insurance, the effect of policy diffusion is mediated by the strength of labor, suggesting that strong labor is more capable of blocking welfare retrenchment policies.

Key words: import competition, welfare state, social policies, policy diffusion, developing countries.

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Introduction

Recent policy diffusion literature views decisions about policy changes as interdependent decisions that are taken within a group of countries. Lately, scholars have made important efforts to engage in general theoretical discussion on the mechanisms of policy diffusion.¹ For instance, Elkins and Simmons identify two types of diffusion mechanisms: first, adaptation to altered conditions, that is, those for which another’s adoption alters the value of the practice; second, learning, that is, those for which another’s adoption provides information.² Simmons, Dobbin, and Garrett further elaborate on causal mechanisms and emphasize coercion, competition, learning, and emulation among states as channels of policy diffusion.³ Franzese and Hays include migration wherein components of some units move directly into others and generate direct and mechanical interdependence.⁴

In this paper, we focus on a particular type of competition mechanism: this is a policy diffusion mechanism that has been overlooked by the existing literature, which often assumes that the target of global competition among states is the overseas market, that is, markets in third, export destination countries. We posit that for many countries, domestic industries also compete fiercely for their own domestic market shares with imports from other countries. Such import competition creates policy interdependence between a country and its import competitor countries. Our conceptualization of import competition differs from that of the existing literature, which measures the levels of import competition as the amount of foreign imports. Instead we focus on the concept of structural similarity. This is, the idea that two countries are in competition if they sell same products to the same market. According to our conceptualization, a country i’s import competitor country j is a country whose firms directly compete for domestic market in country i across a portfolio of market sectors. Structural similarity between country i and j makes them competitors, because from the perspective of buyers in country i’s market, they are substitutable.

We posit that this import-competition-induced policy diffusion might be observed in policy areas that directly affect production costs of domestic industries, such as social protection and welfare spending. One country’s policy change aiming at improving competitiveness is likely to be reciprocated thanks to this competition mechanism. Theoretically, we focus on key actors’ policy preferences across both factor and sector lines to analyze cleavages around social protection policies. Empirically, we test our theory by examining two broad types of policies: social insurance spending and progressive social spending (health, education, and housing).

Using a panel of 67 developing countries between 1977 and 2004, we find strong evidence for import competition induced policy diffusion in both types of spending. This finding makes an important contribution to the existing literature as it shows that international trade can not only be conceptualized as a given amount of commercial flows and exposure to income risks,⁵ but also as a channel for the diffusion of social policy. Spending in social protection in a given country is a direct consequence of its import competitors’ social spending choices. Interestingly, in the case of social insurance, the effect of policy diffusion is mediated by the strength of labor: the effect of policy diffusion disappears when labor power is high enough. We suspect that this is because such strong labor is more capable of blocking welfare retrenchment policies. An important implication from this result is perhaps that deeply entrenched labor organizations are able to insulate domestic social protection from global trends of welfare retrenchment.
An Overlooked Competition Mechanism of Policy Diffusion

Approaches to the diffusion of traditional forms of social protection and welfare policies have looked at a wide variety of mechanisms such as coercion, learning, and emulation. Social policy changes in developing countries, such as the historical emergence of social security programs, pension privatization, and the newer adoption of conditional cash transfers, are all found to follow robust geographic patterns of diffusion among countries. Our research complements this extant literature by looking at social security and welfare policy diffusion resulting from a particular form of the trade competition.

Indeed, for many, competition in the global market is one of the most important factors that drive domestic policies today. However, how to capture the effects of such competition is not always an easy question. The field has come a long way from simply using trade openness measures (e.g., sum of imports and exports as a percentage of GDP) to measuring countries’ network positions in the global trade network that drive policy interdependence among countries competing for the same export markets. In this section, we review such development in the conceptualization of trade competition and explain why we should also pay attention to the competition between domestic, import-competing industries and foreign competition that both target the focal country’s domestic market.

From Trade Openness to Trade Competition for External Markets

Studies that focus on globalization and its implications are now legion. In order to gauge the extent to which a country is subject to the pressure of globalization, the first step has been made by incorporating variables from the international level to models of domestic political and economic processes. It is a common practice in the literature to summarize the economic forces of globalization by an estimate of a country’s overall trade exposure to the global market. Trade exposure is conceptually important as it reflects the actual and perceived economic conditions and levels of insecurities associated with the vagaries of the global market which, in turn, affect the chances to unleash changes through domestic political processes.

However, this is also an undifferentiated way to conceptualize the forces of globalization. It misinterprets one key aspect of global competition faced by nation states: governments do not merely examine indicators of overall trade exposure and adjust policies accordingly; they are often also sensitive to their specific export markets and key competitors in the global market. For instance, from the perspective of South Asian countries, such as India and Pakistan, the lifting of textile-import quotas in Europe and America at the beginning of 2005 brought less of an opportunity than it brought a potential loss of market share to a newly unfettered competitor, China. For developing countries the textile and clothing industries are important. However, competition among these peers is fierce. China, India, Pakistan, and other textile/clothing-exporting countries are often engaging in a “race.” These states closely watch one another and any policy effort in one country to reduce production costs, thereby increasing competitiveness, is likely to trigger similar moves in other countries.

Recent studies in international relations have discovered the logic of externalities of national economic policy-making. One country’s policy decision alters the costs and benefits of the policy for others, either materially through direct economic competition or
ideationally through the subjective pressures of prevailing global norms. From this perspective, the behavior of each country is defined or influenced by a subset of countries to which it is most closely related. Competition is one of the key mechanisms that drive the diffusion of norms, rules, and organizational practices. Competition here refers to policy interdependence stemming from peer pressures between countries competing with each other. Simmons and Elkins, discussing the globalization of liberalization, argue that governments’ liberalization policies will be influenced by the policies of their most important foreign economic competitors. When competing in the international market, countries targeting the same sources of foreign investment and the same overseas markets are facing a collective action problem as they all desire to be competitive — actually more competitive than their major contenders. States often have strong incentives to adopt efficiency-mandated economic policies and institutions to gain advantages over competitors. Other countries respond by going even further in that direction.

**Competition for Domestic Markets and Policy Diffusion**

In previous research, trade competition is often conceptualized as most likely to happen among countries targeting the same overseas markets. In the previous example of trade competition in the textile industry, the very definition of trade competitor countries is about the extent to which these countries all target overseas markets in Europe and North America. Export competition, that is, the conceptualization of trade competition as one for external markets, is important because with globalization, more and more countries become outward-looking and compete in the global market. However, it overlooks the fact that for many countries, domestic markets are the key to the success of many domestic firms. In addition to export competition, import competition, that is, the competition for domestic markets with foreign firms, should also play an important role in businesses’ daily life and related domestic politics.

<table>
<thead>
<tr>
<th>Country A</th>
<th>Country B</th>
<th>Import-competing firms</th>
<th>Exporting firms</th>
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<tbody>
<tr>
<td>Import-competing firms</td>
<td>no competition</td>
<td>import competition</td>
<td></td>
</tr>
<tr>
<td>Exporting firms</td>
<td>import competition</td>
<td>export competition</td>
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</table>

In order to illustrate the difference between export and import competition, we choose a very simple setting with two countries A and B; each country has two types of firms: import-competing (which mainly sell products in the domestic market) and export-oriented (those targeting overseas markets). Interactions between these industries in two countries are summarized in Table 1. Previous policy diffusion literature has been mainly focusing on the lower-right cell of the table, that is, export competition between export-oriented firms from both countries (for markets in other countries). However, it is easy to see that competition could also occur in the lower-left and upper-right cells of the table in which one country’s export-oriented firms enter the other country and compete directly with that country’s import-competing firms. This is what we call “import competition” and we argue it is a competition mechanism that potentially causes policy diffusion between countries.

Our conceptualization (and therefore variable operationalization) of import competition is different from those in the existing literature. How foreign imports affect
various aspects of domestic economy has been a major question for students of international trade. For instance, Autor et al., studying effects of Chinese imports on the US market, find that rising imports from China cause higher unemployment, lower labor force participation, and reduced wages in local labor markets that house import-competing manufacturing industries.\textsuperscript{20} Ex post measures of import competition are often used for such recent studies of import competition: these are various measures of domestic shares of foreign goods. For example, Iacovone et al. use the actual market share gains of Chinese exporters between 1998 and 2004 to capture import competition from China.\textsuperscript{21}

Such measures and conceptualizations of import competition are important. However, they overlook the potential policy interdependence aspect of import competition. For instance, if Chinese government and exporting firms reduce production costs by cutting social wages for Chinese labor, one potential result would be an increased level of import competition from China as reflected in increased market shares of Chinese products in countries such as Mexico: note this increase in market shares will be captured by the \textit{ex post} types of import competition measures. However, this change in market share might not happen at all if the Mexican government and firms react to such policy changes in China fast enough. For instance, the government observes policy changes in China and makes preemptive policy responses, for example, by following suit in social welfare retrenchment in Mexico. Import competition happens in this case and yet we might not be able to observe market share gains of Chinese exporters thanks to preemptive measures by the Mexican government. The \textit{ex post} types of import competition measures simply cannot pick up such interdependent policy making processes.

