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Labor Institutions and Development Under Globalization*

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ABSTRACT

Labor market regulation is a controversial area of public policy in both developed and developing countries. After decades of de-regulatory advice, international financial institutions have recently come to a less extreme position. But any concessions to labor regulation are based on concerns for social stability or for short-term support to aggregate demand, while regulation continues to be viewed as harmful to economic efficiency. In this paper we take a deeper look at the impact of labor institutions on economic development in two ways. First, we propose a macroeconomic model with balance-of-payments constraint for a "small" developing country open to trade and foreign capital. This helps us clarify the importance of a dynamic view of economic efficiency, as opposed to the static view embedded in mainstream policy advice. Secondly, we discuss the political economy of labor regulation. We argue that labor institutions promote economic development though positive effects on aggregate demand, labor productivity and technology.

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1 'Luxuries' that developing countries cannot afford ……

Labor market regulation is a high-profile and controversial area of public policy in developed and developing countries alike: its impacts on economic growth, employment and income inequality have been the topic of heated policy discussions and much research in recent decades.[1] Labor market regulation is usually thought of as a set of legal interventions or collective (bargaining) organizations that structure and coordinate processes of wage determination and employment generation; examples include rules for labor unions and collective bargaining, legislation on minimum wages and employment protection, and unemployment insurance. Such regulations make up an important part of the institutional framework within which real-life labor markets are embedded—and they are therefore often called 'labor market institutions'. Today's developing countries introduced labor market institutions that were often patterned after their colonizers' laws and traditions (Botero *et al*. 2004; Campos and Nugent 2012; Deakin 2016). While such 'progressive' or 'protective' institutions generally enjoy public (political) support and are perceived as welfare-improving by most voters, in economic analysis they have traditionally been portrayed as 'luxuries' developing countries cannot afford. Mainstream economists, often employed by the World Bank or the IMF, have been among their most outspoken critics. Laws governing (minimum) wages, job protection, and working conditions or facilitating collective wage bargaining, they argue, prematurely raise developing countries' labor costs which, in turn, will reduce the international cost competitiveness of their firms, hurt (net) exports and hence destroy the very formal-sector jobs these laws are designed to protect (Besley and Burgess 2004).

This suggests that there exists a trade-off, as argued by Okun (1975), between the quality and the quantity of jobs available to workers operating in competitive labor markets: in the absence of compensatory productivity gains, policy efforts to protect workers lead to higher unit labor costs, discouraging investment, reducing export competitiveness and ultimately leading to lower economic activity and employment. In this view, labor rights and labor protection are more likely to create additional unemployment and informal-sector under-employment, particularly of unskilled workers or labor force entrants, than lead to higher wages

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[1] Recent surveys of the literature include Freeman (2010), Lee and McCann (2011), Campos and Nugent (2012), Betcherman (2014), Berg (2015), Deakin (2016) and Brancaccio, Garbellini and Giammetti (2018). Broecke, Forti and Vandeweyer (2017) review 95 studies for 14 emerging countries and present a meta-analysis based on 56 of the studies (see our Table 1).

and better working conditions. According to the World Bank's *Doing Business Report* "… laws created to help workers often hurt them,' (World Bank; 2008). The working draft of the World Bank's 2019 *World Development Report* again advocates for cutting minimum wages, facilitating dismissals and removing other labor regulations in order to favor employment and economic development. The working draft says that less "burdensome" regulations are needed so that firms can hire workers at lower cost as well as rearrange their workforce to accommodate changing technologies. In a more extreme statement, Nobel Prize–winning economist James McGill Buchanan (1996) wrote in *The Wall Street Journal*: "Just as no physicist would claim that water runs uphill, no self-respecting economist would claim that increases in the minimum wage increase employment."[2]

This one-sided take of labor market institutions, which has become codified in textbook treatments since Samuelson (1947), underpins what Albert Hirschman called 'the rhetoric of reaction': three standard tropes used by critics of social reform to defend the status quo. The first standard trope, as Andrew Schrank (2014) explains, is that protective labor market institutions are 'futile', because they do not solve the problem they are designed to improve, as they will push workers into precarious, informal employment. The second one is that the impacts of labor institutions are 'perverse', because their introduction achieves just the opposite of what it is intended to achieve; the third trope is 'jeopardy' whereby labor market regulation destroys 'good' formal-sector jobs. Policymakers in the developing world had better prioritize job creation – so the mainstream argument goes – and should not go against the proverbial 'magic of the market'.

The 'rhetoric of reaction' has been challenged on both theoretical and empirical grounds and there have been signs that the debate on labor market regulation and economic development may turn. Theoretically, it has been argued that labor market institutions are not generally instruments for 'rent-seeking' (by 'insiders' trying to influence the distribution of incomes in their favor at the expense of 'outsiders'), but address (labor) market imperfections in a second-best world (Lee and McCann 2011). These institutions can reduce transactions costs, generate 'efficiency effects' and raise productivity (Freeman 2010; Storm and Naastepad 2009). They may also function as second-best instruments of risk sharing and insurance, protecting workers

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[2] For an important intellectual biography of Buchanan, who not only advised the Pinochet dictatorship in Chile, but also worked to build a radical-right social movement in the U.S., funded by the Koch brothers and a network of fellow wealthy donors, see MacLean (2017).

against unemployment and income loss (Agell 2002; Lee and McCann 2011; Berg 2015) — a role that has become more prominent for developing and emerging countries facing greater external risks as they become more globalized (Rodrik 1998; Akyüz 2015). At the firm level, labor regulation increases job stability, reduces search costs, and lowers labor turnover rates (for high-skilled workers) and it can improve labor productivity and innovation through employer-worker cooperation, efficiency-wage effects, the build-up of firm-specific human capital and Marx-biased labor-saving technical progress (Storm and Naastepad 2009). Labor regulations thus generate benefits, not just for (high-skilled) workers but also for firms and in terms of overall economic growth.

Empirically, there is a growing body of econometric work on the impact of labor market institutions on economic development which suggests (and quite clearly so) that their impacts on growth are much smaller than one would infer from the heat of the debates (Campos and Nugent 2012; Betcherman 2014). Richard Freeman summed up the evidence, stating that more rigid labor regulations "reduce the dispersion of earnings and income inequality" while their "effects on other aggregate outcomes, such as employment and unemployment are inconclusive" (Freeman 2010). The ILO (2015, p. 110) concludes in its *2015 World Employment and Social Outlook* that "there is a fairly wide 'plateau' on which labor regulations will have neutral effects on employment performance, allowing considerable scope for country preferences and choices.' The *2013 World Development Report* on *Jobs* reaches a similar conclusion: the efficiency enhancing and undermining effects of labor rules generally cancel out, and hence most of their effects are redistributive. But swinging back to the vision of a decade earlier the 2019 edition of the same report seems to fully embrace the 'rhetoric of reaction again. On the other hand, even the IMF (2016, p. 115) seems to be changing its view in response to the new evidence, concluding in its *World Economic Outlook* of 2016 that: "The analysis shows that reforms that ease dismissal regulations with respect to regular workers do not have, on average, statistically significant effects on employment and other macroeconomic variables."[3] These new findings do not just constitute a challenge to the 'rhetoric of reaction',

[3] Likewise, the OECD (2016, p. 126) writes in its *OECD Employment Outlook*, that "Most empirical studies investigating medium/long-term effects of flexibility-enhancing Employment Protection Legislation reforms suggest that they have, at worst, no or a limited positive effect on employment in the long run."

but also open up a menu of public policy choices to improve distribution, and perhaps productivity and competitiveness, in the developing world (Berg 2015; ILO 2016/17).

Our paper takes stock of the large and growing literature on the economic effects of labor market institutions in developing countries under globalization. Section **2** reviews the literature, critically assessing the theoretical concepts and summarizing the key empirical findings. Section **3** goes into the relative strengths and weaknesses of the indicators of 'labor market institutions' used in the extant literature—do these indicators, which quantitatively 'reduce' a complex (institutional and legislative) reality to a single-dimensional metric, really measure what they are supposed to measure? Our next step, in Section **4**, is to try and interpret the stylized facts coming out of the discussions in **2** and **3**, in terms of a simple macroeconomic growth model of a balance-of-payments (BoP) constrained, late-industrializing country facing the risks and challenges of globalization. We use the model to highlight the channels through which reforms of labor market institutions may hinder, or advance, economic development assuming (realistically) that the growth of late-industrializers is limited, in a structural sense, by the need to finance necessary imports through either earning from exports or financial inflows (*cf.* Thirlwall 1979; McCombie and Thirlwall 2004; Blecker 2010). Section **5** presents a political-economy analysis of ways in which late-industrializing states may use regulatory obligations to improve income distribution, and perhaps productivity and international competitiveness. The argument here (loosely) follows Streeck's (2004) notion of 'beneficial social or regulatory constraints', which force capitalists (in Schumpeterian fashion) to innovate so as to benefit from these constraints, and by doing so, these firms improve the economy's dynamic efficiency (Ocampo 2005). Put differently, labor market regulation, already desirable in its own right, must be seen as complementary to and supportive of (active) industrial policy. We end by drawing our conclusions in Section **6**.

