



Employment protection legislation and macroeconomic outcomes: channels of influence

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Abstract

Motivation: Employment protection legislation (EPL) plays an important role in shaping macroeconomic performance, yet its impact remains contested. Traditional analyses have focused on labour demand effects, but recent economic transformations call for a broader perspective. Globalization, technological change, and new labour market dynamics suggest that EPL may influence not only hiring and firing decisions but also productivity, innovation, income distribution and social welfare. Understanding these diverse channels is essential, as EPL can create opportunities while also generating rigidities that affect growth.

Aim: This paper systematically examines the transmission channels through which EPL affects macroeconomic outcomes. It proposes a hierarchical framework in which the effects on labour demand are supplemented by EPL's impact on productivity and resource allocation; labour supply and economic activity; well-being and social welfare. The study investigates how these channels shape key outcomes such as employment, unemployment, income structures, aggregate demand, total factor productivity, and social inequalities. The analysis relies on mixed-method approach, combining a comprehensive review of literature with an empirical assessment of relationships between EPL and economic performance.



Results: The findings confirm that labour demand is the dominant channel of EPL influence, but productivity, labour supply, and efficiency effects are also important in determining macroeconomic and social outcomes. EPL influences economic performance not only by regulating job security but also by shaping incentives for innovation, organizational change, and resources use. By integrating these wider mechanisms, the study provides a more comprehensive understanding of EPL's role in the economy. It contributes to policy debates by highlighting that EPL should be assessed not solely in terms of labour market flexibility, but also with regard to its broader implications for efficiency, equity, and welfare.

Keywords: employment protection legislation, labour market dynamics; economic efficiency; social welfare

JEL: J08; J21; J24; J38

1. Introduction

Employment protection legislation (EPL) remains one of the most contested labour market institutions in both academic research and public policy debates. While frequently assessed in terms of labour market rigidity and employment outcomes, its broader macroeconomic and social effects are far less systematically analysed. This paper addresses this gap by focusing explicitly on the multiple channels through which EPL influences macroeconomic performance.

EPL is one of regulatory tools designed to protect workers from arbitrary and possibly unfair decisions by employers, as well as to mitigate the financial repercussions of job loss. This legal framework encompasses various aspects of the employment relationship, including the duration of contracts, permissible grounds for dismissal, severance payments, and regulations of temporary employment. Effective worker protection gains increasing importance in today's dynamic and often turbulent economies. The impact of EPL on labour market variables and macroeconomic outcomes has been researched since the 1980s, yet two major problems persist. First, there is still no firm consensus on the effects of EPL and empirical results vary quite dramatically. Second, and probably contributing to the first, the detailed workings of EPL have not been studied in any comprehensive manner. Most papers focus on a chosen channel of influence (the impact firing/hiring costs have on labour demand, for example) while neglecting other mechanisms and interconnections. Similarly, outcome variables affected by EPL are often viewed rather narrowly.

The purpose of the paper is to present a systematic analysis of all significant mechanisms through which EPL influences macroeconomic variables, most notably employment, unemployment, wages and profits, factor productivity, aggregate demand and social inclusion, that were identified so far in the literature.

Hypothesised main channels of influence include, in the order of diminishing significance, the impact on labour demand; productivity and efficiency of resource allocation; labour supply and economic activity; well-being and social welfare. The main contribution of the study is development of a structured framework that maps how EPL translates into macroeconomic variables, integrating insights from a wide literature. The theoretical framework is supplemented by an empirical illustration, based on correlation analysis of OECD data to assess the relative importance of different channels.

The rest of the paper is structured as follows. Section 2 presents a detailed review of existing literature. Section 3 describes the methodological approach. Results of both theoretical and empirical research are discussed in section 4. The last section concludes.

2. Literature review

The literature on the EPL's impact on labor market and other economic variables is more than ample. However, the theoretical connections between EPL and macroeconomic outcomes are multifaceted and often yield ambiguous predictions (see (Sordyl, 2024) for a recent review). Most research focuses on a chosen channel or channels of impact on some outcome variables, while a comprehensive summary of all mechanisms of influence remains lacking. Probably the longest list of costs and benefits of EPL was provided by OECD (2004), but no attempt at systematization followed.

By far the most researched channel of EPL's impact on labor market outcomes is the effect the regulations have on hiring and firing decisions by firms (labor demand). The obvious consequence is an additional resource cost that a firm would not need to incur without the regulation (Autor et al., 2007; Kuddo, 2018; Martinez-Matute & Urtasun, 2022). Additionally, EPL creates incentives to outsource (Bertola, 1992) and to informality (Lustig & McLeod, 1997; Pages, 2003), also diminishing (formal domestic) labor demand.

A similar mechanism, working indirectly against the labor demand, is the fact that EPL diminishes the value of firms and thus negatively affects investment (Blau & Kahn, 1999; Cacciatore & Fiori, 2016). The same effect is caused by a lower share of profits in national income if regulation strengthens the bargaining power of incumbent workers (Bentolila & Saint-Paul, 2003; Bertola, 2009). In a similar vein, Ljungqvist (2002) treats EPL as an inferior production technology.