Our conceptualization of import competition aims exactly at capturing such strategic interactions. For a given country \textit{i}, we identify its import competitor countries by looking at those countries that directly compete with country \textit{i}’s domestic, import-competing firms. We focus on the concept of structural similarity, the idea that two countries are competitors if they sell same products to the same market. According to our conceptualization, a country \textit{i}’s import competitor country \textit{j} is a country whose firms directly compete for domestic market at \textit{i} across a portfolio of market sectors. Structural similarity between country \textit{i} and \textit{j} makes them competitors, because from the perspective of buyers in country \textit{i}’s market, they are substitutable. Our conceptualization of import competition, therefore, can be referred to as import competition by structural similarity. The \textit{ex post} measures can be referred to as import competition by volume. In the rest of the paper, for simplicity, we use the term import competition generally to represent import competition by structural similarity.

\textit{Import Competition and Social Policies}

Domestic firms targeting domestic markets are sensitive to import competitor countries’ policy changes that might enhance rival foreign firms’ competitiveness. Note that the first response from the import competing sector often is for the government to use tariffs and/or non-tariff barriers to protect the domestic market from foreign competition. Such protection policies benefit domestic-oriented firms as they secure their market shares. However, the costs of implementing those policies are often prohibitive. First, foreign firms might lobby their government to retaliate. Second, in a globalized economy, tariffs and/or non-tariff barriers become more and more costly, both economically and politically, especially for developing countries that reply on the global market for capital
and technologies. Third, for GATT/WTO member states, such protection measures are often simply unjustifiable under the norm of free trade and can trigger sanctions from the free trade regime. On the other hand, policy changes in social welfare policies might be another way to respond to enhanced foreign competition. Welfare retrenchment in other countries can provide a strong justification for domestic business interest groups to lobby for similar policy changes. It is likely that one country’s social welfare policies are affected by those of its import competitor countries.

Note that two logics of social policy diffusion due to import competition may be at play. First, market actors may have specific knowledge of the labor cost in their import competitor countries. After having observed welfare retrenchment in competitor countries, they could demand domestic policy change accordingly. Alternatively, policy diffusion may result from a market-based mechanism rather than direct observation. For instance, an import competitor country implements retrenchment and becomes more competitive in one country’s domestic market. As a result, domestic firms from that country lose their shares in the domestic market, which might incentivize them to pressure the government to retrench the welfare state in order to stay competitive. However, both logics suggest the same underlying story: import competition is a channel for the international diffusion of social policy.

We assume, for simplicity, that government aggregates societal interests as well as the preferences and strength of relevant interest groups determine policy outcomes. Table 2 shows the relevant actors in our model and their preferences towards two different types of policy response to import competition. Note that we label various policy instruments (e.g., tariffs, non-tariff barriers, and subsidies) aiming at direct trade protection as protectionist policies and those that reduce social provisions (in order to reduce production costs) as welfare retrenchment policies. We distinguish two sectors of the economy: exporting vs. import competing. We consider the preferences of the labor and the capital in both sectors.

Traditional economic theories make different predictions about the trade policy preferences of different groups. The choice is often between a factor- and a sector-based model. Stolper-Samuelson theorem implies that capital comprises a single, class-based interest group opposing labor. Preferences towards free trade depend on factor endowments of the economy with the abundant factor of the production preferring free trade and the scarce factor opposing it. A competing model of trade preferences, the Ricardo-Viner model, assumes that factors of production are immobile within a country and cannot shift from a losing to a winning sector, so that both labor and capital within an industry either gain or lose jointly as a result of changing level of trade openness. Business and labor in the import-competing sector tend to oppose opening together, while both actors within the export sector generally support further liberalization.

Note, however, that in these economic theories of trade preferences, the actors’ choice is whether to welcome free trade or not. Our research question is different: we explore the preferences of labor and capital both in the exporting and import-competing sectors of the economy with regard to different policy instruments when facing import competition. The import-competing sector is directly affected by import competition as its firms lose market shares to foreign firms. The exporting sector is also involved because of the potential effects of different policy instruments: for instance, protectionist policies benefit import-competing firms; however, they might hurt exporting firms as foreign countries targeted by such protectionist policies are likely to retaliate. Here, we expect a sectoral difference in the preferences towards protectionist policies. Moreover, as protectionist policies are becoming less and less viable given potential retaliations and
WTO rules, other options to deal with import competition become more important. Some domestic actors might have preferences towards reducing production costs, including reducing social wages and labor social welfare. Indeed, it is likely that capital in both import-competing and exporting sectors prefer such policy changes while labor in both sectors opposes such changes.

If a sector-based model characterizes political coalitions facing import competition, we expect to see conflict between import-competing and exporting sectors. Note here that within both sectors, labor and capital disagree on welfare state retrenchment as a policy response to import competition, because such policies in general hurt labor while benefiting capital. Therefore, it is unlikely that a unified capital-labor coalition in either import-competing or exporting sector would agree to cut welfare spending. Preferences towards trade protectionist policies of capital and labor in the same sector, on the other hand, are the same. The capital-labor unified coalition in the exporting sector is against trade protectionist policies, while the coalition in the import-competing sector supports such policies. If a sector-based model applies, even though other countries’ welfare policy changes increase their competitiveness and import competition for a country \(i\), we would not be able to observe policy interdependence in social welfare policies between country \(i\) and its import competitor countries, because in country \(i\), responses in social policies introduce disagreements between capital and labor within the same sector of the economy.

<table>
<thead>
<tr>
<th>Table 2: Preferences of labor and capital across two sectors.</th>
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<tr>
<td><strong>Labor</strong></td>
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<tr>
<td>Exporting against protectionist policies</td>
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<tr>
<td>against welfare retrenchment policies</td>
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<tr>
<td>Import competing</td>
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<td>against welfare retrenchment policies</td>
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On the other hand, if a class-based model characterizes political coalitions facing import completion, we observe classical labor-capital conflicts: capital in exporting sector is against protectionist policies, but welcomes welfare retrenchment policies; capital in import-competing sector prefers protectionist policies, but they also welcome welfare retrenchment policies — the common ground for capital in both sectors is welfare retrenchment. The preference aggregation process for labor is more complicated. Labor in exporting sectors, fearing retaliation from other countries, is against protectionist policies; As described above, they are also against welfare state retrenchment. Likewise, labor in import-competing sectors opposes welfare state retrenchment; but they are in favor of protectionist policies. In other words, to the extent that labor as a political coalition is not completely dominated by members of the import competing sector, protectionist policies are unlikely to be a preferable policy response for labor in both sectors. At the same time, labor would oppose any attempt of the capital to reduce welfare provisions. Whether such opposition from labor would succeed so that we would not be able to observe policy interdependence caused by import competition in social policies, we argue, is a function of the relative strength of labor.

Whether a sector or a class-based model better captures potential political coalitions is both a theoretical and empirical question. In essence, the complication for us is that the distributive effects of social welfare policies are added into the equation. Both sector- and class-based models only consider the distributive effects of free trade as they affect the preferences of actors. On the other hand, most of the political economy models of
welfare state retrenchment implicitly assume that conflicts between labor and capital therefore are class-based models. As we discussed earlier, for a number of reasons, protectionist policies have become less and less viable for actors in developing countries to pursue. Therefore, to the extent that social welfare policy instruments have become more and more salient when responding to import competition (in other words, to the extent factor-based model applies here), we argue that:

1) one country’s social welfare policies are positively associated with those of its import competitor countries;
2) such policy diffusion is conditional on the relative strength of labor in the country because labor is against using welfare retrenchment as the policy response to import competition;

If, on the other hand, a sector-based model better captures reality, we should observe no policy diffusion in social policies as a function of import competition. In other words, we would not be able to observe 1) and 2) from the empirical analysis. Note that our theoretical preferences towards a factor-based model are based on our observations that sector-based, trade protectionist policies (e.g., tariffs and non-tariff barriers) have become less and less viable given the overall trend of economic liberalization: in an extreme case where trade protectionist policies are ruled out by an open economy assumption, our model would predict 1) and 2) directly.

Moreover, to the extent that the applicability of a factor-based vs. a class-based model is also a function of factor mobility in the economy as illustrated by early research, we should more likely to observe 1): import competition induced policy diffusion in social protection and 2): such diffusion conditioned by labor power, as predicted by a class-based model, when factor mobility is high.

Finally, we expect that our theory holds for developing country contexts only. Unlike Varieties of Capitalism accounts, we assume that the welfare state provides no competitive advantage. Furthermore, our argument predicts positive welfare state interdependence, meaning a race to the bottom in developing countries. While we assume workers’ preferences are identical in both LDCs and OECD countries (they demand for compensation to trade and welfare benefits), we also assume that capital is different from one region to another. Developing countries compete in low-wage low-production costs and business sectors do not see a productive benefit from social policy. In this regard, social spending may harm external competitiveness in developing countries, both in import-substituting economies and low-wage producers. Even if the welfare state has positive effects on competitiveness, these effects are dominated by the incentives of price competition. Thus, unlike capital in developed countries, capital in LDCs finds welfare states less attractive because the benefits from the productive features of social policy are less pronounced. Thus, capital and labor have opposite preferences toward the social policy in developing countries. In a developing country context, we assume that for capital, welfare state retrenchment (not expansion) is an alternative to protectionism to face the harm of import competition. In other words, our theory assumes capital against welfare in LDCs. Therefore pooling all developed and developing countries would confound different causal mechanisms regarding social protection interdependence through import-competition.