2 Literature review: theoretical concepts and empirical results

The economic literature on the developmental impacts of labor regulation is overwhelmingly empirical. In this econometric literature, the mechanisms through which labor regulation is assumed to produce specific economic effects are rarely made explicit—the implicit theoretical prior is that interventions in the form of employment protection legislation (EPL) or unemployment insurance distort the functioning of the labor market leading to lower employment or lower growth or both. Minimum wages are an exception, however, following debates of the early twentieth century on the impact of wage setting policies and, later, on efficiency wages (Leibenstein 1957; Stiglitz 1976; Dasgupta and Ray 1986). But even for minimum wages theoretical contributions focusing on developing economies are rare. In one such contribution', Basu and Felkey (2008) show that *higher* wages can be associated with *lower* unemployment even in competitive labor markets and that, absent a minimum wage, the economy may converge to a low-wage and high-unemployment equilibrium. Basu and Felkey's argument did not, however, upset the consensus that the distortionary nature of labor regulation must raise unemployment and lower growth. Given this theoretical prior, greater equity, brought about by higher (minimum) wages, would require sacrificing higher employment, defeating its purpose. In a widely cited paper, Lazear (1990) argues that mandatory severance payments are likely to lead to an equilibrium outcome with lower employment because they drive up unit labor costs without affecting (marginal) productivity. As a result, optimal labor demand is lower than it would be, an unsurprising result given the implicit assumption of Say's law. This logic surfaces in influential papers on the effects of labor regulation in India by Besley and Burgess (2004) and Aghion, Burgess, Redding and Zilibottti (2008), who find that Indian states which amended labor laws in a pro-worker direction experienced lower output, employment, investment, and productivity in registered manufacturing (but higher output in unregistered manufacturing),[4] and in Latin America by Heckman and Pagès (2004) who report adverse impacts of regulation on employment and inequality. Espousing the same view, the first World Bank's *Doing Business Report* (World Bank 2003) states that increases in dismissal

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[4] These studies on India have been criticized for faulty coding (of strength of EPL), incorrect interpretation of labor laws, and 'attribution bias', *i.e.* incorrectly attributing lower productivity in a given state to EPL. Acharya *et al*. (2010), D'Souza (2010) and Sofi and Sharma (2015) provide a critique and more realistic findings for India.

costs are responsible for double-digit increases of unemployment in countries as diverse as India, Peru and Zimbabwe.

Recently, however, a more realistic view seems to have emerged. According to the latest World Bank's *Doing Business Report* (2017), "by setting the right incentives and deterrents for both employers and employees, labor regulation could contribute to labor mobility and productivity growth". While the report still cites labor flexibility as a factor facilitating job creation, recent contributions point to two channels through which labor regulation can affect output and employment: productivity growth and innovation. In the framework of neoclassical growth theory these are two sides of the same coin. On the negative side, some authors argue that EPL will lead to lower aggregate productivity because firms, unable to adjust labor demand freely, will refrain from investments and the process of creative destruction will be hampered (Samaniego 2006; Poschke, Martin and Scarpetta 2012; Caballero, Cowan, Engel and Micco 2013). An alternative negative view focuses on younger firms, innovation and FDI. By burdening these firms more than others, labor regulation obstructs their signature contribution to growth—innovation and attraction of FDI (Pierre and Scarpetta, 2007). On the positive side, while still assuming that productivity growth depends mostly on supply-side factors, others argue that EPL leads to higher productivity because it encourages better cooperation between workers and employers, better work commitment and the process of skills acquisition (Akerlof and Yellen 1986; Soskice 1997; Pierre and Scarpetta 2004, 2007; Acharya *et al*. 2010). Also on the positive side, although with a somewhat unclear argument, the 2018 *Doing Business Report* anticipates that gender-equality laws will lead to higher productivity by encouraging more women to enter the labor market (World Bank 2017). In sum, theoretical frameworks that analyze the economic effects of labor regulation in developing countries are largely undeveloped and most contributions refer to a textbook version of a (neoclassical) general equilibrium model in the spirit of Samuelson (1947) to come up with the finding that 'water runs downhill', as Buchanan (1996) insisted. In section **4** we propose a framework that better reflects key features of late-industrializing economies.

The empirical literature on the impacts of labor regulation in developing countries is much richer. Probably also owing to the absence of a clear theoretical framework, empirical studies have gone in many different directions testing the effect of regulation on many different variables. After an initial wave of empirical research, inspired by Besley and Burgess (2004) and Heckman and Pagès (2004), which mostly reported negative impacts of labor regulation on growth, employment and productivity, later studies are increasingly converging on several

empirically robust 'stylized facts'.

The first stylized fact is that the observed growth and employment effects of (higher) minimum wages and (stricter) employment protection are mostly inconclusive, while these measures lower the dispersion of earnings and income inequality (Betcherman 2014; Deakin 2016; Broecke *et al.* 2017). While some sector-level studies tend to maintain that regulation harms employment creation (e.g. Amin 2007), there is growing evidence that the aggregate impacts of higher minimum wages are insignificant. A recent World Bank study (Kuddo, Robalino and Weber 2015, p. 11) concludes that "although the range of estimates from the literature varies considerably, the emerging trend is that the effects of minimum wages on employment are usually small or insignificant (and in some cases positive)."[5] Evidence, especially for China, is building up for a positive minimum wage-employment relationship in a monopsonistic labor market (Huang, Loungani and Wang 2014 for China; Bhorat, Kanbur and Stanwix 2017 for Sub-Saharan Africa). This latter evidence is reinforced by macroeconomic analyses that point to positive feedback of labor market institutions on investment and aggregate demand (Storm and Naastepad 2012; Storm and Isaacs 2016; Strauss *et al.* 2017; UNIDO 2017). But effects on growth and employment are generally small or insignificant compared to those on income distribution (Freeman 2010; Betcherman 2014), as is confirmed as well by recent meta-analyses of this literature (Nataraj *et al.* 2014; Broecke *et al.* 2017). This is illustrated in Table 1 which summarizes findings relating to the effects of higher minimum wages on employment and informality in fourteen emerging and developing countries.

A second finding is that employment protection laws often encourage employers to invest in productivity-enhancing technologies. Such laws are found to be positively associated with innovation as measured by patenting activity or number of start-ups in higher-technology industries such as software and bio-pharma (Acharya *et al.* 2010). Thirdly, labor market standards are found to have a 'technology-forcing' or 'cleansing' effect, as tougher rules favor stronger enterprises and lead to the displacement of weaker, less productive ones (Mayneris, Poncet and Zhang 2014; Huang, Loungani and Wang 2014; Mau and Xu 2017). Likewise, there is strong firm-level evidence that regulation supporting 'worker voice' within the firm

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[5] Likewise, a review of about 70 studies for high-income countries by Belman and Wolfson (2014, p. 21) finds that employment effects of higher minimum wages are close to zero and too small to be observable in aggregate employment or unemployment statistics.

induces productivity as well as employment gains through their impacts on worker motivation and commitment (Deakin 2016). Finally, a fourth stylized fact is that stricter regulation may lead to higher informality although this effect is small according to most studies (Nataraj *et al*. 2014; Broecke *et al.* 2017; see also Table 1).

From an empirical perspective, a critical issue is the way labor regulation is measured. Most forms of labor regulation are 'ordinal' in nature which means they can be ordered (in terms of 'low', 'medium' and 'high' or on a scale (say) from 1 to 6, with a higher score indicating stricter, more worker-protective, laws). But the indicators of labor market regulation, *e.g.* the restrictiveness of legal employment protection as reflected in various EPL indices, are used in empirical analyses as 'interval' or 'ratio' variables—meaning that the difference between two values is meaningful.[6] Defining these ordinal measures is not a straightforward exercise in the first place: the (rank) correlations between different labor market indicators are found to be very moderate (Aleksynska and Cazes 2014), which is not a good sign (since these indices are intended to measure exactly the same phenomenon). But interpreting the obtained ordinal measures as representing interval (or even ratio) scales and using these to calculate means, standard deviations and standard errors involves not just a quantum leap of logic—requiring quite a few pinches of salt — but is methodologically faulty. An additional complication is that labor market regulation is not a scalar, but a multidimensional variable and that the various features of very diverse labor institutions (such as minimum wages, EPL, unionization and more) have to be condensed to a single-dimensional metric (for example by means of factor analysis). In the next section we examine more closely the indices that are used for this purpose.

