Income Inequality and Employment Protection Laws:

Evidence from OECD countries

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Abstract

Do stringent employment protection laws (EPLs) help the poor? Using the sample 21 OECD countries for the period of 1960-2003, we find an affirmative answer to this question. We find that stringent EPLs are negatively associated with income inequality. We find that EPL index is positively associated with the income share of the poorest 20% of the population of the country (Q1) and negatively with the Gini coefficient. The results are robust to country and year fixed effects and also to the inclusion of country-specific trends to account for spurious correlations stemming from such trends in economic inequality and in enacting employment protection laws. The reverse causality between economic inequality and enactment of employment protection laws could be a cause of concern. We take 3-year lag of EPL index to address this issue. Though the effect of EPL index on inequality has reduced, but it remained statistically significant. We also test for endogenous changes in employment protection laws caused by changes in country's government specifically adopting or rejecting a left-of-center political stance. The results are robust to such changes. We identify the possible channel through which EPLs affect the income inequality. Though stringent EPLs lead to an increase in the price of labour and hence less use of labour-intensive techniques, but we find that stringent EPLs are positively associated with the relative wages paid in the labour intensive industries. We also conduct a placebo test by testing the effect of stringent EPLs on income share of the Top 10, 5, 1 and 0.5 % of population. The test results further support our main results.

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Introduction

The literature on income inequality and labor protection laws is quite sparse. Except for a few country studies in developing countries and some cross country comparisons in developed world, the research in this topic is very limited. Besley and Burgess (2004) find that states in India that amended the Industrial Dispute Act in pro-worker direction experienced lower output, investment and productivity in registered manufacturing. Also, the regulation in pro-worker direction was negatively related to the income of the urban poor. On the other hand, Bazen (2000) studies the experience of three countries that have national minimum wages-France, Belgium and the Netherlands, and three where the low wages rates are determined through wide spread collective bargaining-Germany, Italy and Denmark. Overall there results suggest that there is less inequality and less poverty than in United Kingdom and the United states, where low wages are less regulated.

There exists a large literature on the relation between real growth and inequality (Dollar and Kraay, 2002; Gine and Townsend, 2004; Burgess and Pandey, 2005; Beck et al, 2009). Similarly, there exists another large literature examining the real effects of employment protection laws. Lazear (1990) and Ljungqvist and Sargent (1998) argue that employment protection laws hinder job destruction and thereby lead to less job creation and higher unemployment. Botero et al. (2004) find empirically that heavier regulation of labor leads to adverse consequences for labor market participation and unemployment. Atanassov and Kim (2007) examine the interaction between labor laws and investor protection laws and find that rigid employment laws lead to higher likelihood of value-reducing major asset sales, particularly when investor protection is weak. They find that assets are sold to forestall layoffs, even if these

asset sales hurt performance. Bassanini, Nunziata and Venn (2009) also show that mandatory dismissal regulations in OECD countries have a depressing effect on productivity growth in industries where layoff restrictions are more likely to be binding. In contrast, Acharya et al. (2010) show that laws that render dismissal of employees difficult can have a positive effect on innovation and thereby economic growth. Recent work by Subramanian et.al (2011) documents the negative effect of employment protection laws on privatization. Our study tries to bridge the gap between the two strands of literature by examining the effect of employment protection laws on income inequality.

Data

In this study we use panel data for 21 OECD countries[2] for the period of 1960-2003 for which the data is available for both measures of income inequality and employment protection laws.

A) Income Inequality

We consider the two most widely used measures of economic inequality in a country: Gini coefficient of the country and the income share of the poorest 20% of the population of the country (Q1). The source of our data on inequality is the World Income Inequality Database (WIID) of the United Nations University World Institute of Development Economics Research (UNU-WIDER). The data contains 4981 overlapping country-year observations on the Gini coefficient and 2945 observations on quintiles and deciles for 157 countries spanning from before 1960 to 2006.