Data and Methods
Social Insurance and Progressive Social Spending

We test the import competition hypothesis in a panel of 67 developing countries between 1977 and 2004. In this paper we focus on two different welfare-state related dependent variables: social insurance spending and progressive social spending, both as a percentage of GDP. Social insurance covers government spending allocated to social security and welfare programs. A common criticism of using expenditure-based measures of the welfare state is that they do not capture questions of policy design that are politically salient and distributionally divisive. For the purposes of our study, however, it is the economic burden of social insurance that may play an important role in import competition. Our results are comparable with previous contributions in the study of economic globalization and social spending in developing countries employing expenditure-based measures as dependent variables. The great bulk of social insurance spending in developing countries comes from contributory-based programs, where workers’ benefits are tied to contributions from the part of capital and labor.

Figure 1: Trends of social insurance and progressive social spending in LDCs

![Figure 1](image)

*Notes: Vertical lines depict the 95% CIs for the level of social insurance and progressive social spending in LDCs.*

Our second dependent variable is what Albertus & Menaldo have called “progressive social spending”. The measure aggregates government expenditures on education, health, and housing as a percentage of GDP. In their words “social spending on education, health, and housing is progressive because it involves (1) the transfer of social resources to alter inequality induced by market outcomes and (2) the attempt to equalize the life chances of poorer individuals via investments in human capital. Increased social spending narrows market inequality by boosting the income and quality of life of the poor majority. Social spending is therefore redistributive in nature.” Figure 1 describes the trends in social insurance and progressive social spending in LDCs. In stark contrast to the OECD, social insurance spending remained at very low levels during the process of trade liberalization between the 1970s and 1980s. Only after the
1990s it is possible to observe an increase in social security spending. The progressive social spending (education, health, and housing) has been remained relatively stable over the analyzed period although experiencing important declines during the 1990s.

**Measuring Import Competition**

In order to measure import competition among countries, we calculate pair-wise equivalences between the domestic-oriented manufacturing profile in a given country \(i\) and the imports profile of that country from every other country \(j (j \neq i)\). A given country’s “domestic production profile” is composed of \(k = 28\) manufacturing sectors. This profile is to be compared with the country’s “imports profile” corresponding to each of the \(n - 1\) import’s origin countries, where \(n\) is the total number countries. Thus, connectivity between countries \(j\) and \(i\) is modeled as the similarity between the domestically oriented manufacturing production in country \(i\) and the manufacturing imports coming from country \(j\) to \(i\). We conceptualize this similarity as the channel of influence of country \(j\) over country \(i\) through import competition: if domestically oriented manufacturing firms of country \(i\) and exporting firms in country \(j\) are competing for the same sectors of the domestic market of country \(i\), we would see high level of similarity between country \(i\)’s domestic production profile and its import profile from country \(j\).

Policies enacted in country \(j\) may exert an influence over policies in country \(i\) as long as such policy changes might increase the competitiveness of country \(j\)’s export oriented firms in country \(i\)’s domestic market.

Equivalences between import and domestic production profiles are computed using two different types of data assembled in the Nicita and Olarreaga’s *Trade, Production, and Protection Database, 1976–2004*. The data is disaggregated into 28 manufacturing sectors, corresponding to the 3-digit level of the International Standard Industrial Classification (ISIC), Revision 2. The source of domestic production profile is the United Nations Industrial Development Organization (UNIDO). We build countries’ domestic production profiles using the production data of this database which, for each of the 28 manufacturing sectors, provides information on variables such as output, value added, and gross fixed capital formation. We use the total output reported in U.S. dollars for each sector. First, we complete and update Nicita and Olarreaga’s production data to reduce the amount of missing information with the current available UNIDO data. Second, as we only consider the inward-oriented manufacturing output, namely, the industrial production that is commercialized in the domestic market, we subtract the exported output in each sector from the total production output. The sectoral export data are also available in Nicita and Olarreaga.

Imports profiles result from the bilateral trade data disaggregated in the same 28 manufacturing sectors. While the original data comes from the United Nations’ COMTRADE database using the Standard International Trade Classification (SITC), Revision 2, Nicita and Olarreaga convert the data into the ISIC Revision 2 classification using a concordance table. This allows us to compare international trade and domestic production in a sector-by-sector base. The trade data contains exports and imports information and is reported at both aggregate and bilateral level. Following Feenstra et al., we use mirrored trade data to fill missing information. This means completing reported imports with reported exports provided the former data has been omitted by the importing country.

The *equivalences* between production and import profiles are then calculated by taking the correlation between a country’s domestic production profile (across 28 sectors)
and its imports profile from each import competitor country. All pair-wise correlations are stacked into a matrix to capture the connectivity between each country and its import competitor countries within its domestic market. Hence, the correlation capturing the equivalence between domestic production in country \(i\) and imports from country \(j\) in a given year \(t\) has a theoretical range equals to \(1 < \text{imp.compi, j, t} < 1\), with 1 representing a perfect equivalence of domestic production of \(i\) and imports from \(j\). This is, \(i\) produces and sells within its geographical boundaries the same type of products that it imports from \(j\) across the 28 sectors considered. Put simply, \(1 < \text{imp.compi, j, t} < 1\) reflects the strength of imports competition coming from country \(j\). We assume that import-induced competitive pressures only come from countries with a positive score of structural equivalence.

Each equivalence (similarity) score — a typical element \(\text{imp.compi, j, t}\), is a component of a row-standardized matrix \(\mathbf{W}_{i}^{\text{imp.comp}}\). The \(i\)th row of the matrix is the country \(i\)’s vector of standardized equivalence scores \(\frac{\text{imp.compi, j, t}}{\sum_{j} \text{imp.compi, j, t}}\). \(^{42}\) Then competition in welfare policies should be reflected in country \(i\)’s decisions to change the levels of spending given the changes in the levels of spending in its key import competitor countries. The expectation is that \(i\)’s levels of spending depend on a weighted average of the spending levels of all \(i\)’s import competitor countries. We use the standardized equivalences to weight spending in country \(i\)’s competitor countries \(\left(\frac{\text{imp.compi, j, t}}{\sum_{j} \text{imp.compi, j, t}}\right) y_{j, t}\). Hence, the vector resulting from the product \(\mathbf{W}_{i}^{\text{imp.comp}} \times y_{t}\) contains all the weighted averages for every \(i\)’s import competitor country’s spending in a given year. This is equivalent to a spatial lag variable. This is not defined by geographical distance as in a typical spatial model. Instead, we model connectivity between countries considering the similarities between what a country produces and what that country imports from another specific country. Hence, connectivity between countries is a theoretically defined continuous measure of import competition taking place in domestic — not international — markets for country \(i\). \(^{43}\)

To account for the different forms of policy diffusion due to trade competition (export and import competition), we also include a spatial lag of export competition in our estimations. Following Cao and Prakash\(^{44}\) and Ward and Cao\(^{45}\), export competition is calculated using pair-wise structural equivalences of countries’ export profiles. Again, the structural equivalence is calculated by taking the correlation between two countries’ exports profiles (at both bilateral and sector levels).\(^{46}\) To see the difference between import and export competing countries, we use the example of Mexico. Note that the top-ten import competitor countries for Mexico in 1996 are Argentina, Poland, Lithuania, New Zealand, Greece, Guatemala, Uruguay, Australia, Iceland, and Costa Rica. Equivalence scores between domestic production in Mexico and imports from these countries range between 0.45 and 0.67. The top ten Mexico’s export competitor countries for the same year: Canada, Japan, Philippines, Singapore, Republic of Korea, Taiwan, Malaysia, Israel, Thailand, and United Kingdom.\(^{47}\) Equivalences in export profiles between Mexico and its top export competitors range between 0.50 and 0.95.\(^{48}\)

*Labor Power and Factors Mobility*: Based on a political mobilization argument — consisting of evaluating the implications of the Hecksher-Olhin model for the power resources theory of the welfare state,\(^{49}\) Rudra emphasizes the low bargaining power of labor to demand welfare effort against the pressures of globalization.\(^{50}\) In her account,
globalization increases the demand for low-skilled and informal workers in labor-abundant countries, and then labor’s collective power declines because these groups are difficult to organize. This would explain why Rogowski’s factoral model of politics could not be simply applied to LDCs, since openness operates by reducing the power of labor vis–á-vis that of capital. Because unionization rates data are not available for most LDCs, we assess the impact of using Rudra’s “Potential Labor Power” (PLP) variable. Rudra designed a labor power index, which is calculated as the ratio between the number of skilled and non-skilled workers in the industrial sector, weighted by the size of the surplus labor. In particular, we are interested in the mediating effects of labor power. Our expectation is that with increasing difficulty to apply protectionist policies, a class-based model better captures cleavages when domestic actors respond to import competition. Capital in general prefers welfare retrenchment while labor opposes it. Policy diffusion in social welfare policies through the import competition mechanism is likely to be observed when labor is weak.