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[6] To illustrate: the LAMRIG index developed by Campos and Nugent (2012) is argued to capture the rigidity of employment protection legislation. The LAMRIG index takes a value of 1.45 for Argentina, of 2.25 for Brazil, and of 1.42 for China during 2005-2009. Because the index is used as an interval variable, the strength of employment protection to Argentinean workers was almost exactly similar to the strength of job protection given to Chinese workers. Job protection in Brazil was more than 1.5 times more rigid than employment protection for workers in Argentina and China.

Table 1

The effect of minimum wages on employment in the 14 largest emerging economies

	minimum/ average wage (2013)	employment rate, 15+ (2013)	Informal employment	Effect of an increase in minimum wage on:			
				Employment	formality	number of studies	mean
Argentina	0.59	56%	50% (2009)	Mixed	little research	1	−0.011
Brazil	0.45	59%	42% (2009)	mostly negative (small)	mostly negative or zero / mixed	14	−0.025
Chile	0.45	56%	36% (1995-99)	mostly negative		5	−0.051
China	0.33	69%	33% (2010)	mixed		9	−0.100
Colombia	0.60	63%	60% (2010)	mostly negative	mixed	1	−0.048
India	0.40	50%	84% (2009)	mixed			
Indonesia	0.69	63%	73% (2009)	mixed	mixed	8	−0.010
Mexico	0.28	57%	54% (2009)	mixed		3	−0.175
Philippines	0.87	59%	44% (2008)	negative			
Poland	0.40	50%	5% (2010)	negative		5	−0.091
Russia	0.18	65%	12% (2010)	zero (or small)	mixed/negative	1	+0.001
South Africa	0.30	43%	33% (2010)	zero/mixed	mixed/positive	6	−0.009
Thailand	0.65	71%	42% (2010)	mixed		1	−0.182
Turkey	0.38	46%	31% (2010)	mixed	little research	3	+0.040
All countries						56	−0.052

Source: Broecke, Forti and Vandeweyer (2017). These authors conclude that "moderate increases in a minimum wage (….) are unlikely to lead to significant employment losses" and that "minimum wage studies for Mexico, Colombia and Poland most often report negative effects of the minimum wage on employment, while positive effects are most often found in studies for China, Indonesia and South Africa" (Broecke *et al*. 2017, p. 383).

3 Indicators of labor market regulation: methodological pitfalls and snags

A consistent research program attempting to quantify aggregate regulation of economic activity began in the mid-1990s with a series of papers by La Porta *et al.* (1997, 1998, 2000). A decade later, Botero *et al.* (2004) applied this idea to labor regulation. Botero *et al.* (2004) quantify labor regulation in 85 countries using a two-step procedure. First, they make a list of regulatory features relevant to the labor market. Secondly, they assign to each country scores indicating the degree to which each feature is reflected in its laws. For example, for the feature "prohibition of part-time employment" a country receives a score of 1 if part-time employment is not allowed and a score of zero in other cases. The scores are then combined to create indexes for employment laws, collective bargaining laws and social security laws. Using their indicator, Botero *et al.* (2004) find that lower regulation is associated with higher income, higher employment, lower informality and other desirable outcomes.

This type of index could be useful to assess the way regulation evolves over time in a country because of the "ordinal" nature of the scores. Since the scores are assigned somewhat arbitrarily it is hard to argue that their differences can be useful in cross-country comparisons. For example, while the variable "conditions of the employment in the constitution" is given values of 0 or 1 depending on whether employment conditions appear or not in a country's constitution, it is given values of 0.33 or 0.67 in intermediate cases. Clearly, these numbers could be replaced by many others in the same relative positions, but this would affect any averages and any processing, including any econometric analysis.

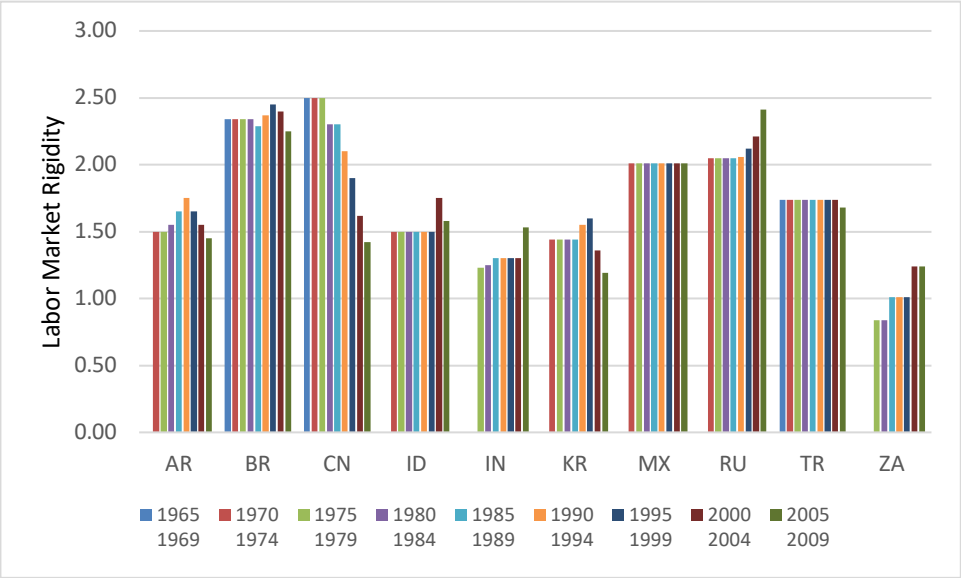
There are also several other problems with this "leximetric" approach to assessing labor regulation. First, for the index to be meaningful the list of features would have to be complete, including all factors that affect the performance of the labor market. This, however, requires a prior specification of a theory of the impact of regulation on labor market performance. While no theory is made explicit by Botero and colleagues, they seem to take the view of regulation as a burden stifling the good performance of the labor market. Therefore, they do not consider effects of regulation that may benefit the economy, such as measures of job or income security. Secondly, in many countries only a fraction of labor regulation is enforced, suggesting that a narrow focus on *formal rules* may be misplaced (Aleksynska and Eberlein 2016; Schrank 2014). Thirdly, arbitrariness is involved when combining scores reflecting different regulatory areas into overall indexes.

Despite these problems, the empirical research on labor regulation indexes has developed over the years, with contributions that have tried to generalize or correct Botero *et*

al.'s (2004) initial results. Campos and Nugent (2012) extend the index (the acronym they use is LAMRIG) to 140 countries, including many developing countries, and present data for the period 1960-2010. For emerging economies their data paint a mixed picture with clear trends toward deregulation in Argentina, Brazil, China and Korea, a clear trend toward strengthening regulation in South Africa and less clear dynamics elsewhere (Figure 1).

Figure 1

LAMRIG: Emerging Economies



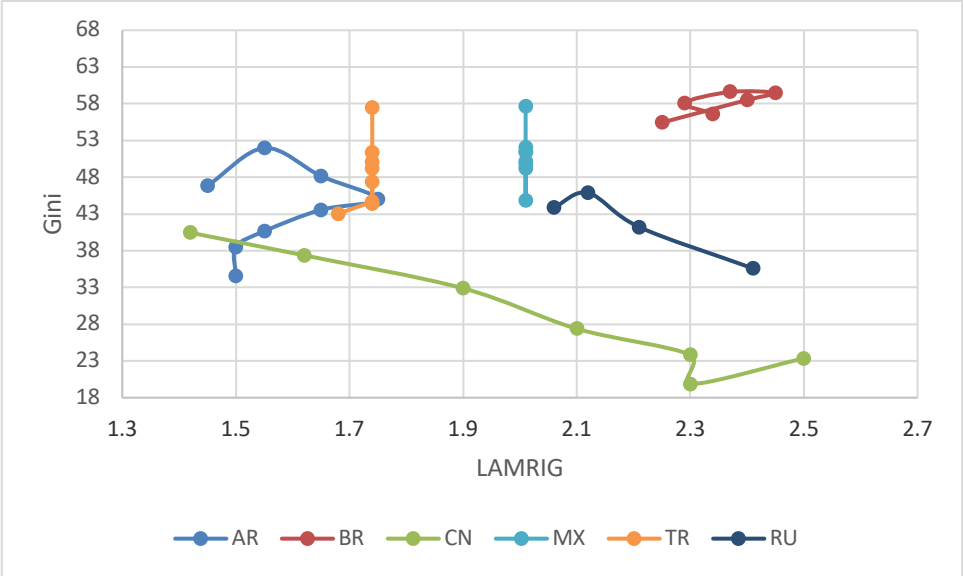
Notes: AR = Argentina; BR = Brazil; CN = China; ID = Indonesia; IN = India; KR = South Korea; MX = Mexico; RU = Russia; TR = Turkey; ZA = South Africa. *Source*: Authors' calculation based on data from Campos and Nugent (2012).