Employment measured by the number of employees becomes more stable over the cycle due to firing restrictions, but working hours become more volatile (Bertola, 1992; Addison & Teixeira, 2001; Petrin & Sivadasan, 2006). Higher volatility, in turn, may favor employment of less skilled workers (Feldmann, 2003). In addition, high-turnover firms can lose reputation and be forced to pay higher wages to recruit (Carmichael, 1989; Belot et al.,

2007). Higher costs of labor may lead to lower international competitiveness (Roy, 2021; Arestis et al., 2023). However, the increase in employment costs for firms may not reduce aggregate welfare. Some authors stress that EPL forces firms to bear full (or at least a bigger part of) social costs of cyclical or structural adjustments in employment patterns, thus easing the pressure on workers and social security systems (OECD, 2004; Clark & Postel-Vinay, 2005; Bertola, 2009).

On the other hand, a very ample literature shows no significant impact of EPL on the number of jobs (Avdagic, 2015; Duval & Loungani, 2019; Heimberger, 2021), and some studies indicate that EPL can in fact increase the demand for labor, at least under some conditions (Cacciatore & Fiori, 2016; Ferreiro & Gómez, 2020).

Almost as frequently researched channel of influence on macro variables is the effect EPL has on labor productivity and efficiency of resource use. Two main and opposing strands emerge in the literature, revealing both a positive and a negative impact on efficiency. Slower reallocation towards higher productivity means that firms are forced to keep workers who became less productive than at the time the match was created (McMillan & Rodrik, 2011; Eichhorst & Marx, 2019). A similar effect is caused by local or global shocks affecting productivity (Hamermesh & Pfann, 1996; Scarpetta, 1996; Blanchard & Wolfers, 2000). Consequently, less fluctuation of employment over the cycle (Boeri, 2011; Duval et al., 2017; Arestis et al., 2021) is observed at the cost of less efficient labor (resource) allocation (OECD, 2004; Martin & Scarpetta, 2012; Duval & Loungani, 2019).

On the other hand, labor productivity may be increased by EPL, through several channels. Investment in human capital will be higher in a more stable employment relationship, with better incentives on both sides (Betcherman, 2019; OECD, 2019; Arestis et al., 2020b). Closely related are incentives to share information with other workers and with management (Auer et al., 2004; Deakin et al., 2007; Vergeer & Kleinknecht, 2010–2011) and to cooperate in the workplace (Freeman, 2007; Storm & Nastepad, 2009; Adams et al., 2018). A special case is the employees' willingness to innovate and to share their ideas with the firm (Belloc, 2019; Sharpe & Fard, 2022; Arestis et al., 2023). More generally, EPL supports good relations in the workplace, encouraging trust and loyalty (Auer et al., 2004; OECD, 2019; Inanc & Kalteberg, 2022). However, these mechanisms may operate unevenly across different segments of the labour market, implying that productivity-enhancing effects of EPL are likely to be concentrated among workers with access to stable employment, while those in secondary jobs may not benefit to the same extent. There is also some evidence that lack of employment security for parents negatively affects educational achievements of children (Ruiz-Valenzuela, 2020; Bertoni et al., 2023) and thus lowers productivity of future worker cohorts.



The mere existence of EPL may improve on pure market outcomes if it makes up for some market imperfections; for example, by easing the bargaining process and supporting collective action (Bertola, 2009; Bartling et al., 2013; Betcherman, 2015). Regulations on firing encourage a more careful selection of workers (Scarpetta, 1996; Pries & Rogerson, 2005; Duval & Loungani, 2019). On an individual level, if EPL lengthens the average tenure, it can increase worker's productivity in the given job (Saint-Paul, 2002; Arestis et al., 2020b). On the other hand, reduced threat of layoffs may loosen the discipline and encourage shirking (Jackman et al., 1996; Holmlund, 2013).

Less research focuses on the impact of EPL on the supply side of the labor market. Again, several channels can be identified here, affecting both the size and the composition of the labor supply. Some tentative results show that EPL indirectly affects the number of (potential) workers through migration (Piasna & Myant, 2017), family formation (De Paola et al., 2021; Bertoni et al., 2023) and mental and physical health (Dixon et al., 2013; Kalleberg & Vallas, 2018; Inanc & Kalleberg, 2022). Firing restrictions have a potentially significant impact on the structure of the workforce. Making layoffs more expensive prevents them (up to a point) in downturns, lengthening the average tenure at the cost of longer unemployment spells (Calderón et al., 2007; Boeri, 2011). The net effect of less firing and less hiring in booms depends on the shape of the labor demand function and the phase of the cycle (Blau & Kahn, 1999), but – at least over the medium horizon – lower employment and increase in unemployment are to be expected (OECD, 1994; Addison & Teixeira, 2001; Nickell et al., 2005). The effect, however, is rejected by some empirical studies (OECD, 2006; Howell et al., 2007).