We have posited that if a sectoral model of trade applies, welfare retrenchment due to enhanced import competition is not an option to protect import-competing actors because it divides interests between capital and labor within the same sector. Whether factors are specific to sectors is ultimately an empirical question. In other words, medium and high levels of industrial factor mobility is a necessary condition for our theory to apply. Following previous literature, we use a measure of inter-industry labor mobility calculated by the coefficient of variation of wages across industries. Measures of inter-industry labor mobility were offered by Zhou using data on industrial wages and employment from the United Nations Industrial Development Organization (UNIDO), Industrial Statistics Database at the 3-digit industry level of ISIC code (rev.2). While the data cover only manufacturing workers and wages classified in 29 sectors, it is precisely the horizontal mobility options for manufacturing workers in the import-competing sector that matter for our argument. We first control for the reallocation costs of industrial workers and show that, in average, our argument is supported by the data in the entire sample. Then, we further investigate if this assumption of the theory is in fact needed and find that inter-industry mobility makes a big difference for social insurance spending.

**Control Variables**

Trade exposure alters the relative political power of the different factors (or sectors) in the economy. Kaufman & Segura-Ubiergo argue that the power of business sectors exposed to international competition prevails in curbing social insurance spending in Latin America. Wibbels claims that efficiency concerns in tradable sectors exert powerful downward pressures in social security and welfare spending. Openness may be an undefined way of looking at economic globalization pressures as it confounds many different mechanisms. In our view preferences of business for welfare cuts may crucially depend on the specific challenges that imports competition imposes to domestic firms. Nonetheless, the negative effects of trade exposure on welfare states in developing countries have been largely documented. We therefore include trade openness ((imports+exports)/GDP) as a control variable in our estimations.

A number of different contributions focus on the association between social policy regimes and different post-war development strategies. In this respect, the distinction between imports-substitution industrialization (ISI) and export-led growth seems to have a major effect on spending regimes. To account for this variation, we control for an ISI
variable used by Wibbels and Ahlquist measured as the total manufacturing output not-exported.\textsuperscript{61} ISI should be highly correlated with the size of the inward-oriented manufacturing sector. This is precisely the economic sector through which we model import competition interdependence between countries.\textsuperscript{62}

We also control for autocracy-democracy levels using the “polity2” variable from the Polity IV database.\textsuperscript{63} This accounts for the relationship between democratization and the provision of public goods and services such as health, education, and social insurance.\textsuperscript{64} Demographics are considered by including the dependency ratio, the total population size (log), and urbanization.\textsuperscript{65} The log of the GDP per capita controls for Wagner’s law, which holds that the size of government increases with the size of the economy. Finally, as our dependent variables are either spending categories or the structure of government revenue, total government spending levels are also considered.\textsuperscript{66}

\textit{Estimation Strategy and Empirical Results}

Modeling interdependence requires an explicit specification of the diffusion of social policy channeled by imports competition. In a spatial lag model the dependent variable of one unit is affected by the values taken by dependent variable in other units. Given the presence of strong autoregressive processes in government spending categories we also include the temporal lag dependent variable in the right hand side of the equation. As a result, we estimate a number of spatio-temporal autoregressive models,

\begin{equation}
y_t = \phi y_{t-1} + \rho_{\text{imp.comp}} W_{t-1}^{\text{imp.comp}} y_{t-1} + \rho_{\text{exp.comp}} W_{t-1}^{\text{exp.comp}} y_{t-1} + X_{t-1} \beta + T_t + C_i + \epsilon_t \tag{1}
\end{equation}

where \( y \) is an \( NT \times 1 \) vector of observations (\( N \) units, \( T \) time period per unit), \( \phi \) captures the effect of the temporally lagged dependent variable \( y_{t-1} \), and the \( \rho_{\text{imp.comp}} \) and \( \rho_{\text{exp.comp}} \) are estimates of the amount of strategic interdependence measured by the temporally lagged spatial lag variables \( W_{t-1}^{\text{imp.comp}} y_{t-1} \) and \( W_{t-1}^{\text{exp.comp}} y_{t-1} \) respectively. Each \( W \) is a matrix of dimensions \( NT \times NT \) with \( T \times N \) sub-matrices along the block diagonal, and elements \( w_{i,j,t} \) capturing the influence from unit \( j \) to \( i \) at time \( t \). In other words, \( \rho_{\text{imp.comp}} \) and \( \rho_{\text{exp.comp}} \) estimate the domestic government reaction in spending due to a change in spending in import and export competitor countries. We temporally lag the spatial lags by one year. This helps to mitigate simultaneity bias in spatial models, and is a feasible solution that allows the estimation of parameters by simply Least Squares, provided that the disturbances are not serially correlated.\textsuperscript{67} \( X_{t-1} \) is a battery of one year lagged independent variables, and \( T_t \) and \( C_i \) are controls for contemporaneous and country specific effects respectively.

We first analyze import competition interdependence with respect to social insurance spending. Table 3 reports both standard regression coefficients and the long-run multipliers (LRM).\textsuperscript{68} Empirical results support our argument: the weighted average of social insurance in import competitor countries seems to exert a powerful effect. The estimated coefficients for the spatial lag \( W_{t-1}^{\text{imp.comp}} y_{t-1} \) in Table 3 are all positive, highly significant, and robust to the exclusion and inclusion of control variables.\textsuperscript{69} Models 1 to 3 in Table 3 suggest a sizable diffusion effect due to import competition, while export competition has no effect on social insurance. A one point of GDP change in social insurance spending among relevant competitors to the internally oriented
manufacturing sector is followed by a domestic change between a 0.2 and 0.4 points of GDP change of the same sign in social insurance spending if we look at the long term effects (LRM). This is an economically relevant amount of resources induced by policy interdependence due to import competition. Furthermore, notice that the diffusion effect due to import competition is not affected by the inclusion of trade openness. While we confirm once again that total trade exposure negatively affects social security and welfare spending in developing countries, our diffusion variable captures a different impact of international trade on social insurance: governments seem to react strategically to the spending patterns of competing countries in their own domestic market, even when they also cut social security and welfare spending as openness mounts.

Figure 2: Diffusion effects in social insurance and progressive social spending

Notes: Dots and lines depict LRM and 95% CIs for the social insurance (models from Table 3) in ‘blue’, and progressive social spending (models from Table 4) in ‘red’.

We now turn to the analysis of social spending that encompasses health, education, and housing benefits. These are human capital related policies, and hence the social spending variable captures the most progressive welfare state programs in developing countries. The empirical results are presented in Table 4. The estimated long-run effects of interdependence due to import competition are again positive and highly significant, but stronger than in the case of social insurance. As the relevant competing countries in the internal market retrench social spending by a one point of GDP, the domestic government is also expected to do so by some amount between 0.8 and 1.0 points of GDP in the long-run. Such effects indicate that human capital related programs, like those included in the social spending variable, are even more vulnerable to social policy interdependence due import competition than social insurance spending. Furthermore, while trade openness seems to be less harmful for social spending – as it does not reach significance in any of the three models in Table 4, the diffusion effects due to import competition are clearly magnified.

On the other hand, policy interdependence due to export competition exerts no effect on social spending, as the estimated coefficients are
insignificant and close to zero (with negative and positive sign depending on controls and sample size).

Comparative long-run multipliers for the two different dependent variables considered are plotted in Figure 2. The plot shows the estimated long run effects and 95% confidence intervals of policy diffusion due to import competition for social insurance and progressive social spending. References to models 1-3 refer to different sets of control variables shown in each table. First, the largest diffusion effects due to import competition correspond to what we refer with progressive social spending (health, education, and housing). We also find robust and significant import competition effects in social insurance spending.

[Insert Table 5 about here.]

Figure 3: Marginal Long Run Effects of Diffusion through Import Competition on Social Insurance Conditional on Potential Labor Power (logged).

Finally, we analyze how domestic conditions affect policy interdependence induced by import competition. Specifically, we analyze the ability of labor to protect welfare programs in developing countries. In Table 5 we interact our spatial lag variable with “Potential Labor Power”. The negative and significant sign in the interaction term in the model of social insurance indicates that as labor power increases the effect of imports competition decreases. The estimated marginal effects and associated uncertainty are plotted across the values of the PLP variable in Figure 3. We have conducted the same test for the progressive social spending (see Table 5). Our findings suggest that labor power weakens the import competition mechanism only with respect to social insurance. In the case of progressive social spending, the interaction is slightly positive and statistically insignificant. Hence, as workers become more able to organize and overcome collective action problems, diffusion through imports competition tends to disappear in the case of social insurance. This mediating effect of potential labor power holds for contributory social policies, namely, social security and welfare benefits. Since we analyze policy interdependence due to domestic business interests in the manufacturing
sector, this conditional finding is consistent with the fact that industrial labor is the key constituency of social insurance spending in the developing world.\textsuperscript{72}

A last but important point is to further analyze our argument under different levels of inter-industry labor mobility. A harder test of the argument requires evaluating the interplay between import competition interdependence and labor power across different contexts of factor mobility. We have argued that if labor mobility is low and therefore a sectoral model better describes the alignment of interests, no diffusion takes place. If labor mobility is medium or high, we should observe diffusion effects that decrease with the levels of potential labor power. Here we only report results for the social insurance variable, as this is the case where policy interdependence depends on labor power.