[2] Australia, Austria, Belgium, Canada, Denmark, Germany, Finland, France, Greece, Ireland, Italy, Japan, Netherlands, Norway, New Zealand, Portugal, Spain, Sweden , Switzerland United Kingdom, and United States of America

As suggested by Kuznets (1955), an ideal database on inequality should measure inequality on the basis of gross (rather than net) incomes (rather than consumption expenditures) of family units (rather than individuals) covering all the segments (rather than a particular upper or lower tail), all the regions (rather than underdeveloped regions) for the income earners (excluding those in the age of learning and already retired). While selecting the observations from WIID we have followed Kuznet's preference ordering. For a given country-year we preferred to choose high quality household level income-based Gni coefficients/Q1 calculated for all the regions in the country and for all the age groups. For instance, if for a given country-year we have two high quality data points at household level for Gini, one based on income and another based on consumption, we include the data point based on income. In addition, we adjust for different survey methodologies and measurements across countries by regressing both the Gini coefficient and the first quintile share on a constant, a set of country dummies, and dummy variables indicating whether the measure is income (D_i=1) or consumption (D_i=0), whether the income measure is gross (D_g=1) or net (D_g=0) and whether the unit of analysis is household (D_h=1) or individual (D_h=0). We add back the coefficients on D_i ,D_g and D_h for the sample points wherever inequality is defined on the basis of consumption, net income and at an individual level respectively. This process leaves us with 2302 country-year observations covering 157 countries with the median number of observations per country being 12.

B) Employment protection laws

In order to analyze the impact of employment protection laws on income inequality, we exploit the time-series variation generated by changes in these laws within countries. We use the Employment Protection Law (EPL) index sourced from Allard (2005), who analyzes in detail the evolution of employment protection legislation across the OECD countries for each year from

1950 to 2003 to generate the EPL index. The EPL index offers an important advantage in the context of our study. First, the long time-series, which captures comprehensively all country-level changes in employment protection laws, enables us to conduct tests that alleviate econometric concerns that would otherwise be a problem in a cross-country setting.

Second, the EPL index covers comprehensively all aspects of employment protection legislation for the OECD countries. This index has been constructed by surveying existing law and regulations in OECD countries and by assigning numerical scores for each and every aspect of employment protection legislation. The final scores have been obtained after necessary reviews and corrections by each of the national governments. The EPL index covers eighteen aspects of employment protection legislation grouped into three broad categories: (i) laws protecting those workers who have signed regular contracts with their employers ("Regular Contracts"); (ii) laws affecting workers with fixed-term/temporary contracts or contracts with temporary work agencies ("Temporary Contracts"); and (iii) regulations applying to collective dismissals ("Collective Dismissals").

The "Regular Contracts" index focuses on the procedural requirements that need to be followed once a decision is taken to fire an employee who has been provided a regular employment contract, the notice period that needs to be given to such an employee, the severance pay requirements, and the prevailing standards of and penalties for "unfair" dismissals. Employment protection laws protect workers covered under "Regular Contracts" from redundancies resulting from economic factors. Such economic factors include bankruptcy, complete or partial liquidation of the enterprise, staff cuts due to changes in the production technology or the structure of the enterprise as well as due to financial problems of the employer. In such a case the redundant worker enjoys protection in the form of a notice period combined

with severance pay. Other reasons for employment termination with notice include long-term absence from work due to health reasons, unsatisfactory work performance due to health problems or inadequate qualifications, and refusal to move to another locality in connection with the relocation of the enterprise or of one of its parts. In some countries, age and eligibility for old-age pension are also valid reasons for employment termination with notice by employer while in other countries such a termination is unlawful. The "Temporary Contracts" index evaluates the conditions under which these types of contracts can be offered, the maximum number of successive renewals and the maximum cumulated duration of a temporary employment contract. The "Collective Dismissals" index defines a collective dismissal and specifies the notification requirements provided by law and the associated delays and costs for the employers.

By merging these two datasets we arrive at our sample used in our study. Table I provides the summary of variables for each country. The standard deviation in EPL index in each country suggests that we have enough time-series variation in our sample. Figure 1A, 1B and 1C provides the times series graphs for Gini coefficient, Q1, and EPL index respectively for the sample countries.