The most important impact of EPL on the workforce is labour market segmentation. Restrictions on firing and hiring tend to favor some groups of workers over others (Vosko, 2011; Myant & Brandhuber, 2017; Inanc & Kalleberg, 2022). EPL encourages firms to choose non-standard forms of employment (Aleksynska & Eberlein, 2016; Myant & Brandhuber, 2017; Arestis et al., 2021), leading to long term lock-in and scarring effects (Avdagic, 2015) that can be hereditary if access to social insurance depends on primary sector employment (Giesecke & Gross, 2004). However, some authors point out that deregulation might lead to even more segmentation (De Stefano, 2014; Rubery & Piasna, 2016). On the other hand, EPL may increase employment among vulnerable groups by higher economic activity (Adams et al., 2018) and more intense job search (Scarpetta, 1996; Bertola, 2009; Bertoni et al., 2023). Importantly, labour market segmentation should not be viewed as an isolated outcome of EPL, but rather as a mechanism that mediates its effects on productivity, labour supply dynamics, and welfare, by shaping access to stable employment, incentives to invest in human capital, and exposure to economic risk.

A more recently included and less researched channel connects EPL with general welfare and individual well-being. The well-being aspect that first appeared in the literature, as the obvious feature of the regulation, is increased job and income stability (Agell, 1999; Deakin et al., 2007). In other words, some risk of cyclical labor demand fluctuations is borne by employers (Rubery & Piasna, 2016). That constitutes a form of private insurance, especially in countries where access to social security is limited (Agell, 2002; Pages, 2003). This brings about the consumption-stabilizing feature of EPL, without recourse to credit (Arestis et al., 2020b), that is important in a crisis (Clark et al., 2022; Arestis et al., 2023; Bertoni et al., 2023). The access to credit itself becomes easier with EPL (Mistrulli et al., 2023), it is also more feasible to save for retirement (Piasna & Myant, 2017). Absent EPL, tax revenues would decline (Boeri et al., 2015) and social spending would increase (OECD, 2013; Bertoni et al., 2023). From a more general viewpoint, EPL can be considered a tool preventing worker exploitation (Kaufman, 1997; Kuddo, 2018; Duval & Loungani, 2019). A lighthouse effect may influence even the informal sector (Aleksynska & Eberlein, 2016). A facet also important from the equality perspective is that EPL compensates for costs of losing a job which increase with seniority (OECD, 2013).

Another feature of EPL that affects welfare is its impact on income distribution and inequalities. Some authors perceive regulations as rent-seeking by insiders (Agell, 2002; Clark & Postel-Vinay, 2005) leading to worse distribution and more inequality (Giesecke & Gross, 2004; Betcherman, 2005; Boeri et al., 2015). Others stress that more stable and secure employment does indeed increase wages (Scarpetta, 1996; Blau & Kahn, 1999; Feldmann, 2003) and the labor share of income (Deakin et al., 2014; Ciminelli et al., 2018; Arestis et al., 2023), but the effect actually improves income distribution, leading to lower inequalities (Acemoglu, 2003; Boeri et al., 2015; Arestis et al., 2020a). This suggests that EPL, as many other labor market regulations, is in fact a redistributive measure, but this type of redistribution might lead to higher global welfare (Freeman, 2007; Adams et al., 2018).

A crucial point of EPL is avoiding many different and potentially hugely damaging social costs of employment and income insecurity, documented by a growing number of papers. These include increased poverty (Arestis et al., 2023), higher political tensions (Boeri et al., 2015; Eichhorst & Marx, 2019), psychological costs of insecurity (Piasna & Myant, 2017), as well as fairness considerations (Adams et al., 2018).

3. Methods

This paper combines a systematic literature review with an illustrative empirical exercise. The empirical part is cross-sectional in nature and is in-

tended as an illustrative complement to the theoretical framework, rather than a causal estimation of the effects of EPL. Initially an extensive study of literature was performed in an attempt to identify all channels through which EPL influences outcome variables. Some effects are documented in multiple studies; in such cases – for brevity – a maximum of three references were chosen based on relevance and the date of publication (the most recent). Some authors also find more than one effect of EPL; hence, several sources are referenced more than once. Based on literature review, a hierarchy of channels of influence was hypothesized (see Figure 1 in the appendix). To search for the existence and relative importance of the four main channels, representative proxies were selected among data available for all countries in the sample. Employment and unemployment data capture the labour demand channel; labour productivity reflects the efficiency channel; the Gini coefficient illustrates distributional effects; and adjusted national income *per capita* serves as a proxy for welfare.

As shown in the literature review, empirical confirmation of the effects of EPL is very difficult, for reasons that merit a separate analysis and are omitted here. However, it is important to note that the aim of the paper is not to estimate precisely the effect of EPL on output variables; rather, to look for confirmation or rejection of the intuition on the importance of the main impact channels identified above. To empirically assess the strength of the mechanisms discussed, a matrix of Pearson correlation coefficients was calculated. Three measures of EPL were used: OECD EPL Index, a leximetric measure reflecting *de iure* regulations; Cambridge Labour Regulation Index (CBR-LRI, subindex C: Regulations of dismissal, variables 16–24), another leximetric measure but used jointly with the Rule of Law index to capture enforcement (Adams et al., 2018); and World Economic Freedom index (Area 5: Regulations, B. Labour market regulations, (ii) Hiring and firing regulations) provided by the Frasier Institute and based on opinion surveys. Since the WEF awards higher scores to countries with ‘more freedom’ (less regulation), its values were multiplied by -1 before computing correlations. The dataset covers 38 OECD countries for which the OECD EPL index is available. Output variables were drawn from the World Bank’s World Development Indicators for comparability; the data on labor productivity are from OECD database. The year chosen for the exercise was 2019 – the most recent for which the OECD EPL index was available.