Results are displayed in Table 6 and plotted in Figure 4. First, the triple interaction is highly significant across different control variables. To better interpret these results, we run a simple simulation of the long run predicted levels of social spending across the values of insurance spending in import competing countries, the values of potential labor power, and two hypothetical levels of labor mobility (percentiles 10 and 90 in wage covariance). All other control variables are held at their sample means, including country and year fixed effects.

The simulation based on “Model 3” in Table 6 suggests a number of important results. First, when labor mobility is low — as captured by large inter-industry wage differentials — social insurance spending changes very little due to diffusion and labor power. This can be seen in the flat surface from Figure 4. However, when mobility is high, social insurance seems to heavily depend upon import competitors’ insurance spending and the domestic mobilization capacity of labor. Note that when domestic labor power is at its minimum, social insurance spending decreases dramatically when import competing countries retrench the welfare states (“interdependence” axis in Figure 4). This strong negative effect becomes reduced as we move upwards across the levels of PLP.

For instance, enhanced import competition may be more costly for labor in the import competing sector under low factor mobility because the market provides fewer reallocation opportunities. In this scenario, low labor mobility may work as a substitute of PLP because workers in the import competing sector may organize themselves and protect social insurance. High inter-industry mobility signals more exit options for displaced workers due to import competition. Unless labor power is high, import-competition may undermine social insurance because displaced workers first can move to another sector and are also collectively unable to stop capital from retrenching the welfare state.

[Insert Table 6 about here.]

Figure 4: Simulated Long-Run Levels of Social Insurance Spending Conditional on Import Competition Interdependence, Potential Labor Power and Inter-industry Wage Variation.
Conclusion and Discussion

In this paper, we focus on policy diffusion induced by competition for domestic market shares. For many developing countries, domestic industries compete fiercely for domestic market shares with imports from other countries in the world. Such import competition creates policy interdependence and we argue that such policy interdependence might be observed in policy areas that directly affect production costs of domestic industries such as social insurance and social welfare spending. We test our theory in two broad types of policies: social insurance spending and progressive social spending (health, education, and housing). We find strong evidence for import competition induced policy interdependence in both policy areas. Moreover, in the case of social insurance, we find that the effect of policy interdependence is mediated by the strength of labor: the effect of policy independence disappears when labor power is high enough and we argue that this because stronger labor is more capable of blocking welfare retrenchment policies.

As far as we know, this is the first study to look at the effects of import competition from a policy diffusion perspective. Our empirical analysis lends strong support to the existence of such policy interdependence in social spending in a developing country context. Moreover, we have provided a theory on the underlying causal mechanism that accounts for such policy interdependence, especially regarding the preferences of actors and how the political game is played out. Facing import competition, other policy choices such as increasing tariffs and non-tariff barriers often directly serve the interests of both labor and capital in domestic oriented firms and industries. If such policies are viable and sufficient to address the issue of import competition, we would not observe policy interdependence in social welfare policies. The fact that we find strong empirical evidence for policy interdependence in social insurance and progressive social spending supports our early suspicion that with increasing level of global economic integration, trade protectionist policies have become less viable policy instruments to deal with import competition.
What we find in this paper seems to suggest that welfare retrenchment has become an important policy instrument. However, welfare retrenchment is also a dividing issue between labor and capital, with the former strongly opposing any attempt to reduce welfare benefits. We therefore further theorized and tested the conditional effects of labor power. The analysis revealed that the effect of import competition induced policy interdependence is stronger in countries with weak labor power in the case of social insurance; we found no such conditional effect in progressive social spending. Future research needs to better understand the domestic conditions of policy interdependence triggered by import competition. For instance, why potential labor power only mediates policy responses in social insurance but not in progressive social spending? One potential explanation might be that social insurance much more directly affects workers’ life while social spending, basically in education, health, and housing, benefits a much larger segment of the society. Finally, we have limited our empirical analysis to social insurance and social spending. The logic of import competition, however, could be also applied to other policy areas such as various taxation schemes and even active labor market programs. We believe that there is much more to be done in the emerging political economy literature of policy diffusion and welfare state in a developing country context. We hope this study can add to this line of research and is able to stimulate further examination in the future.
### Table 3: Imports Competition and Social Insurance in LDCs

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>LRM</th>
<th>Model 2</th>
<th>LRM</th>
<th>Model 3</th>
<th>LRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDV</td>
<td>0.754 (0.024)***</td>
<td>LRM</td>
<td>0.749 (0.024)***</td>
<td>LRM</td>
<td>0.778 (0.027)***</td>
<td>LRM</td>
</tr>
<tr>
<td>Spatial lag $W_{t-1}^{\text{imp.comp}}$</td>
<td>0.062 (0.024)***</td>
<td>0.254 (0.100)**</td>
<td>0.060 (0.024)***</td>
<td>0.239 (0.098)**</td>
<td>0.094 (0.029)***</td>
<td>0.426 (0.139)***</td>
</tr>
<tr>
<td>Spatial lag $W_{t-1}^{\text{exp.comp}}$</td>
<td>0.037 (0.055)</td>
<td>0.150 (0.222)</td>
<td>0.053 (0.056)</td>
<td>0.212 (0.220)</td>
<td>0.033 (0.068)</td>
<td>0.149 (0.308)</td>
</tr>
<tr>
<td>Openness t-1</td>
<td>0.037 (0.055)</td>
<td>-0.003 (0.002)</td>
<td>-0.012 (0.008)</td>
<td>-0.007 (0.003)***</td>
<td>-0.031 (0.011)***</td>
<td>LRM</td>
</tr>
<tr>
<td>Potential Labor Power t-1</td>
<td>-0.070 (0.235)</td>
<td>-0.315 (1.063)</td>
<td>-0.007 (0.010)</td>
<td>-0.032 (0.043)</td>
<td>LRM</td>
<td></td>
</tr>
<tr>
<td>Polity score t-1</td>
<td>-0.006 (0.006)</td>
<td>-0.026 (0.026)</td>
<td>-0.006 (0.006)</td>
<td>-0.026 (0.026)</td>
<td>LRM</td>
<td></td>
</tr>
<tr>
<td>Wage covariance t-1</td>
<td>0.073 (0.119)</td>
<td>0.331 (0.542)</td>
<td>0.001 (0.008)</td>
<td>0.004 (0.037)</td>
<td>LRM</td>
<td></td>
</tr>
<tr>
<td>Dependency ratio t-1</td>
<td>0.001 (0.008)</td>
<td>0.111 (0.065)*</td>
<td>0.025 (0.014)*</td>
<td>0.101 (0.065)*</td>
<td>LRM</td>
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<tr>
<td>Urbanization t-1</td>
<td>0.007 (0.173)</td>
<td>-0.191 (0.701)</td>
<td>-0.030 (0.173)</td>
<td>-0.118 (0.687)</td>
<td>LRM</td>
<td></td>
</tr>
<tr>
<td>Population (log) t-1</td>
<td>-0.047 (0.173)</td>
<td>-0.191 (0.701)</td>
<td>-0.030 (0.173)</td>
<td>-0.118 (0.687)</td>
<td>LRM</td>
<td></td>
</tr>
<tr>
<td>Real GDP per capita (log) t-1</td>
<td>0.006 (0.006)</td>
<td>0.025 (0.025)</td>
<td>0.025 (0.006)</td>
<td>0.028 (0.024)</td>
<td>LRM</td>
<td></td>
</tr>
<tr>
<td>Spending t-1</td>
<td>0.067 (0.173)</td>
<td>-0.191 (0.701)</td>
<td>-0.030 (0.173)</td>
<td>-0.118 (0.687)</td>
<td>LRM</td>
<td></td>
</tr>
<tr>
<td>Adj. R squared</td>
<td>0.538</td>
<td>0.538</td>
<td>0.538</td>
<td>0.538</td>
<td>0.538</td>
<td>0.573</td>
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<td>Num. of countries</td>
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<td>69</td>
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<td>58</td>
<td></td>
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<tr>
<td>Country dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>LRM</td>
<td></td>
</tr>
<tr>
<td>Year dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>LRM</td>
<td></td>
</tr>
</tbody>
</table>

***p<0.01, ** p<0.05, *p<0.1$

LRM: Long-run multipliers calculated from the Bewley transformation of error-correction model

Countries: Algeria, Argentina, Azerbaijan, Bangladesh, Benin, Bolivia, Brazil, Bulgaria, Cameroon, Chile, China, Colombia, Costa Rica, Cote d'Ivoire, Cyprus, Czech Republic, Ecuador, Egypt, El Salvador, Ethiopia, Ghana, Guatemala, Hungary, India, Indonesia, Iran, Israel, Jordan, Kenya, Republic of Korea, Kuwait, Latvia, Lithuania, Macao, Malawi, Malaysia, Malta, Mauritius, Mexico, Moldova, Mongolia, Morocco, Myanmar, Nepal, Nigeria, Oman, Pakistan, Panama, Peru, Philippines, Poland, Romania, Russian Federation, Senegal, Singapore, Slovakia, Slovenia, South Africa, Sri Lanka, Tanzania, Thailand, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Uruguay, and Venezuela.
# Import Competition and Policy Diffusion

Table 4: Import Competition and Progressive Spending (health, housing, and education) in LDCs