Using panel methods Campos and Nugent (2012) analyze econometrically the relationship between their index of labor market rigidity (LAMRIG) and several economic and social variables, including GDP growth, unemployment and the Gini index but also dummies representing the occurrence of economic crises as well as trade or financial liberalization. On the one hand, Campos and Nugent conclude that lower labor market rigidity does not systematically affect economic growth but does raise income inequality. The latter finding is illustrated in Figure 2, using data for Argentina, Brazil, China, Mexico, Russia and Turkey. Figure 2 combines LAMRIG indices with Gini coefficients, averaged over the same five-

periods. A negative relationship between (greater) labor market rigidity and (lower) inequality emerges for three of the six emerging economies (China, Russia and, partially, Argentina) for which data are available. In the remaining three countries, the relationship is either positive or unclear. Campos and Nugent further observe that trade liberalization, unlike financial liberalization, is often followed in time by an increase in the LAMRIG indicator; this could suggest that (formal-sector) workers (in import-competing industries) react to the process of opening up of the economy by demanding stronger job protection. However, the possible links between these liberalizations and inequality levels are not analyzed explicitly.

Figure 2

LAMRIG and Gini: Emerging Economies



Notes: AR = Argentina; BR = Brazil; CN = China; MX = Mexico; RU = Russia; TR = Turkey. *Source*: Authors' calculation based on data from Campos and Nugent (2012) for the LAMRIG indicator, and on UNU-WIDER's World Income Inequality Database for the Gini coefficients. Annual observations are averaged over the same 5-year periods used in the LAMRIG database.

Refraining from many arbitrary calculations, Rama and Artecona (2000) and Forteza and Rama (2006) build indexes summarizing the ratification of international conventions on non-discrimination in employment. With a similar approach Kucera's (2002) index summarizes the rules governing collective bargaining, while Aleksynska and Schindler (2011) put together a more comprehensive database of regulation comprising EPL, unemployment insurance and minimum wage for 91 countries starting from 1980. More complex, and arbitrary, calculations are involved in Heckman and Pagès' (2000, 2004) Job Security Index in which labor regulation determines the cost of worker dismissal and, therefore, the value of dismissing a worker at a given point in time. The index is defined as the discounted value of dismissing a worker. Deakin, Lele and Siems (2007) and Deakin *et al.* (2015) make an attempt to offer a general index based on the view that labor regulation is necessary to allocate authority and risk. Their CBR-LRI index, applied to 60 countries, to the years from 1990 onwards, points to moderately increasing labor protection in all regions, especially for alternative employment contracts (other than full-time contracts) except in Europe. Furthermore, using panel econometrics they argue that the impact of labor regulation on the economy is not negative.

Some of the most influential indexes have been built and published by institutions. The most widely debated index has probably been the World Bank Employing Workers Index, a component of its 'Ease of Doing Business' indicator. Extensive criticism (see Berg and Cazes, 2008; Lee *et al.*, 2008) and an independent evaluation (World Bank, 2011), pointed out that the index was biased by a view of labor regulation as a cost to business and a drag on efficiency, which overlooked any positive effects that regulation might have on the economy. As a result, the index was excluded from the larger 'Doing Business' indicator, but Aleksynska and Cazes (2014) have shown that it survives in at least three frequently cited indexes: the World Economic Forum's Labor Market Efficiency Index; the Fraser Institute Labor Market Regulations Index and the Government Efficiency Index of the International Institute for Management Development. Finally, the OECD's (2004) 'strength of employment protection legislation' (EPL) indicator is a comprehensive dataset of regulation covering OECD countries from the 1990s. Its construction has evolved over time, moving from relying on government surveys to surveys of businesses (which, however, are more prone to consider regulation a burden) and, eventually, to primary sources.

4 A balance-of-payments constrained growth model analysis

In order to identify the potential impacts of labor market regulation on economic development, we use a modified version of Thirlwall's (1979) model of balance-of-payments-constrained growth, which focuses on a "small" developing country open to trade and foreign capital.[7] In this model, long-term growth is constrained by export growth, because developing countries cannot permanently run (and finance) a trade deficit. We emphasize that the model is used as a mnemonic device, capturing and illustrating essential aspects rather than constituting a universal description of economic reality. Let us further assume that the late-industrializing country under consideration produces one (composite) good which is an imperfect substitute for the goods produced by the rest of the world.

The export growth (x) of this country is a function of the growth of world income (y_W), the growth of relative prices ($p - p_W$) and the relative change in the exchange rate (er). This gives:

$$x = \vartheta(\tau)\, y_W - \eta\,(p - p_W - er) \tag{1}$$

where p is domestic inflation, p_W is global inflation, and $er > 0$ means that the country's exchange rate is depreciating. The elasticity η measures the impact of relative prices ($p - p_W - er$) on export demand while $\vartheta(\tau)$ is the world income elasticity of demand for a country's exports. The parameter τ can be interpreted as the technological intensity of the export item which ranges from 'low-tech' to 'medium-tech' and 'high-tech'. The world income elasticity of export demand is higher for higher-technology exports, as illustrated by the econometric estimates of $\vartheta(\tau)$ for selected Latin American countries (1962-2014) by Neto and Porcile (2017) which appear in Table 2. We therefore assume that ϑ depends positively on the level of technological diversification of the economy, or $d\vartheta/d\tau > 0$. It is the role of macroeconomic, trade and industrial policies to build up domestic technological capabilities, facilitate learning and promote more diversified and upgraded production structures to bring about a more technology-intensive export structure (Ocampo, Rada and Taylor 2009; Storm 2015; Wade

[7] As usual when discussing international trade and finance, a "small" country here indicates one whose economy is not large enough to influence the international price of traded goods and services, the exchange rate and other international macro prices.

2018). We argue here that labor market institutions can help in bringing about such technology-deepening of a country's exports.

Import growth (m) is a function of the growth of domestic income (y), the growth of relative prices ($p - p_W$) and the relative change in the exchange rate (er). This gives:

(2) $$m = \mu\, y + \gamma(p - p_W - er)$$

where μ is the domestic income elasticity of demand for imports and γ is the elasticity of import demand with respect to the relative prices ($p - p_W - er$). To bring unit labor costs into the picture, we assume (following Fagerberg 1988) that prices are determined by unit labor costs with a constant mark-up. Unlike other analyses (*e.g.*, Fagerberg 1988) we include other costs of production such as energy cost and costs of materials and intermediate inputs. This means that the price level $P = \theta\,(ULC + \zeta)$, where θ equals 1 plus the mark-up, ULC is the level of unit labor cost, and ζ is non-labor costs per unit of production. When we express this price equation in growth rates, while assuming that both θ and ζ are constant, we get the following expression for domestic wage-cost-push inflation:

(3) $$p = \Xi\, ulc, \qquad 0 < \Xi < 1$$

ulc stands for the growth of the country's unit labor costs. Coefficient Ξ is the share of marked-up labor costs $ULC \cdot \theta$ in the price level P, which for developing economies like India and Brazil takes values between less than 0.1 and 0.25 in (export) manufacturing. What this means is that (say) a 5 percentage point increase in unit labor cost growth leads to an increase in inflation of around 1 percentage point (Storm and Naastepad 2012). For reasons of exposition (and without loss of generality) we further assume that unit labor costs in the rest of the world do not change; this means that $p_W = \Xi_W\, ulc_W = 0$. Using these two assumptions, equations (1) and (2) can be simplified as follows:

(1#) $$x = \vartheta(\tau)\, y_W - \eta\,(\Xi\, ulc - er)$$

(2#) $$m = \mu\, y + \gamma\,(\Xi\, ulc - er)$$

Table 2

Income elasticity of export demand: 1962-2014, selected countries

	Primary products	Resource-based manufactures	Low-technology manufactures	Medium-technology manufactures	High-technology manufactures
Argentina	0.66	0.69	0.79	0.82	0.93
Brazil	0.62	0.87	1.74	2.23	4.14
Chile	1.05	1.10	1.51	2.26	3.85
Colombia	1.00	1.58	1.57	3.24	4.24
Mexico	0.77	1.12	2.26	2.83	6.91
Uruguay	0.76	0.84	0.62	1.26	2.18

Source: Neto and Porcile (2017), Table 1. The data are from the United Nations Commodity Trade Statistics Database. The trade data are classified according to technological intensity using Lall's (2000) classification.