4. Results

The results of the literature review indicate a rather complicated net of channels through which EPL affects macroeconomic variables. Table 1 summarizes the main channels of impact, as identified in the literature, and serves

as a reference point for the subsequent discussion. The impact of EPL on labor demand works through costs of jobs, value of firms, investment, and competitiveness. Stronger protection leads to lower (if more stable) employment, higher and more persistent unemployment, higher wage share and lower profits, more stable aggregate demand and more equality. The impact on resource efficiency is uncertain because slower reallocation in response to shocks is at least partially recompensed by higher individual productivity in more stable jobs.

Workers' productivity itself is affected by EPL through several main mechanisms. First of all, both sides of a match have stronger incentives to invest in human capital; longer average tenure also supports learning. Workers are more prone to share their ideas, including new inventions, with management. Cooperation is easier with more stable employment relations. The resulting increase in productivity might compensate for higher labor costs and increase profits.

EPL impacts the size and structure of labour supply. High barriers to entry to the primary sector might lead to persistent segmentation and low-quality jobs for some worker groups, especially those most vulnerable (younger and older workers, women, migrants). In this sense, labour market segmentation acts as a transmission mechanism through which EPL influences both aggregate labour supply and longer-term productivity and welfare outcomes. On the other hand, for those who manage to achieve a formal sector job, income stability seems an important factor in family creation, educational achievements of children, as well as workers' physical and mental health.

It seems that the most important effects of EPL on individual and societal welfare work through income security and distribution, provision of social insurance, the distribution of political power and social conflict, and changes in public revenues and spending. It also affects factors difficult to measure but important for wellbeing, as the feeling of fairness and inclusion.

Table 2 reports Pearson correlation coefficients between alternative EPL measures and selected macroeconomic and social outcome variables for a sample of 38 OECD countries. Consistent with previous research, theoretical assumptions about the workings of EPL are not easy to confirm. The results indicate that EPL is significantly negatively correlated with economic activity and employment and positively (albeit weakly) with self-employment, unemployment and youth unemployment – all to be expected from theory. These patterns are consistent across the OECD and WEF indices, and align with the hypothesis that EPL primarily operates through the labour demand channel. The results on CBR-LRI, however, almost always present the opposite sign, even on the significant correlations. EPL does seem to coincide with lower income inequalities, but the relation with the level of income (represented by average wage and average national income *per capita*) is negative for most indices. This points to a puzzling trade-off between

wage levels and distributional outcomes. The relationship between EPL and productivity is weak and not robust across measures: the WEF index shows a negative coefficient, while the OECD and CBR-LRI results are close to zero. This suggests that, within the OECD sample, EPL is not significantly correlated with productivity gains, even though theory identifies several potential mechanisms linking the two.

GDP-related measures show mixed results. Correlations with GDP growth are negligible for all indices. GDP *per capita* is negatively correlated with EPL when using the OECD and WEF indices, but positively and significantly correlated with CBR-LRI. These differences reflect the sensitivity of results to the choice of indicator. Overall, the empirical analysis confirms that the strongest and most consistent associations of EPL are found in the labour demand and supply. The evidence for productivity, wages and growth is weaker and more ambiguous. These findings, however tentative, show the importance of considering multiple channels and cautiously choosing institutional measures when evaluating the macroeconomic effects of EPL.

5. Conclusion

This paper has offered a comprehensive examination of the channels through which EPL influences macroeconomic outcomes. It has highlighted some of the underappreciated interactions with productivity, efficiency of resource allocation, labour supply dynamics, and welfare. The analysis demonstrates that while EPL may reduce flexibility in hiring and firing, it can also enhance investment in human capital, foster cooperation, and contribute to social stability by reducing inequality and income volatility. It needs to be stressed, however, that even if broad in scope, the theoretical analysis lacks enough detail to do justice to the importance of the topic. Further research is necessary to reveal the nuances in the main channels of impact and in their interrelations, possibly allowing for less uncertainty in empirical results which cannot be treated as other than exploratory.

The empirical findings are consistent with theoretical expectations in some areas, particularly with regard to the effects of EPL on employment and unemployment. However, the results also reveal the inherent difficulties in quantifying the broader impacts of EPL, especially when relying on measures of regulation that may not capture the realities of labour markets. The weak and sometimes contradictory correlations underscore the need for caution in drawing general conclusions, and they point to the importance of context, especially institutional and structural differences between countries.