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>LRM</th>
<th>Model 2</th>
<th>LRM</th>
<th>Model 3</th>
<th>LRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDV</td>
<td>0.831 (0.024)**</td>
<td>0.825 (0.024)**</td>
<td>0.804 (0.029)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatial lag $W_{t-1}^{imp,comp} y_{t-1}$</td>
<td>0.169 (0.052)**</td>
<td>1.005 (0.337)**</td>
<td>0.163 (0.052)**</td>
<td>0.934 (0.324)**</td>
<td>0.162 (0.064)**</td>
<td>0.829 (0.354)**</td>
</tr>
<tr>
<td>Spatial lag $W_{t-1}^{exp,comp} y_{t-1}$</td>
<td>-0.090 (0.136)</td>
<td>-0.533 (0.821)</td>
<td>-0.068 (0.137)</td>
<td>-0.389 (0.793)</td>
<td>0.017 (0.167)</td>
<td>0.088 (0.849)</td>
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<tr>
<td>Openness t-1</td>
<td>-0.004 (0.003)</td>
<td>-0.025 (0.017)</td>
<td>-0.004 (0.004)</td>
<td>-0.022 (0.019)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential Labor Power t-1</td>
<td>-0.163 (0.330)</td>
<td>-0.832 (1.690)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Polity score t-1</td>
<td>0.011 (0.016)</td>
<td>0.056 (0.079)</td>
<td></td>
<td></td>
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<tr>
<td>ISI t-1</td>
<td>0.011 (0.008)</td>
<td>0.054 (0.044)</td>
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<tr>
<td>Wage covariance t-1</td>
<td>-0.036 (0.174)</td>
<td>-0.182 (0.890)</td>
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<td>Dependency ratio t-1</td>
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<td>0.055 (0.060)</td>
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<tr>
<td>Urbanization t-1</td>
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<td>-0.070 (0.108)</td>
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<td>Population (log) t-1</td>
<td>0.225 (0.974)</td>
<td>1.148 (4.966)</td>
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<td>Real GDP per capita (log) t-1</td>
<td>0.213 (0.240)</td>
<td>1.266 (1.457)</td>
<td>0.230 (0.240)</td>
<td>1.318 (1.406)</td>
<td>0.057 (0.365)</td>
<td>0.289 (1.872)</td>
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<tr>
<td>Spending t-1</td>
<td>-0.019 (0.008)**</td>
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<td>-0.018 (0.008)**</td>
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<td>Yes</td>
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<tr>
<td>Year dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
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</tr>
</tbody>
</table>

**p<0.01, **p<0.05, *p<0.1$  

LRM: Long-run multipliers calculated from the Bewley transformation of error-correction model  
Countries: Algeria, Argentina, Bangladesh, Benin, Bolivia, Brazil, Bulgaria, Cameroon, Chile, China, Colombia, Costa Rica, Cyprus, Czech Republic, Egypt, El Salvador, Ethiopia, Ghana, Guatemala, Hungary, India, Indonesia, Iran, Israel, Jordan, Kenya, Republic of Korea, Kuwait, Kyrgyzstan, Latvia, Lithuania, Malawi, Malaysia, Mauritius, Mexico, Moldova, Mongolia, Morocco, Myanmar, Nepal, Nigeria, Oman, Pakistan, Panama, Philippines, Poland, Romania, Russia, Senegal, Singapore, Slovakia, Slovenia, South Africa, Sri Lanka, Thailand, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Uruguay, and Venezuela.
### Table 5: Conditional Imports Competition and Policy Interdependence in LDCs

<table>
<thead>
<tr>
<th></th>
<th>Social Insurance</th>
<th>Spatial lag $W_{t-1}^{imp,comp} y_{t-1}$</th>
<th>Prog. Spending</th>
<th>Spatial lag $W_{t-1}^{exp,comp} y_{t-1}$</th>
<th>Potential Labor Power (log) t-1</th>
<th>SPatial lag $W_{t-1}^{imp,comp} y_{t-1}$</th>
<th>PLP</th>
<th>Openness t-1</th>
<th>Polity score t-1</th>
<th>ISI t-1</th>
<th>Wage covariance t-1</th>
<th>Dependency ratio t-1</th>
<th>Urbanization t-1</th>
<th>Population (log) t-1</th>
<th>Real GDP per capita (log) t-1</th>
<th>Spending t-1</th>
<th>Adj. R squared</th>
<th>Num. of observations</th>
<th>Num. of countries</th>
<th>Country dummies</th>
<th>Year dummies</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDV</td>
<td>0.777 (0.027)***</td>
<td>0.211 (0.064)***</td>
<td>0.805 (0.029)***</td>
<td>0.040 (0.068)</td>
<td>0.647 (0.423)</td>
<td>0.060 (0.052)**</td>
<td>-0.106 (0.052)**</td>
<td>-0.007 (0.003)***</td>
<td>-0.008 (0.010)</td>
<td>-0.005 (0.006)</td>
<td>0.001 (0.002)</td>
<td>0.000 (0.008)</td>
<td>0.027 (0.014)*</td>
<td>-0.543 (0.638)</td>
<td>0.005 (0.249)</td>
<td>0.003 (0.007)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.947 (0.305)***</td>
<td></td>
<td>0.179 (0.305)</td>
<td>2.907 (1.915)</td>
<td>-0.474 (0.238)**</td>
<td>-0.377 (0.382)*</td>
<td>-0.032 (0.011)***</td>
<td>-0.037 (0.043)</td>
<td>-0.025 (0.026)</td>
<td>0.004 (0.007)</td>
<td>0.000 (0.036)</td>
<td>0.120 (0.065)*</td>
<td>-2.440 (2.822)</td>
<td>0.023 (1.117)</td>
<td>0.014 (0.031)</td>
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<td>0.062 (0.125)</td>
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<td>0.026 (0.167)</td>
<td>-0.584 (0.563)</td>
<td>0.096 (0.103)</td>
<td>-0.003 (0.004)</td>
<td>-0.005 (0.004)</td>
<td>0.012 (0.016)</td>
<td>0.010 (0.008)</td>
<td>-0.001 (0.002)</td>
<td>0.011 (0.012)</td>
<td>-0.012 (0.021)</td>
<td>0.090 (0.963)</td>
<td>0.003 (0.361)</td>
<td>-0.012 (0.010)</td>
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<td></td>
<td>0.316 (0.642)</td>
<td></td>
<td>0.132 (0.850)</td>
<td>-2.986 (2.937)</td>
<td>0.492 (0.535)</td>
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<td>0.316 (0.642)</td>
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<td>0.132 (0.850)</td>
<td>-2.986 (2.937)</td>
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<tr>
<td>Adj. R squared</td>
<td>0.574</td>
<td></td>
<td>0.532</td>
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<td>Num. of countries</td>
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<td>Country dummies</td>
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<td>Year dummies</td>
<td>Yes</td>
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***p<0.01, ** p<0.05, *p<0.1$

LRM: Long-run multipliers calculated from the Bewley transformation of error-correction model

Countries: Algeria, Argentina, Azerbaijan, Bangladesh, Bolivia, Brazil, Bulgaria, Cameroon, Chile, Colombia, Costa Rica, Cote d'Ivoire, Cyprus, Czech Republic, Ecuador, Egypt, El Salvador, Ethiopia, Ghana, Guatemala, Hungary, India, Indonesia, Iran, Israel, Jordan, Kenya, Korea, Kuwait, Latvia, Lithuania, Malawi, Malaysia, Mauritius, Mexico, Morocco, Nigeria, Oman, Pakistan, Panama, Peru, Philippines, Poland, Romania, Russian Federation, Senegal, Singapore, Slovakia, Slovenia, South Africa, Sri Lanka, Thailand, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Uruguay, and Venezuela.
Table 6: Imports Competition and Social Insurance in LDCs conditioned by PLP and Inter-industry Labor Mobility