The model is closed by assuming that the balance-of-payments (BoP) identity holds in domestic currency terms:

(4) $$P\,X + K = P_W M\,ER$$

P is the domestic price level, X is the volume of exports, K is the net capital inflow into the economy, P_W is the world market price, M is the volume of imports, and ER is the nominal exchange rate. When we express (4) in growth rates and use (3) and assume that $p_W = \Xi_W\, ulc_W = 0$, we get:

(5) $$\Theta\,(x + \Xi\, ulc) + (1 - \Theta)\kappa \equiv m + er$$

Equation (5) states that the weighed growth of exports and the weighted growth of net capital inflow (κ) must equal the growth of imports plus the rate of change in relative prices. Θ is the initial share of export earnings in the total inflow of foreign exchange, defined as the ratio [PX / ($PX + K$)]. For most developing countries, K is relatively small and hence Θ will likely have a value close to unity. The BoP restriction states that export earnings (in domestic currency terms) must match payments for imports (in domestic currency terms). Substituting (1#) and (2#) into equation (5), we solve for the (BoP-constrained) growth rate of domestic income y^*:

$$(6) \qquad y* = \frac{\Theta\, \vartheta(\tau) y_W + (1-\Theta)\kappa + [\Theta - \Theta\eta - \gamma]\Xi\, ulc - [1-\Theta\eta-\gamma]er}{\mu}$$

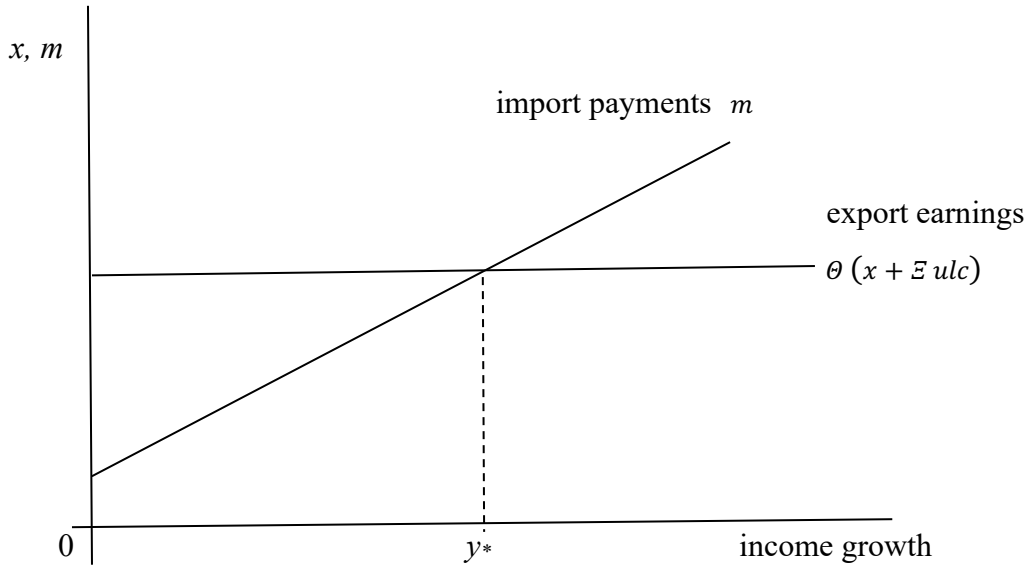
We note that the growth of unit labor cost is, by definition, equal to the difference between (nominal) wage growth (indicated by w) and labor productivity growth (denoted by λ). Using this definition, we rewrite (6) as follows:

$$(7) \qquad y* = \frac{\Theta\, \vartheta(\tau) y_W + (1-\Theta)\kappa + [\Theta - \Theta\eta - \gamma]\Xi\, (w-\lambda) - [1-\Theta\eta-\gamma]er}{\mu}$$

Domestic income growth $y*$ is thus determined by the growth of world income y_W, the rate of change of unit labor costs, and the growth of net capital inflow κ, as in the models of BoP-constrained growth developed by Thirlwall (1979) and McCombie and Thirlwall (2004). In what follows, we assume that net capital inflow κ is constant, the exchange rate does not depreciate or appreciate ($er = 0$), and μ does not change. Figure 3 graphically illustrates how the BoP-constrained growth rate $y*$ gets determined by the BoP-restriction of equation (5). It can be verified that an exogenous increase in world income growth will push up the horizontal 'exports' curve, thereby raising $y*$, while a currency depreciation (*i.e.* an increase in er) will push up the 'imports' curve, which would lower $y*$ (keeping all other factors constant).

Figure 3

The Balance of Payments (BoP) constraint and economic growth



However, our focus is on the impact of labor market institutions on growth in this open-economy setting, and we follow Betcherman (2014) by concentrating on the growth impacts of minimum wages and employment protection legislation (EPL). Let us first consider the impact of (higher) minimum wages—a notoriously controversial intervention, as is shown by the recent heated debate on the issue in South Africa (Storm and Isaacs 2016, Isaacs *et al.* 2017). Empirical research finds that not only formal-sector wages rise with higher minimum wages, but often informal-sector wages rise as well (Betcherman 2014; Nataraj *et al*. 2014). This would mean, in terms of equation (7), that the growth rate of nominal wages (w) increases. As a first approximation, the impact of higher w on growth is:

$$\text{(8)} \qquad \frac{d\,y*}{d\,w} = \frac{[\Theta - \Theta\,\eta - \gamma]\,\Xi}{\mu}$$

It can be seen that (dy^*/dw) is negative, if the Marshall-Lerner condition is strictly satisfied: $\eta + \gamma > 1$ (*cf.* Fagerberg 1988).

This cannot be taken for granted, however. Findings from empirical research are mixed and, if anything can be concluded, it is that the hypothesis that the Marshall-Lerner condition does not hold has not been rejected so far (Fagerberg 1988; Rose 1991; Bahmani, Harvey and Hegerty 2013). This means that our working hypothesis should be that $\eta + \gamma \approx 1$, in which case, higher minimum wages may or may not hurt the (long-run) BoP-constrained growth. If capital inflows are relatively small ($\Theta \approx 1$). Figure 4 illustrates the comparative-statics. Higher real wage growth (accelerating from w to w') means higher *ulc* and higher (export) prices; this would shift the 'export earnings' curve upwards (keeping export volume unchanged). But faster growth of unit labor costs (higher *ulc*) reduces the country's cost competitiveness and therefore lowers the growth of export volume x pushing down the 'export earnings' curve. From the left-hand side of (5), substituting (1#) and remembering that $er = \kappa = 0$, the growth rate of export earnings can be written as:

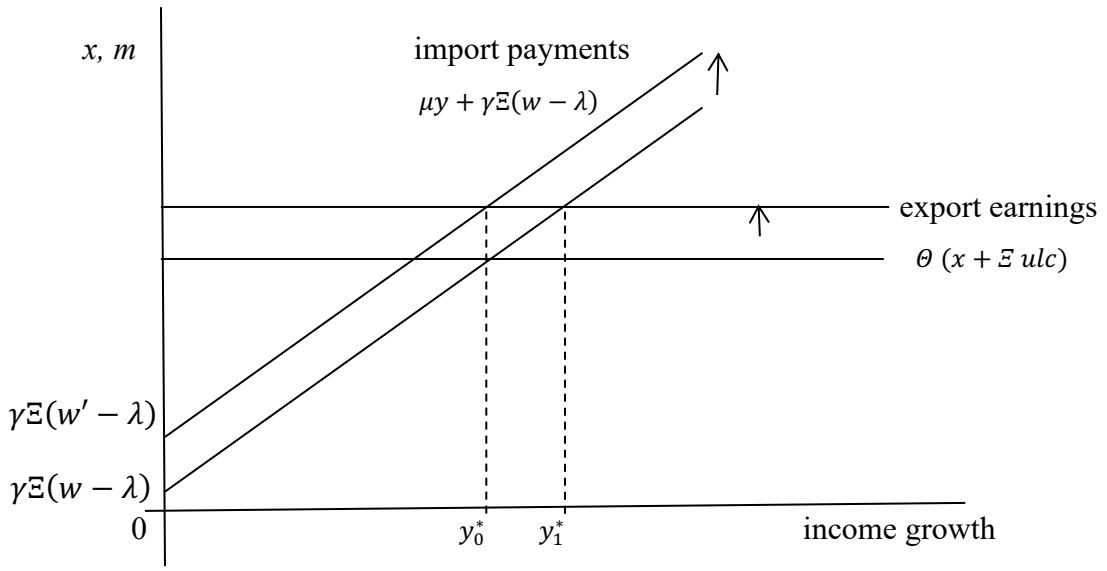
$$\text{(5a)} \qquad \Theta\,(x + \Xi\,ulc) = \Theta[\vartheta(\tau)\,y_W + (1-\eta)\,\Xi\,ulc]$$

Since the *ULC* elasticity of exports is smaller than unity—after all, we know that $\eta \approx 1 - \gamma$ —the net outcome is an *upward* shift of the 'export earnings' curve as in Figure 4. Higher export earnings loosen the BoP constraint and would, in principle, allow the country to import

more and step up growth from $y_0^*$to y_1^*. But the growth acceleration does not materialize. The reason is that the increase in *ulc* increases the import intensity of growth through the price elasticity of import demand γ in equation (2). The higher import intensity of growth is captured by the upward shift of the 'import payments' curve in Figure. Given $\eta + \gamma \approx 1$, the ultimate impact on y* turns out to be negligible—and the country's economic growth rate stays put close to y_0^*.