Future research should address these limitations by developing more nuanced measures of EPL that reflect not only the content of legislation but also the degree of its enforcement and the extent of informality in labour markets. Incorporating other institutions into the analysis – such as minimum wage

laws, unemployment insurance, and collective bargaining – would allow for a more realistic assessment of how EPL operates within a broader policy system. Greater attention should also be paid to how EPL interacts with demographic and technological changes, particularly in shaping access to stable employment and its implications for productivity.

A key implication of the analysis is that many of the observed effects of EPL operate indirectly, through interactions between labour demand, segmentation, productivity, and welfare, rather than through a single dominant channel. Ultimately, EPL should not be viewed in binary terms as simply restrictive or protective. Its macroeconomic effects are shaped by complex trade-offs between efficiency, equity, and stability. A more integrated and multidimensional understanding of these trade-offs is essential for designing labour market institutions that are both economically sound and socially inclusive.

References

- Acemoglu, D. (2003). Cross-country inequality trends. *The Economic Journal*, 113(February), pp. 121–149. doi:10.1111/1468-0297.00100
- Adams, Z., Bishop, L., Deakin, S., Fenwick, C., Martinsson Garzelli, S., & Rusconi, G. (2018). *Protection and different forms of employment: analysis of a panel of 117 countries, 1990–2013*. ECGI Working Paper Series in Law: Working Paper No. 406/2018. doi:10.1111/ilr.12128
- Addison, J., & Teixeira, P. (2001). The economics of employment protection. *IZA Discussion Papers*(381).
- Agell, J. (1999). On the benefits from rigid labour markets: norms, market failures, and social insurance. *The Economic Journal*, 109(February), pp. F143-F164.
- Agell, J. (2002). On the determinants of labour market institutions: rent seeking vs. social insurance. *German Economic Review*, 3(2), pp. 107–135. doi:10.1111/1468-0475.00054
- Aleksynska, M., & Eberlein, F. (2016). *Coverage of employment protection legislation (EPL)*. ILO, Geneva: Conditions of Work and Employment Series, no. 80.
- Arestis, P., Ferreiro, J., & Gomez, C. (2020b). *Quality of employment and employment protection. Effects of employment protection on temporary and permanent employment*. No. 48/2020: ASTRIL Working Paper. doi:10.1016/j.strueco.2020.02.008
- Arestis, P., Ferreiro, J., & Gomez, C. (2023). Does employment protection legislation affect employment and unemployment? *Economic Modelling*, 126, pp. 1–13. doi:doi.org/10.1016/j.econmod.2023.106437



- Arestis, P., Ferreiro, J., & Gómez, C. (2020a). Employment protection legislation and labour income shares in Europe. *PANOECONOMICUS*, 67(3), pp. 291–308. doi:<https://dx.doi.org/10.2298/PAN2003291A>
- Arestis, P., Ferreiro, J., & Gómez, C. (2021). Labour market flexibilization and income distribution in Europe. *Paneconomicus*, 68(2), pp. 167–185. doi:[10.2298/PAN2102167A](https://dx.doi.org/10.2298/PAN2102167A)
- Auer, P., Berg, J., & Coulibaly, I. (2004). Is a stable workforce good for the economy? Insights into the tenure-productivity-employment relationship. *International Labour Review*, 144(3).
- Autor, D., Kerr, W., & Kugler, A. (2007). Do employment protections reduce productivity? Evidence from the U.S. states. *NBER Working Paper*(12860). doi:[10.3386/w12860](https://dx.doi.org/10.3386/w12860)
- Avdagic, S. (2015). Does deregulation work? Reassessing the unemployment effects of employment protection. *British Journal of Industrial Relations*, 53(1), pp. 6–26. doi:[10.1111/bjir.12086](https://dx.doi.org/10.1111/bjir.12086)
- Bartling, B., Fehr, E., & Schmidt, K. (2013). Use and abuse of authority: a behavioral foundation of the employment relation. *Journal of the European Economic Association*, 11(4), pp. 711–742.
- Belloc, F. (2019). Institutional complementarities between labor laws and innovation. *Journal of Institutional Economics*, 15(2), pp. 235–258. doi:[10.1017/S1744137418000139](https://dx.doi.org/10.1017/S1744137418000139)
- Belot, M., Boone, J., & Van Ours, J. (2007). Welfare-improving employment protection. *Economica*, 74(295), pp. 381–396.
- Bentolila, S., & Saint-Paul, G. (2003). Explaining movements in the labor share. *Contributions in Macroeconomics*, 3(1). doi:[10.2202/1534-6005.1103](https://dx.doi.org/10.2202/1534-6005.1103)
- Bertola, G. (1992). Labor turnover costs and average labor demand. *Journal of Labor Economics*, 10(4).
- Bertola, G. (2009). Labour market regulation: motives, measures, effects. *Conditions of Work and Employment Series*(21).
- Bertoni, M., Chinet, S., & Nistico, R. (2023). Employment Protection, Job Insecurity, and Job Mobility. *IZA Discussion Paper*(16647).
- Betcherman, G. (2015). Labor Market Regulation: What do we know about their Impacts in Developing Countries? *The World Bank Research Observer*, 30(1), pp. 124–153.
- Betcherman, G. (2019). Designing labor market regulations in developing countries. *IZA World of Labor*, 57(2).
- Blanchard, O., & Wolfers, J. (2000). The role of shocks and institutions in the rise of European unemployment: the aggregate evidence. *The Economic Journal*, 110(March), pp. C1–C33.
- Blau, F., & Kahn, L. (1999). Institutions and laws in the labor market. In O. Ashenfelter, & D. Card, *Handbook of Labor Economics* (Vol. 3). Elsevier Science B.V.