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>LRM</th>
<th>Model 2</th>
<th>LRM</th>
<th>Model 3</th>
<th>LRM</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDV</td>
<td>0.772 (0.025)**</td>
<td>0.771 (0.026)**</td>
<td>0.774 (0.027)**</td>
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<tr>
<td>Spatial lag $W_{t-1}^{imp.comp}y_{t-1}$</td>
<td>1.008 (0.427)**</td>
<td>4.427 (1.905)**</td>
<td>1.413 (0.458)**</td>
<td>6.177 (2.051)**</td>
<td>1.415 (0.619)**</td>
<td>6.261 (2.731)**</td>
</tr>
<tr>
<td>Wage covariance (log) t-1</td>
<td>1.678 (0.780)**</td>
<td>7.368 (3.487)**</td>
<td>2.262 (0.818)**</td>
<td>9.891 (3.662)**</td>
<td>2.084 (1.061)**</td>
<td>9.224 (4.684)**</td>
</tr>
<tr>
<td>Wage Covariance * PLP</td>
<td>-1.466 (0.703)**</td>
<td>-6.439 (3.132)**</td>
<td>-1.980 (0.734)**</td>
<td>-8.660 (3.261)**</td>
<td>-1.845 (0.927)**</td>
<td>-8.165 (4.076)**</td>
</tr>
<tr>
<td>Spatial lag $W_{t-1}^{imp.comp}y_{t-1}$ * PLP</td>
<td>-0.843 (0.387)**</td>
<td>-3.704 (1.718)**</td>
<td>-1.203 (0.410)**</td>
<td>-5.261 (1.824)**</td>
<td>-1.181 (0.532)**</td>
<td>-5.224 (2.340)**</td>
</tr>
<tr>
<td>Spatial lag $W_{t-1}^{imp.comp}y_{t-1}$ * Wage Cov.</td>
<td>-0.255 (0.112)**</td>
<td>-1.118 (0.500)**</td>
<td>-0.356 (0.120)**</td>
<td>-1.556 (0.535)**</td>
<td>-0.341 (0.165)**</td>
<td>-1.508 (0.728)**</td>
</tr>
<tr>
<td>Spatial lag $W_{t-1}^{imp.comp}y_{t-1}$ * PLP * Wage Cov.</td>
<td>0.225 (0.103)**</td>
<td>0.990 (0.457)**</td>
<td>0.313 (0.109)**</td>
<td>1.370 (0.483)**</td>
<td>0.299 (0.143)**</td>
<td>1.323 (0.630)**</td>
</tr>
<tr>
<td>Spatial lag $W_{t-1}^{exp.comp}y_{t-1}$</td>
<td>-0.009 (0.062)</td>
<td>-0.039 (0.271)</td>
<td>0.015 (0.067)</td>
<td>0.066 (0.298)</td>
<td></td>
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<tr>
<td>Openness t-1</td>
<td>-0.005 (0.002)**</td>
<td>-0.024 (0.009)**</td>
<td>-0.007 (0.002)**</td>
<td>-0.032 (0.011)**</td>
<td></td>
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<tr>
<td>Polity score t-1</td>
<td>-0.001 (0.009)</td>
<td>-0.006 (0.039)</td>
<td>-0.007 (0.009)</td>
<td>-0.033 (0.041)</td>
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<tr>
<td>ISI t-1</td>
<td>-0.006 (0.007)</td>
<td>-0.025 (0.030)</td>
<td>0.001 (0.008)</td>
<td>0.005 (0.034)</td>
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<tr>
<td>Urbanization t-1</td>
<td>0.024 (0.013)*</td>
<td>0.107 (0.055)*</td>
<td>0.034 (0.014)**</td>
<td>0.149 (0.061)**</td>
<td></td>
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<tr>
<td>Population (log) t-1</td>
<td>-0.532 (0.549)</td>
<td>-2.324 (2.375)</td>
<td>-0.901 (0.620)</td>
<td>-3.987 (2.693)</td>
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<tr>
<td>Dependency ratio t-1</td>
<td>-0.003 (0.006)</td>
<td>-0.012 (0.025)</td>
<td>-0.003 (0.006)</td>
<td>-0.012 (0.025)</td>
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<tr>
<td>Real GDP per capita (log) t-1</td>
<td>-0.159 (0.194)</td>
<td>-0.696 (0.841)</td>
<td>0.006 (0.219)</td>
<td>0.025 (0.958)</td>
<td>-0.083 (0.240)</td>
<td>-0.368 (1.054)</td>
</tr>
<tr>
<td>Spending t-1</td>
<td>0.008 (0.006)</td>
<td>0.034 (0.026)</td>
<td>0.006 (0.006)</td>
<td>0.028 (0.027)</td>
<td>0.004 (0.007)</td>
<td>0.017 (0.029)</td>
</tr>
</tbody>
</table>

Adj. R squared 0.571 0.572 0.576
Num. of observations 861 841 768
Num. of countries 62 61 58
Country dummies Yes Yes Yes
Year dummies Yes Yes Yes

***p<0.01, ** p<0.05, *p<0.1$

LRM: Long-run multipliers calculated from the Bewley transformation of error-correction model
Countries: Algeria, Argentina, Bangladesh, Benin, Bolivia, Brazil, Bulgaria, Cameroon, Chile, China, Colombia, Costa Rica, Cyprus, Czech Republic, Egypt, El Salvador, Ethiopia, Ghana, Guatemala, Hungary, India, Indonesia, Iran, Israel, Jordan, Kenya, Republic of Korea, Kuwait, Kyrgyzstan, Latvia, Lithuania, Malawi, Malaysia, Mauritius, Mexico, Moldova, Mongolia, Morocco, Myanmar, Nepal, Nigeria, Oman, Pakistan, Panama, Philippines, Poland, Romania, Russia, Senegal, Singapore, Slovakia, Slovenia, South Africa, Sri Lanka, Thailand, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Uruguay, and Venezuela.
Import Competition and Policy Diffusion

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There is no conflict in interests.

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Import Competition and Policy Diffusion


substitutable redistributive tools. However, for the aforementioned three reasons, we assume 22
flows.

Diffusion: Explaining Worldwide Change

versus Structural Equivalence, Review

Isomorphism and Co

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Economist,


17 In theory, facing competition, reducing production costs (e.g., by reducing social spending) is not the only option left. For countries competing in labor-intensive product markets, upgrading is another option; for countries competing in high-end production, further investments in research and development (R&D) might also be an alternative to a “race to the bottom.” However, for developing countries, moving up the production chain is difficult, if not impossible. Moreover, recent study on developing countries shows a negative correlation between social spending and exposure to the global market, suggesting that facing competition in the global market, most of these countries choose a downward move rather than upgrading (Rudra, “Globalization and the Decline of the Welfare State in Less-Developed Countries”).


22 Some have also argued that trade protection and social protection can be seen as substitutable redistributive tools. However, for the aforementioned three reasons, we assume
that governments are increasingly constrained to offer trade protection; hence they use social protection to satisfy the demands of some economic groups negatively affected by import-competition.

23 Divisions within both business and the labor movement suggest that the assumptions of this theory may be unrealistic in some cases.

24 The assumption that labor is always against welfare retrenchment and capital is always against increasing labor’s social welfare is not shared by all. For instance, the “varieties of capitalism” literature argues in favor of business interests toward social policies (Peter Hall and David Soskice, Varieties of Capitalism: The Institutional Foundations of Comparative Advantage, (London: Oxford University Press, 2001)). When firms rely on specialized production, both capital and labor confront the need of making risky investments to survive. Interests of different factors would then converge around the productive and insurance features of social policy (Isabela Mares, “The Sources of Business Interest in Social Insurance: Sectoral Versus National Differences,” World Politics 55 no. 2 (2003):229–258). Yet specialization and upgrading are less frequent in developing countries. Ultimately, developing countries can be hardly classified into “liberal” and “coordinated” market economies, and the institutional complementarities to market arrangements are less associated with social policy than in the OECD context. e.g., social security and welfare programs are normally contributory systems that add costs directly to the wage bill. Hence, new import competition from countries with lower levels of social spending than the existing domestic level of spending may posit strong pressures from the part of capital to demand for retrenchment. On the other hand, these are the precise policies that labor would demand when displaced due to import competition.


28 Mares, “The Sources of Business Interest in Social Insurance: Sectoral Versus National Differences,” 229–258; We acknowledge the possibility that welfare states may play an important role in trade competition, as suggested by the varieties of capitalism’s account for OECD countries. First, education and health may have competitiveness-enhancing effects because they increase human capital. Second, unemployment schemes help to secure the existence of high quality labor available for firms in countries with pronounced business cycles. Our assumption of capital against welfare is justified on different grounds though. Human capital investment takes a long period to trigger changes in production. This requires firms with long time horizons. However, our story is precisely about more immediate demands from the part of firms struggling to survive due to import competition. Moreover, varieties of capitalism’s theory emphasizes that the types of firms willing to support public human capital investment are those that specialize in niches of production, and normally oriented to the international markets. We suspect that most firms and industries fighting for

Our theory is more similar to the power politics thesis than to the compensation hypothesis. The latter often associates globalization with higher levels of social spending. This is because with increased instability (actual or perceived) associated with the global market, governments are assumed to face higher pressures to compensate the losers through social spending programs (David Cameron, “The Expansion of the Public Economy,” *American Political Science Review* 72 no. 4 (1978):1243–1261). We include the trade openness variable to control for this effect in the empirical analysis. We have also included imports as a percentage of GDP and exports as a percentage of GDP in our robustness checks (see Table 1 of the online appendix): they are not statistically associated with welfare efforts. We further tested the effects of import and export change variables measured as the first difference between imports (exports) of year t and t-1. We find statistically significant effects associated with changes in imports and exports (Table 1 in online appendix). However, the inclusion of these variables does not change the point estimate of the import competition policy interdependence variable.

Empirically, when using a sample of only OECD countries we get similar, but insignificant, coefficients for import competition. Also, pooling LDCs and OECD renders the same results. Methodologically, the decision of whether studying only developing or developed countries is always close to selecting on the dependent variable. Our cut-off here is correlated with the development of welfare states.

Data are from the International Monetary Fund, *government Finance Statistics* (GFS) and *International Finance Statistics* (IFS), various years. The GFS has limited coverage and measurement instability. We supplemented information based on the IMF’s GFS manual and relied on data from the Economic Commission for Latin America and the Caribbean (CEPAL), and the OECD *Social Expenditure Database* (SOCX). The major categories covered in this variable are sickness and disability, old age, survivors’ benefits, family and children allowances, and unemployment benefits. In developing countries, the overwhelming share of these programs is contributory in nature, being social security the largest one in most countries.


Ibid.