Figure 4

Higher minimum wage growth and BoP-constrained growth



If this is the case, it directly follows that (higher) minimum wages also do not reduce aggregate employment, which is exactly what Betcherman (2014), Kuddo *et al.* (2015) and Broecke *et al.* (2017) conclude based on reviews of the relevant empirical literature. At the same time, there is strong evidence that (higher) minimum wages compress wage distributions and reduce earnings inequality (for covered workers) and lower working poverty (see Betcherman 2014; ILO 2016/17)—and if (dy*/dw) = 0 indeed, all this can be achieved without depressing (structural) economic growth. It is in exactly this context that the position on labor regulations of the ILO (2015) has to be understood.

However, the conclusion that labor market institutions are not a 'luxury' which late-industrializing nations cannot afford does not only depend on the (empirical) fact that the Marshall-Lerner condition is not satisfied. Let us now assume that $\eta + \gamma > 1$.[8] Hence, from (8), we obtain that (dy^*/dw) < 0. For one, it should be clear that the (negative) impact of higher wage growth on y^* (through higher unit labor cost growth) can only be small, even when $\eta + \gamma > 1$, because *ULC* are just a fraction Ξ of the price (Ξ takes a value of only around 0.20). The negative impact on growth of higher *ulc* is therefore only around one-fifth of the impact of higher inflation. But there are other reasons to argue that any decline in y^* due to the deterioration in labor cost competitiveness is only a partial effect—as two other growth impacts of higher minimum wages are still ignored. Let us consider these two growth effects successively.

The *first* effect on growth of higher minimum wages operates through its impacts on labor productivity growth. As we already explained above, higher minimum wages encourage employers to invest in labor-saving (productivity-enhancing) technologies and at the same time have a 'technology-forcing' or 'cleansing' effect, as the stronger enterprises can cope with the higher wages, whereas weaker, less productive, firms, unable to adjust, are forced to exit the market (Mayneris *et al.* 2014; Huang *et al.* 2014). We summarize the productivity-enhancing impact of higher (minimum) wages in a simple expression (linear in growth rates) as follows (see also Ocampo, Rada and Taylor 2009):

$$\lambda = \alpha + \beta\, w, \qquad \text{where } 0 < \beta < 1 \tag{9}$$

Differentiating equation (7) with respect to w, taking (9) into account, gives us the growth impact of higher minimum wages which includes the increase in labor productivity growth which is—directly and indirectly— induced by the rise in w:

$$\frac{d\, y*}{d\, w} = \frac{[\Theta - \Theta\, \eta - \gamma]\, \Xi\, (1-\beta)}{\mu} \tag{10}$$

We already argued with reference to equation (8) that (dy^*/dw) is likely to be small (in absolute terms). Since $0 < \beta < 1$, it follows from (10) that the negative impact on growth of higher

[8] As can be seen in (7) if the condition is satisfied, $\Theta - \Theta\, \eta - \gamma > 0$ *a fortiori*. But the latter can also be true if the Marshall-Lerner condition is not satisfied and capital inflows are relatively large ($\Theta > 0$).

minimum wages becomes even smaller (in absolute terms). If we assume that β takes a value of 0.5, the growth-retarding impact of higher minimum wages, caused by a loss of international labor cost competitiveness, is reduced by half—even when the Marshall-Lerner condition is met and the relative price elasticities η and γ are large. The bottom-line is that even in this case, there are solid analytical reasons to expect the impact of minimum wages on growth and employment to be non-significant (as appears to be the new consensus).

It is important to emphasize that equation (10) does not yet capture one further growth impact of higher minimum wages, namely the effect on growth which operates through industrial upgrading and diversification, or what we have called the 'technology-forcing mechanism' above. The introduction of a higher wage floor makes the survival of non-dynamic firms and low-productivity activities more difficult—the economy is forced to upgrade and diversify into higher-productivity activities (Mayneris *et al*. 2014; Huang *et al.* 2014). This will also lead to greater export diversification, which shows up (as studies show) in a higher world-income elasticity of demand for this country's exports ϑ. We have assumed in equation (1) that ϑ depends positively on the level of technological diversification of the economy (τ), or $d\vartheta / d\tau > 0$ (see Table 2; Neto and Porcile 2017). Accordingly, and against the background sketched above, we assume that the world-income elasticity of export demand will be higher—in a structural sense—when wage growth is higher:

$$(11) \qquad d\vartheta = \xi \, dw > 0$$

Using equations (10) and (11), when differentiating (7) with respect to w, we get:

$$(12) \qquad \frac{d\,y*}{d\,w} = \frac{\Theta y_W}{\mu}\xi + \frac{[\Theta - \Theta\,\eta - \gamma]\,\Xi\,(1-\beta)}{\mu}$$

Eq. (12) includes all three—structural—impacts of (higher) minimum wages on economic growth of a late-industrializing economy, operating through:

- a loss of international labor-cost competitiveness, which raises import growth and depresses export growth, *if and only if* the Marshall-Lerner condition is satisfied. BoP growth $y*$ declines in this case.

- more rapid labor productivity growth, induced by higher wage growth, which ameliorates relative labor-cost competitiveness and raises y^* (keeping all other factors constant).
- an upgraded, more diversified composition of exports, which results in a (one-time) increase in the world-income elasticity of export demand and permanently higher rate of growth y^*.

If the Marshall-Lerner condition is not satisfied (an entirely realistic possibility), the first two effects vanish, and only the third—structural—growth impact remains. Using equation (12), (higher) minimum wages will in this case provide a spur to BoP-constrained growth y^*, since $\frac{d\,y^*}{d\,w} = \frac{\theta y_W}{\mu}\xi > 0$; this explains the positive growth and employment impacts of higher minimum wages in Sub-Saharan Africa (Bhorat, Kanbur and Stanwix 2017). Seen this way, we can understand why the growth impact of (higher) minimum wages is often negligible, small and sometimes positive.

The above analysis of the growth impacts of higher minimum wages, which operate through their impact on unit labor costs, is instructive for the analysis of the effects of labor institutions (including employment protection) in general. The reason is, as James Heckman (2007, p. 2), writes, that the "only valid index of the effect of institutions on the labor market is the cost of labor, or better, the dynamic schedule of labor costs. All institutions operate on this cost. Instead of creating a panoply of newer, more refined indices to represent the magnitude of various institutional forces, as characterizes the current empirical literature, it would be more constructive to quantify the effects of the *entire edifice* of labor institutions on demand and supply of labor through their effects on a single measure — the labor cost schedule. All institutions affect costs and alternative institutions within an economic environment raise or lower costs. Once the incentives of protective institutions are properly measured, they can be used to estimate economic responses." We concur and hence, when assessing the growth impacts of stronger employment protection legislation (operationalized in terms of an indicator *epl*), we assume that higher *epl* leads to higher wage claims and higher nominal wages, or:

(13) $\quad dw = \Omega\, d\mathit{epl} > 0$

Accordingly, the impact of higher *epl* on the BoP-constrained growth rate y^* is similar to the impact of a higher minimum wage as in (12), or:

$$(14) \qquad \frac{d\,y*}{d\,epl} = \frac{\Theta y_W}{\mu}\xi\,\Omega + \frac{[\Theta - \Theta\,\eta - \gamma]\,\Xi\,(1-\beta)}{\mu}\Omega$$

There is no need to repeat the argument underlying (12) and (14). But it is worth pointing out that as increases in *epl* are unlikely to result in more than proportional increases in wage growth, coefficient Ω is likely to be small—meaning that the growth impact of higher *epl* will be even smaller than that of higher (minimum) wages. It is understandable therefore that the statistical association between measures of *epl* and growth is generally insignificant (e.g. Campos and Nugent 2012).