- Boeri, T. (2011). Institutional reforms and dualism in European labor markets. In O. Ashenfelter, & D. Card, *Handbook of Labor Economics* (Vol. IV). Amsterdam: North Holland.
- Boeri, T., Cahuc, P., & Zylberberg, A. (2015). *The costs of flexibility-enhancing structural reforms: a literature review*. OECD Economics Department Working Papers: No. 1264.
- Cacciatore, M., & Fiori, G. (2016). The macroeconomic effects of goods and labor market deregulation. *Review of Economic Dynamics*, 20(1), pp. 1–24. doi:10.1016/j.red.2015.10.002
- Calderón, C., Chong, A., & León, G. (2007). Institutional enforcement, labor-market rigidities, and economic performance. *Emerging Markets Review*, 8(1), pp. 38–49. doi:https://doi.org/10.1016/j.ememar.2006.11.001
- Carmichael, L. (1989). Self-enforcing contracts, shirking, and life cycle incentives. *Journal of Economic Perspectives*, 3(4), pp. 65–83. doi:10.1257/jep.3.4.65
- Ciminelli, G., Duval, R., & Furceri, D. (2018). *Employment protection deregulation and labor shares in advanced economies*. IMF Working Paper: WP/18/186.
- Clark, A., & Postel-Vinay, F. (2005). Job Security and Job Protection. *CEPR Discussion Paper Series*(4927).
- Clark, A., D'Ambrosio, C., & Lepinteur, A. (2022). *Job insecurity, savings and consumption: an Italian experiment*. Paper prepared for the 37th IARIW General Conference: <https://iariw.org/wp-content/uploads/2022/08/Lepinteur-et-al-IARIW-2022.pdf>.
- De Paola, M., Nisticò, R., & Scoppa, V. (2021). Fertility decisions and employment protection: the unintended consequences of the Italian Jobs Act. *CSEF Working Paper*(596). Retrieved from <https://www.csef.it/WP/wp596.pdf>
- De Stefano, V. (2014). A tale of oversimplification and deregulation: the mainstream approach to labour market segmentation and recent responses to the crisis in European countries. *Industrial Law Journal*, 43(3), pp. 253–285. doi:doi:10.1093/inclaw/dwu014
- Deakin, S., Lele, P., & Siems, M. (2007). The evolution of labour law: calibrating and comparing regulatory regimes. *International Labour Review*, 146(3–4), pp. 133–162. doi:10.1111/j.1564-913X.2007.00011.x
- Deakin, S., Malmberg, J., & Sakar, P. (2014). How do labour laws affect unemployment and the labour share of national income? The experience of six OECD countries, 1970–2010. *International Labour Review*, 153(1), pp. 1–27. doi:doi.org/10.1111/j.1564-913X.2014.00195.x
- Dixon, J., Fullerton, A., & Robertson, D. (2013). Cross-national differences in workers' perceived job, labour market, and employment insecurity in Europe: empirical tests and theoretical extensions. *European Sociological Review*, 29(5), pp. 1053–1067. doi:10.1093/esr/jcs



- Duval, R., & Loungani, P. (2019). *Designing labor market institutions in emerging makret and developing economies: evidence and policy options*. IMF Staff Discussion Note SDN/19/04.
- Duval, R., Furceri, D., & Jalles, J. (2017). Job protection deregulation in good and bad times. *IMF Working Paper*(WP/17/277).
- Eichhorst, W., & Marx, P. (2019). *How stable is labour makret dualism? Reforms of employment protection in nine European countries*. IZA DP No. 12309.
- Feldmann, H. (2003). Labor Market Regulation and Labor Market Performance: Evidence Based on Surveys among Senion Business Executives. *Kyklos*, 56(4), pp. 509–540.
- Ferreiro, J., & Gómez, C. (2020). Employment protection and labor market results in Europe. *Journal of Evolutionary Economics*, 30, pp. 401–449. doi:<https://doi.org/10.1007/s00191-019-00656-5>
- Freeman, R. (2007). Labor Market Institutions Around the World. *NBER Working Paper Series*(13242).
- Giesecke, J., & Gross, M. (2004). External labour market flexibility and social inequality: temporary employment in Germany and the UK. *European Societies*, 6(3), pp. 347–382. doi:<https://doi.org/10.1080/1461669042000231456>
- Hamermesh, D., & Pfann, G. (1996). Adjustment cost in factor demand. *Journal of Economic Literature*, 34(3), pp. 1264–1292.
- Heimberger, P. (2021). Does Employment Protection Affect Unemployment? A Meta-analysis. *Oxford Economic Papers*, 73(3), pp. 982–1007. doi:<https://doi.org/10.1093/oep/gpaa037>
- Holmlund, B. (2013). *What do Labor Market Institutions Do?* Working Paper 2013:23: Uppsala University.
- Howell, D., Baker, D., Glyn, A., & Schmitt, J. (2007). Are Protective Labor Market Institutions at the Root of Unemployment? A Critical Review of the Evidence. *Capitalism and Society*, 2(1). doi:10.2202/1932-0213.1022
- Inanc, H., & Kalleberg, A. (2022). Institutions, Labor Market Insecurity, and Well-Being in Europe. *Social Sciences*, 11(6). doi:<https://doi.org/10.3390/socsci11060245>
- Jackman, R., Layard, R., & Nickell, S. (1996, March). Combating Unemployment: Is Flexibility Enough? *CEPR Discussion Paper*(293).
- Kalleberg, A., & Vallas, S. (2018). Probing precarious work: thoery, research, and politics. *Research in the Sociology of Work*, 31, pp. 1–30. doi:<https://doi.org/10.1108/S0277-283320170000031017>
- Kaufman, B. (1997). Labor Markets and Employment Regulation: The View of the “Old” Institutionalists. In B. Kaufman, *Government Regulation of the Employment Relationship* (pp. 11–56). Madison: University of Wisconsin.
- Kuddo, A. (2018). *Labor Regulations throughout the World: An Overview*.