Every influence from a competing country $j$ in year $t$ in setting levels of spending in country $i$ is weighted by the sum of the total competitive pressure faced by country $i$.

Standardized equivalences are $w_{i}^{imp.comp} = \sum_{j} \frac{imp.comp_{i,j,t}}{\sum_{j} imp.comp_{i,j,t}}$.

Production chains and vertical type of intra-industry trade may induce higher values in our structural equivalences. But even if this type of trade exists, it also creates the type of import competition we want to capture. For example, domestic car industries importing car parts from other countries for assembly will create competition. If no domestic car parts exist, we observe no competition. So we capture these examples both theoretically and empirically. Also, intra-industry trade is less than 30% of total world trade in average. From Lionel Fontagné, Michael Freidenberg and Guillaume Gaulier, “A Systematic Decomposition of World Trade into Horizontal and Vertical IIT,” *Review of World Economics* 142 no. 3 (2006):459–475. For horizontal type of intra-industry trade, however, the same company might be competing with imports and exporting markets at the same time. Horizontal intra-industry trade means that imports are then exported after some value added process. Like many trade models, we assume there are import-competing and exporting sectors. Yet, we first control for export competition in the empirical analysis. Second, our empirical strategy does not include domestically produced goods oriented to the external markets: to construct the import-competition data we take the correlation between a vector of imports values and a vector of *not* exported domestic production.
There is a potential weakness of relational measures such as structural equivalence when it comes to measure the level of competitive pressures between countries. For instance, Lithuania's exports to Mexico are highly similar to Mexican domestic production (therefore high equivalence score between them), but such exports are so small in number or value as to be trivial. Is Lithuania truly a competitor country for Mexico? We think this both an empirical and conceptual question. Conceptually, consider the situation in which Lithuania's exports to Mexico and Mexican production have a correlation of 1 --- highest level in terms of similarity (structural equivalence) which would make the two countries top competitor for each other --- but the size of Lithuanian exports to Mexico is only 10% of Mexican productions across all commodity groups: Would Mexico still consider Lithuania its competitor? Maybe yes, because given these are substitutable products, 10% can easily become say 20-30% percent tomorrow if Lithuanian exports become cheaper.

We thank the editors to raise the concern that structurally equivalent exporters who do not actually export substantial quantities into the country in question are not import competitors in the same sense of a country that is actually exporting a lot. We have experimented with various alternative specifications that discount the similarity approach by weighting the structural equivalence measure by measures of the level of actual import flows. For instance, we weight the structural equivalence measure by import volume of country $i$ from $j$ so this also captures the importance of $j$ to $i$ as a competitor for $i$’s domestic market measured by the level of import flows. We have also tried with the average of the total manufacturing imports from $j$ to $i$ by sector as a percentage of the domestic output in the same sector. None of the discounted structural similarity measures above is statistically associated with either measures of welfare spending (key results are summarized in Tables 3 and 4 of the online appendix). Moreover, we have also tested spatial lags defined solely by levels of bilateral imports (pure import flows). We find no effect associated with the new spatial lags (Tables 3 and 4 of the online appendix). We think this suggests the fact that trade flows involve a lot of intra-firm and intra-industry trade; therefore, they cannot capture policy interdependence due to import competition.


We are grateful to Nita Rudra for sharing her PLP data. This variable was initially calculated for LDCs until 1997. Our updated PLP variable correlates 0.94 with that of Rudra’s.

PLP only measures potential labor power, but it really is the only measure with least missing data relative to other measures such as those on unions. Moreover, the skilled/unskilled distinction used by PLP captures the size of wealthier, more privileged
members of labor population, which has more resources to access and lobby politicians, particularly in developing countries. To address the concern that skill/no-skill ratio may get at only one aspect of collective action problems and the receptiveness of the state to labor demands also matters for welfare policies, we have tried to include a partisanship variable to measure the left-right dimension of government in our robustness checks (see Table 2 of online appendix). We use data from Thorsten Beck, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh, “New Tools in Comparative Political Economy: The Database of Political Institutions,” The World Bank Economic Review 15 no. 1 (2001): 165-176. They provide a three-category measure, left(3)-center(2)-right(1), of the executive party. We find that partisanship affects social insurance but not progressive spending. However, we find no statistically significant conditional effect when we interact the partisanship variable with the important competition variable. We have also tried with other measures, such as the cumulative number of years the left has been in power since 1975 and its logged form. We found no conditional effect associated with these alternative operationalizations of the partisanship variable either. We suspect that this lack of conditional effect of left parties might have to do with the fact that there is no “left” partisanship in the developing world, outside of Latin America: most parties are considered left by traditional ideological definition, or are ethnically based. Even where left parties commit to pro-poor redistribution, social insurance policy is an ill-equipped policy to achieve that end because only targets labor market insiders.


58 Data are from the World Bank (WDI).


62 There are alternative, often OECD-based, explanations of welfare state such as power politics, de-industrialization, and varieties of capitalism. For power politics thesis, in developing country context, it is hard to get comprehensive data on union density and level of wage bargaining, so we followed Rudra 2002 and used potential labor power (PLP) in the paper. For the de-industrialization thesis, we use a variable that captures the importance of service sector in the economy, namely, (100-[industrial and agricultural % GDP]). We find no support for the de-industrialization thesis (Table 5 in the online appendix): we think this
is probably because de-industrialization still is at the very early stage for most of the 
developing countries. Finally, for varieties of capitalism argument, we think the wage 
covariance variable is a good measure of asset specificity, which captures the basic idea of 
social insurance and cooperatist arrangement as a function of asset specificity of the 
economy.

(Severn, MD: Center for Systemic Peace, 2010).

Investment in Education,” International Organization 62 no. 2 (2008):289–322; Nita Rudra and 
Stephan Haggard, “Globalization, Democracy, and Effective Welfare Spending in the Developing 
World,” Comparative Political Studies 38 no. 9 (2005):1015–1049; David Brown and Wendy 
Hunter, “Democracy and Social Spending in Latin America, 1980-92.” American Political Science 
Capital Formation.” Comparative Political Studies 37 no. 7 (2004):842–864; Robert Kaufman and 
Alex Segura-Ubiergo, “Globalization, Domestic Politics, and Social Spending in Latin America: 
A Time-Series Cross-Section Analysis, 1973-97.”

Data are from the World Bank (WDI).

Data are from the IMF-GFS, various years.

Alternatives are spatial maximum likelihood approach (spatial ML) and spatial 
two-stage-least-squares instrumental variable approach (2SLS).

Given the equivalence between error-correction models and autoregressive distributed lag 
models, we follow the standard Bewley transformation of error correction models to 
calculate the long-run multipliers (see Suzanna De Boef and Luke Keele, “Taking Time 
an ADL model can be calculated by dividing the coefficient of interest by one minus the 
coefficient of the lag dependent variable, $\frac{\beta}{1-\varphi}$. Yet, neither ECM nor ADL provides a direct 
estimate of the standard error for the long-run multiplier. One alternative is to calculate the 
variance of the long-run multiplier with the formula for the approximation of the variance of 
a ratio of coefficients with known 
variances: $\text{Var}(a/b) = (1/b^2)\text{Var}(a) + (a^2/b^2)\text{Var}(b) - 2(a/b^3)\text{Cov}(a,b)$. Alternatively, the 
Bewley (1979) transformation allows to directly estimating the long-run multipliers and their 
standard errors. Suppose a simple model $Y_t = \alpha + \varphi Y_{t-1} + \beta X_t + \epsilon_t$, the transformation 
consist of a regression with the following form: $Y_t = \gamma + \omega Y_{t-1} + \psi X_t + \mu_t$, where $\gamma = \eta \alpha$, 
$\omega = \eta \varphi$, $\psi = \eta \beta$, $\mu = \eta \epsilon_t$, and $\eta = \frac{1}{(1-\varphi)}$. This requires instrumental variables regression to 

obtain consistent estimates because the inclusion of $\Delta Y_t$ implies contemporaneous values of 
$Y_t$ on the right hand side of the equation. So we first regress changes in the dependent 
variable on its lagged levels and all other right hand side variables in the model, and then 
take the predicted values to be included in the included Bewley model: $Y_t = \gamma + \omega \Delta Y_{t-1} + 
\psi, \eta$. The long run multiplier is estimated directly as the coefficient on $X_t$, where $\omega = 
\frac{\beta}{1-\varphi} = \eta(\beta)$, as $\eta = \frac{1}{(1-\varphi)}$, and it provides an estimate of the variance associated with the 
LRM.

The fact that the spatial lag has a positive effect on the dependent variable suggests that 
countries either increase or decrease spending in social insurance by converging toward what 
other relevant competitor countries do. If the inward-oriented manufacturing sector faces 
competition from manufactured goods produced in countries with low social insurance 
spending, the expected domestic reaction is reducing the cost of social security and welfare 
programs. On the contrary, the expansion of public social insurance programs in developing
countries may be more likely when domestically oriented industries face competition from countries with more generous and large social insurance schemes.

We acknowledge that openness may be a limited way of testing compensation arguments. Results remain unchanged when we estimate the models controlling for both import flows and export flows (in their lagged levels and first-differences) instead of the total trade openness variable.

Again, levels and first-differences of import and export flows do not affect this result (see Table 1 in the online appendix).