5 The political economy of labor market deregulation

Most social arrangements (including labor regulations), which constrain the operation of supposedly 'free' markets and restrict the space for private business, are resisted as irrational impediments to the pursuit of overall economic improvement (Streeck 2004). Mainstream economics used to legitimate this view arguing that 'excessive' labor market regulation slows down economic development by redistributing income in favor of wages, which compromises capital accumulation, and by hurting international (unit labor) cost competitiveness, which damages (net) export growth. The tension between external competitiveness and labor emerges from the fact that real unit labor costs, which exporting firms have an interest in lowering, is also labor's share of national value added, the ratio of real wages to labor productivity.[9] By

[9] This is clearly visible starting from national accounts' identity which states that the value of output equals the costs of production, or $PX = WL + P_A A + \pi PX$, where P is the average price level, X is total output, W the nominal wage, L is hours worked, A is energy and raw material inputs, P_A is the price of energy and raw materials, and π is the profit share. Dividing both sides by X, and rearranging, gives the price-level equation underlying Equation (3): $P = \theta(ULC + \zeta)$ where $ULC = \frac{WL}{X} = \frac{W}{X/L}$, $\zeta = \frac{A}{X}P_A$, and $\theta = \frac{1}{1-\pi}$. The labor share in income is defined as: $\psi = \frac{WL}{PX} = \frac{W/P}{X/L}$, which is the ratio of the real wage to labor productivity. What these derivations show is that exporting firms have two reasons to lower ULC. First, a reduction in ULC lowers their price and improves international competitiveness (and hence exports). Second, to the extent that firms do not lower their prices in response to lower ULC,

containing nominal wage growth, cutting social security contributions or keeping real wage growth below productivity growth, all of which can be negotiated more easily when labor's bargaining power is weakened by looser or more "flexible" labor market regulation, policymakers can reduce real unit labor costs. In the mainstream vision, the loss of labor income will be more than compensated for by an increase in exports. Unfortunately, this compensatory effect has rarely materialized, while the weakening of domestic demand has choked relatively more employment-intensive sectors in many developing economies. The detrimental effects of these policies have been particularly strong when they have been applied on a global scale (Capaldo and Izurieta 2013).

The mainstream arguments became consolidated in a hegemonic narrative that persuaded policymakers in developing countries, often through policy conditions attached to structural-adjustment program lending, to refrain from introducing labor regulations in order not to stall their economies' development. This 'de-regulatory' narrative has proven to be persistent in policymaking practice, as well as resistant to the empirical evidence (reviewed in Sections **2** and **3)** which disputes the claims that stronger labor regulation leads to lower growth, lower formal-sector employment and a loss of international competitiveness. To this day, policy advice to late-industrializing nations coming from the World Bank and the IMF continues to be in deregulatory mode, often in clear disjunction with the findings of their own research departments.

As a result of these Washington-Consensus policies, labor shares in the world have largely fallen over the last 30 years (Figure 5) in a vicious circle of deteriorating income distribution, declining domestic demand, a growing dependence on external demand and higher financial fragility. Econometric evidence by Onaran and Galanis (2014) shows that a decrease in the labor share leads to a decline in domestic demand in all G20 countries. This decline in domestic demand is not offset by higher net exports in the Euro Area, Japan, the U.K., the U.S.A., Turkey and South Korea, and hence economic growth in these economies declines in response to a fall in the wage share. Onaran and Galanis (2014) provide further evidence that a *simultaneous decline* in the labor share in the G20 countries leads to a decline in global economic growth; hence, the actual global decline in the labor share reported in Figure 5 has

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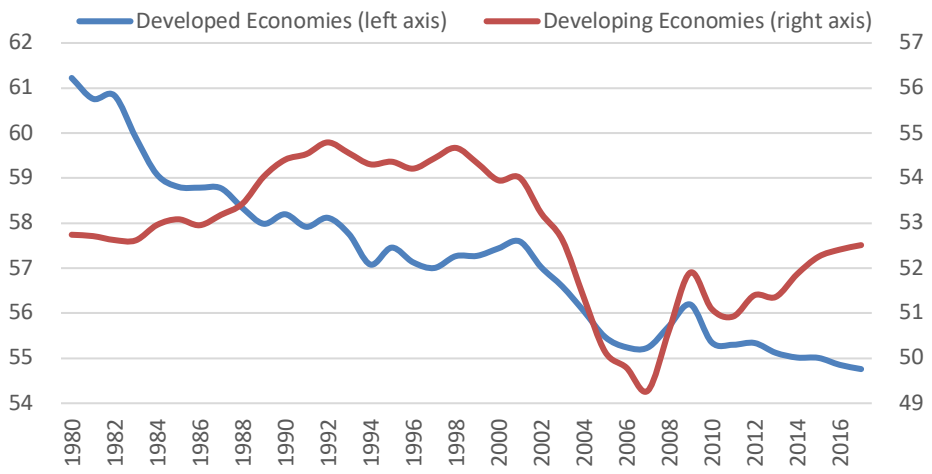
they will enjoy a higher profit share; this can be inferred from the definition of the real profit share which is $\pi = 1 - (\psi + \frac{\zeta}{P})$, and assuming that all other factors remain unchanged.

had significant negative effects on growth. Likewise, Capaldo and Izurieta (2018), using the United Nations Global Policy Model, find that a globally depressed labor share, resulting from a lowering of wages and worker protection in the wake of the liberalization of trade, leads to higher unemployment, higher inequality and higher risks of social and political instability. These findings make it clear that labor market regulation is likely to have beneficial effects on aggregate demand, economic growth and employment, by raising the labor share—and particularly so when this happens at the global level. The implications of all this for late-industrializing countries are profound, as is argued by Storm (2015), Stiglitz (2017), and the authors of UNIDO's (2018) *Industrial Development Report*. The need for a reconsideration of the developmental impacts of labor institutions remains as large as ever before—and this should be done at the global level as well (Capaldo and Izurieta 2013), so as to not fall victim to the fallacy of composition. While deregulation may look beneficial from the point of view of one single nation, it leads to a brutal 'race to the bottom' in labor standards when implemented by all nations—and this 'race' has no winners in terms of growth and development (Nissanke 2015). Unfortunately, it is exactly what (multilateral) free trade arrangements do, as is argued and shown by Kohler and Storm (2016) in the context of the Comprehensive Economic and Trade Agreement between Canada and the E.U. and by Capaldo and Izurieta (2018) for the Trans-Pacific Partnership (TPP), even when their proponents claim these are 'gold-standard'.

Figure 5

Labor share (percentage of GDP): 1980-2017



Notes: Labor share is calculated as ratio of the sum of compensation of employees and mixed income to GDP; developing countries do not include economies in transition. *Source*: United Nations Global Policy Model.

In our opinion, and in line with what we have argued throughout the paper, labor market regulation can be (designed to be) conducive to economic development and must be treated as a strategic 'developmental' policy tool complementary to industrial policy. As generations of development economists have pointed out, industrialization relies strongly on dynamic domestic demand (Storm 2015; UNIDO 2017; Wade 2018), which in turn is sustained by well-paying and stable employment and fair income distribution (Ocampo, Rada and Taylor 2009). In fact, the intrinsic value of labor laws goes beyond this instrumentalist view as they protect economic and social rights (including the right to strike and free, safe and fair working conditions) and often fundamental human rights (*e.g.*, the freedom of association, and the prohibition of slavery, exploitation, and forced and compulsory labor; see Fenwick and Novitz 2010). But our take here is narrower as we argue that labor market regulation (*i.e.* imposing institutional constraints on firms) can have positive impacts on (productivity) growth, employment, equality and competitiveness. Labor laws may constitute 'beneficial constraints', using Wolfgang Streeck's (2004) felicitous term, which may raise the static as well as the dynamic efficiency of economic activity in three separate ways

A first—Weberian—efficiency-enhancing mechanism operates through improving *legitimacy*. Since labor market institutions inject fairness into the employment contract (by limiting inequality and facilitating risk sharing) they create goodwill and political legitimacy among workers enhancing, perhaps as an unintended consequence, (labor) productivity. As Streeck (2004, p. 427) explains:

> "Social justice, as embodied for example in non-marketable civil, political and social rights, enhances what industrial sociologists used to call 'morale' and thereby, through a complex capillary system of causal connections, may make for higher productivity. Especially in advanced production systems, an important condition of the institutions that govern the employment relationship being efficient is that employees regard them as fair. Work flows better, errors are more easily detected and corrected, improvements are introduced more frequently and spontaneously, and conflicts are more easily settled in a general 'climate' of goodwill ….'

Labor laws and institutions modify the operation of markets in ways which, far from undermining capitalism, have made it more stable and efficient, while increasing its legitimacy. Economists have long known this to be true—as is evidenced by the large body of work on the importance of reciprocity and fairness in the employment relationship (Akerlof and Yellen 1986; Agell 2002; Basu and Felkey 2008; Fehr, Goette and Zehnder 2009; Lee and McCann 2011). It is now accepted as well by the World Bank (2015, p. 247), which writes in the *2016 Doing Business Report* that "under-regulation in the areas of working time and minimum wage protection can have harmful effects on productivity and exacerbate the effects of macroeconomic shocks." In our model we included this mechanism in equation (9), which captures in a straightforward manner the productivity-enhancing impact of a higher (fairer) minimum wage or stricter employment protection legislation.