- World Bank Document. Retrieved from <https://documents1.worldbank.org/curated/ar/221471546254761057/pdf/Labor-Regulations-Through-out-the-World.pdf>
- Ljungqvist, L. (2002). How do lay-off costs affect employment? *The Economic Journal*, 112(October), pp. 829–853.
- Lustig, N., & McLeod, D. (1997). Minimum Wages and Poverty in Developing Countries: Some Evidence. In S. Edwards, & N. Lustig, *Labor Markets in Latin America*. Washington, DC.: Brookings Institution.
- Martin, J., & Scarpetta, S. (2012). Setting It Right: Employment Protection, Labor Reallocation and Productivity. *De Economist*, 160(2), pp. 89–116.
- Martinez-Matute, M., & Urtasun, A. (2022). Uncertainty and Firms' Labour Decisions. Evidence from European Countries. *Journal of Applied Economics*, 25(1), pp. 220–241. doi:<https://doi.org/10.1080/15140326.2021.2007724>
- McMillan, M., & Rodrik, D. (2011). Globalization, Structural Change and Productivity Growth. *NBER Working Paper*(17143). doi:10.3386/w17143
- Mistrulli, P., Oliviero, T., Rotondi, Z., & Zazzaro, A. (2023). Job Protection and Mortgage Conditions: Evidence from Italian Administrative Data. *Oxford Bulletin of Economics and Statistics*, 85(6), pp. 1211–1237. doi:<https://doi.org/10.1111/obes.12558>
- Myant, M., & Brandhuber, L. (2017). Uses and abuses of the OECD's Employment Protection Legislation Index in research and EU policy making. In A. Piasna, & M. Myant, *Myths of employment deregulation: how it neither creates jobs nor reduces labor market segmentation* (pp. 23–42). Brussels: ETUI.
- Nickell, S., Nunziata, L., & Ochel, W. (2005). Unemployment in the OECD Since the 1960s. What Do We Know? *The Economic Journal*, 115(500), pp. 1–27.
- OECD. (1994). *OECD Jobs Study*. Paris: OECD.
- OECD. (2004). *Employment Outlook 2004*. Paris: Organization for Economic Cooperation and Development.
- OECD. (2006). *Employment Outlook: Boosting Jobs and Incomes*. Paris: OECD.
- OECD. (2013). *Employment Outlook 2013*. Paris: OECD. Retrieved from http://dx.doi.org/10.1787/empl_outlook-2013-en
- OECD. (2019). *OECD Employment Outlook 2019: The Future of Work*. Paris: OECD Publishing. doi:<https://doi.org/10.1787/9ee00155-en>
- Pages, C. (2003). *Labor Market Reforms: The Good, The Bad and The Ugly*. Inter-American Development Bank.
- Petrin, A., & Sivadasan, J. (2006, December). Job Security Does Affect Economic Efficiency: Theory, A New Statistic, and Evidence from Chile. *IPC Working Paper Series*(21).
- Piasna, A., & Myant, M. (2017). *Myths of employment deregulation: how*



- it neither creates jobs nor reduces labor market segmentation.* Brussels: ETUI.
- Pries, M., & Rogerson, R. (2005). Hiring Policies, Labor Market Institutions, and Labor Market Flows. *Journal of Political Economy*, 113(4).
- Roy, J. (2021). The effect of employment protection legislation on international trade. *Economic Modelling*, 94, pp. 221–234. doi:10.1016/j.econmod.2020.10.004
- Rubery, J., & Piasna, A. (2016). *Labour market segmentation and the EU reform agenda: Developing alternatives to the mainstream.* Brussels: ETUI.
- Ruiz-Valenzuela, J. (2020). Intergenerational effects of employment protection reforms. *Labour Economics*, 62(January). doi:https://doi.org/10.1016/j.labeco.2019.101774
- Saint-Paul, G. (2002). The Political Economy of Employment Protection. *Journal of Political Economy*, 110(5), pp. 672–704.
- Scarpetta, S. (1996). Assessing the role of labour market policies and institutional settings on unemployment: A cross-country study. *OECD Economic Studies*, 26(1), pp. 43–98.
- Sharpe, A., & Fard, S. (2022). The Current State of Research on the Two-Way Linkages between Productivity and Well-Being. *ILO Working Paper*(56).
- Sordyl, M. (2024). Labour Market Institutions – the Problem of Definitions and Measurement. *Ekonomia i Prawo. Economics and Law*, 23(4), pp. 595–610. doi:10.12775/EiP.2024.30
- Storm, S., & Nastepad, C. (2009). Labor Market Regulation and Productivity Growth: Evidence for Twenty OECD Countries (1984–2004). *Industrial Relations*, 48(4), pp. 629–654. doi:https://doi.org/10.1111/j.1468-232X.2009.00579.x
- Vergeer, R., & Kleinknecht, A. (2010–2011). The impact of labor market deregulation on productivity: a panel data analysis of 19 OECD countries (1960–2004). *Journal of Post Keynesian Economics*, 33(2), pp. 371–407.
- Vosko, L. (2011). Precarious Employment and the Problem of SER-Centrism in Regulating for Decent Work. In S. Lee, & D. McCann, *Regulating for Decent Work. Advances in Labour Studies.* London: Palgrave Macmillan. doi:10.1057/9780230307834_3

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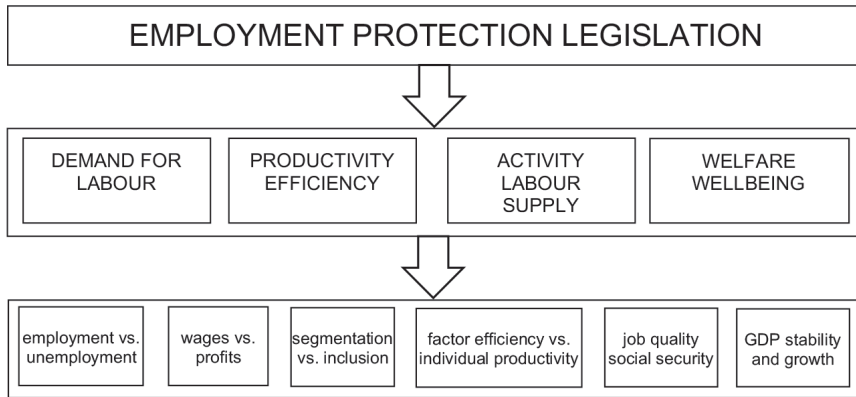
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Appendix

Figure 1. The main channels through which EPL affects macroeconomic variables



Source: own preparation.

Table 1. The impact of EPL on output variables

Main channel	Subchannels	Effects
Labour demand	costs of jobs value of firms investment in physical capital competitiveness	lower employment*, higher unemployment*, higher wage share, lower profits, slower reaction to shocks, less efficient resource allocation, less output and employment volatility over the cycle
Productivity & efficiency	resource allocation investment in human capital innovation cooperation	longer average tenure, more persistent segmentation, slower resource reallocation, less efficient resource allocation, higher human capital accumulation, more innovation, better incentives, better cooperation, information sharing, higher individual productivity, higher-quality jobs
Labour supply & activity	market segmentation search activity family formation health	more search activity, more persistent segmentation*, lack of access for some groups, employment security supports family formation, lack of security negatively affects health
Welfare & wellbeing	income stability/insurance inequalities social inclusion social norms	more stable income, improved income distribution*, more stable consumption, less debt, more savings, better access to credit, fairness and trust, avoiding risks of deregulation

* Results that have not been strongly confirmed in the literature

Source: own preparation.

Table 2. Correlations between EPL measures and output variables

Output variable	OECD index	WEF	CBR-LRI
Labor force participation rate % of total population ages 15+	-0.420***	-0.382**	0.028
Employment ratio % of total population ages 15+	-0.364**	-0.401**	0.047
Waged and salaried workers % of total employment	0.068	-0.155	0.077
Self-employed % of total employment	0.141	0.347**	-0.598***
Unemployment rate % of total labor force	0.153	0.187	-0.161
Youth unemployment rate % of total labor force ages 15–24	0.102	0.229	-0.090
Gini index	-0.176	0.087	-0.474***
Average annual wage USD (2023), PPP	-0.267	-0.130	-0.032
Adjusted national income per capita GNI minus fixed capital consumption and resource depletion, current USD	-0.218	-0.584***	0.474***
Labour productivity GDP per hour worked, USD (2020), PPP	-0.061	-0.129	-0.053
GDP per capita USD (2015), PPP	-0.145	-0.559***	0.490***
GDP growth %	0.034	0.068	0.021

Pearson correlation coefficients. Significance levels: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Source: own calculations based on publicly available data.