A second channel through which labor institutions such as minimum wages and employment protection may enhance labor productivity, competitiveness and industrial upgrading is a Schumpeterian one which operates through spurring *innovation*. Capitalist entrepreneurs must operate in a world in which other social and political actors create rules and institutions, which constrain their profit-seeking activities. Faced with these social restrictions, capitalist entrepreneurs try to exploit the competitive opportunities they offer, as Streeck (2004, p. 428) writes, "turning constraints into opportunities." Firms are creative opportunists that seek advantage in a world governed by many different logics with which they have to make do. In such a world, the more productive and entrepreneurial firms will turn the constraints due to labor market regulation into profitable economic opportunities, and in the process strengthen their competitiveness forcing less inefficient firms out of the market. Tougher labor rules favor

the stronger, more productive and dynamic firms, as these will change work practices and reorganize job boundaries, and in the process become stronger and displace established, but less productive, competitors. This 'cleansing' or 'technology-forcing' effect of labor market standards has been found to have been empirically important in countries such as Germany and Sweden (in line with the Rehn-Meidner model), but recent research confirms that it also operates in late-industrializing economies such as China (Mayneris *et al.* 2014; Huang *et al.* 2014) and India (D'Souza 2010; Acharya *et al.* 2010). Of course, firms are unlikely to pursue these opportunities if they expect regulation to be repealed, since this would take away the need to adapt. Firms always have the option to organize and invest in lobbying activities aimed at stopping or repealing labor regulations but, as we argued in this paper, this would push the economy onto a path of slower development.

A third and final way in which labor regulation can promote the dynamic efficiency of firms and industries is the Keynesian-Kaldorian channel (already signaled by us earlier). Labor regulation raises the labor share in income, which in turn leads to higher domestic demand. The expanded home market allows a greater 'division of labor' and more specialization, which allows firms to benefit from economies of scale and scope and from 'learning by doing'. This way, a higher labor share can provide the foundation for realizing a self-reinforcing ('cumulative') demand-driven industrialization process in which faster growth creates more and better paid jobs, increasing demand, spurring investment and thereby enhancing (embodied) technical progress allowing manufacturing to expand further. Removing labor market regulations, as the World Bank is recommending anew in the *World Development Report 2019*, would asphyxiate this process of cumulative causation. Seen this way, strengthening labor market regulations is a strategy which will pay off in terms of economic development.

Labor market regulation can thus be used in ways supportive to industrial policy. Policymakers could deliberately impose labor standards designed to force firms to comply with technological norms that are not currently viewed as technologically feasible. Taking clues from Schumpeter but also Hirschman, we argue that technology must be conceived as a cumulative and path-dependent process of learning and discovery, in which managerial and technological capabilities are accumulated allowing firms in late-industrializing countries to master, adapt and upgrade existing technologies (Amsden 2001; Shapiro 2007). If the developmental quest is for 'dynamic efficiency'—the ability of an economy to *reconfigure* itself by constantly creating new activities characterized by higher productivity, positive spillovers and increasing returns to scale (Ocampo 2005)—not the static Pareto optimality

implied by neoclassical general equilibrium thinking, then labor market regulations which are designed and implemented to be 'technology-forcing' along the lines we just described, can supplement the more standard instruments of industrial policy (see chapters by Dani Rodrik, Richard Nelson and Raphael Kaplinsky in Nissanke and Ocampo, 2019).

This analysis seems to point to a "puzzle of lobbying". If labor regulations (which raise labor's 'voice' in the workplace) are indeed as beneficial to capitalist development as we claim why do capitalists so often lobby against them rather than in their favor? One reason, as we have already made clear, is that these constraints favor the stronger, more productive firms, but not the lagging firms, which (failing to upgrade) will mount (political) resistance to these rules. Firms also have no way of knowing if in the end the rules and standards will turn out beneficial for them or not—and for that reason they may prefer an unregulated status quo or a deregulatory option. Furthermore, labor market regulations redistribute power both in the bargaining process and on the work floor. Thus, the political resistance to labor market regulation is not a reliable predictor of its longer-run economic implications. Since this is the case, regulation can 'force' (or 'socialize') firms to prefer long-term over short-term profitability—as they have to put in efforts to turn themselves into 'high-road' producers.

This kind of 'technology-forcing' is easier, however, inside national economies more or less closed to foreign capital and external finance (Aküyz 2015; Bortz and Kaltenbrunner 2018). With financial openness, firms can block labor market regulations by threatening to relocate to other countries (Streeck 2004; Nissanke and Thorbecke 2010; Nissanke 2015)—a credible threat as our model illustrates. If firms opt out and relocate in response to (say) the introduction of stricter EPL, the growth of net capital inflow declines (and may even turn negative):

(13) $$\frac{d\kappa}{d\,epl} < 0$$

This offsets, at least partially, the expansionary effect of EPL on the BoP-constrained rate of growth y^*:

(14) $$\frac{d\,y*}{d\,epl} = \frac{\Theta y_W}{\mu}\xi\,\Omega + \frac{[\Theta - \Theta\,\eta - \gamma]\,\Xi\,(1-\beta)}{\mu}\Omega + \frac{(1-\Theta)}{\mu}\frac{d\kappa}{d\,epl}$$

This way, in economies with liberalized capital accounts, firms (including foreign corporations) have a much stronger 'voice' and political leverage than in contexts in which cross-border capital flows are more regulated and restricted. The result is, as argued by Nissanke and

Thorbecke (2010) and Nissanke (2015), that many developing country governments have been reluctant to enact regulations to protect and enhance labor rights and working conditions, out of fear of driving away transnational corporations. It explains why the notion of 'globalization' is used, more often than not, as an excuse for reducing social and worker protection. As a result, actual globalization has resulted in a strong trend toward casualization or informalization of jobs and whole labor forces, and not just in late-industrializing countries, but also in the high-income countries (Nissanke 2015; Storm and Naastepad 2012). Consequently, in order to be able to induce 'technology-forcing' effects, labor market institutions need to be complemented by supportive regulation of cross-border capital flows. This is why Keynes (1933), with characteristic prescience, wrote in his essay on 'National Self-Sufficiency', "let goods be homespun whenever it is reasonably and conveniently possible, and, above all, let finance be primarily national."

6 Conclusions

What we have learned from our review of the theoretical and empirical literature is that the impacts of labor institutions on growth and (un-)employment of the late-industrialization countries are inconclusive. Contrary to the mainstream view they are not necessarily negative and are, rather, contingent on the exact design of the regulation (including coverage and compliance) and the larger national and international political economy context. However, labor market interventions do reduce income inequality and the dispersion in earnings, and they do this without imposing an opportunity cost in terms of economic growth. In other words, Okun's (1975) big tradeoff between equality and efficiency does not exist. There are three key reasons why this is the case, each one highlighted in our model analysis: (*a*) higher wage growth does not depress real income growth in economies operating under a balance-of-payments constraint because the Marshall-Lerner condition is not satisfied; (*b*) the impact of higher wage growth on prices is limited because unit labor costs make up only a fraction of total production costs; and (*c*) higher wage growth is likely to induce higher labor productivity growth—through processes of 'technology-forcing' or 'cleansing', and this in turn reduces unit labor costs. These lessons should no longer be controversial: after decades trying to establish statistically significant negative associations between growth and employment and between growth and labor market regulations, establishment economists have to recognize the project has failed.

New studies as well as meta-analyses of older research point to the inescapable conclusion that labor market regulation is not 'futile', 'perverse' or 'jeopardous' in terms of growth and employment and it is beneficial in terms of equality. There is a fairly wide range of circumstances within which labor regulations will have no effect on employment performance allowing considerable scope for country preferences and choices (ILO 2015, 2016/17).

We have attempted to further discredit the rhetoric of reaction by arguing that developing-country governments can use regulatory obligations as 'beneficial constraints' to raise firms' productivity levels and their dynamic efficiency, thereby forcing them to become more internationally competitive, rather than driving these regulatory obligations down to the current productivity levels and static efficiency levels characteristic of their firms today (Wade 2015). This is a moot point. Can labor institutions be designed so as to serve as 'beneficial constraints', forcing firms to upgrade, diversify and become more productive? Can labor market regulation complement—and reinforce—industrial policy as tools of economic upgrading and diversification? These questions force us to think about the proper design of the interventions (*e.g*. Belser and Sobeck 2012; Storm 2015; Stiglitz 2017; UNIDO 2017) and (reform of) the larger political economy context—needed to bring about higher productivity growth, greater international competitiveness, and faster economic growth. We hope this paper convinces readers that treating labor market institutions as 'luxuries' developing countries cannot afford is not just wrong, but also unrealistic. It is a standard trope which, when accepted, prevents us from creatively exploring feasible and empirically proven (though always context-contingent) ways to turn these interventions into productive, technology-forcing instruments, critical to any project of late industrialization—and especially so in our times of globalization.

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