This time-series variation within a country is generated by specific law changes relating to employment protection. For example, in France, the employment protection laws relating to the notification of employee dismissals were weakened in 1986. Before this law change, an employer was required to provide the employee with written reasons for his/her dismissal. Furthermore, the employer had to obtain the permission of a state/local body prior to any individual dismissal. In 1986, this law was changed so that the employer only had to notify the state/local body prior to an individual dismissal. Consistent with this law change, in Figure 1C,

we see the EPL index for France decreasing in 1986. The EPL index in our sample exhibits considerable variation, as suggested by Table I and Figure 1C, which we can exploit to identify the effect of employment protection on income inequality.

C) Industry Level Data

To identify the channel through which employment protection laws could affect income inequality, we use industry level cross-country data. The source of the data we use to study this channel is the United Nations Industrial Development Organization's (UNIDO) Industrial Statistics Database (INDSTAT2 2010) which has data for the period from 1963 to 2007 for 162 countries. The data are arranged at the 2-digit level of the International Standard Industrial Classification of All Economic Activities (ISIC) Revision 3 pertaining to the manufacturing sector, which comprises 23 industries. In order to use the data, we need to ensure that, for a particular country, the set of industries (be some combined or all separate) remain the same throughout the period of analysis. The variables we use from the UNIDO dataset are (i) wages and salaries, (ii) total number of employees, and (iii) value added.

We run our tests both at industry-country-year level and at country-year level. For country-year level tests, we need to find a representative number for each country-year which we can use in our regressions. This number should capture the difference between industries which are more labour intensive and those which are less labour intensive. To do this, we first find the share of each industry for each of the3 variables mentioned above for each year. For instance, we find the wage share for food and beverages in USA in 1985 by dividing the wages in 1985 in the food and beverage industry in the US by the total wages for all industries in the US in 1985.

Our measure of the labour intensity of an industry is the (i) ratio of the wage share to the value added share and (ii) employment share to output share to cross check. Industries with a

high relative wage share compared to their value added share are the ones with high labour intensity. We sort the industries by this measure for every country-year and pick the industries at the 25th percentile and 75th percentile of the distribution as our representative low labour intensive and high labour intensive industries.

Having got these two industries for each country-year, we find the difference/ratio between average wage rate (wages and salaries/no. of employees) of the high labour intensive industry and average wage rate (wages and salaries/no. of employees) of the low labour intensive industry. This gives us a unique country-year observation which we use in our regressions.

D) Controls and other variables

In our estimation, we also control for some of the important factors mentioned in the cross-country growth literature. The ones we need to control for are mean income, inflation and trade openness. Real GDP per capita allows us to control for changes in the income of the entire population. The growth in the value of the GDP deflator controls for changes in a country's macroeconomic environment and the ratio of the sum of exports and imports to a country's GDP proxies for trade openness. The data source for these controls is the updated version 6.3 of the Penn World Tables. Apart from this we test the effect of employment protection laws on income of the rich. We use Top Income database to study this relationship. Details on all variables and their sources can be found in Table 2.

Table 3 provides the summary statistics of the variables used in the regressions.

Hypotheses and Methodology

As discussed before through this study we would like to test the effect of stringent labour laws on income inequality and the channel through which it works. We first hypothesize that

stringent labour laws favorably affect the poor. In other words, in a country, legislations passed in favour of labor positively affect their income level and hence reduce the income inequality. We test this hypotheses using following regression equation.

$$\boldsymbol{Y_{ct} = \alpha_c + \alpha_t + \alpha_c * t + \beta_0 EPL_{ct} + \beta X_{ct} + \varepsilon_{ct}} \qquad \textbf{..... (1)}$$

In above equation, we use two measure of income inequality, (i) *Q1*-income share of poorest 20% of population and (ii) *Gini* coefficient as dependent variable ($\boldsymbol{Y_{ct}}$)**.** The main independent variable measuring the strictness of labour laws is the Employment Protection Law Index ($\boldsymbol{EPL_{ct}}$). We use a bunch of controls, $\mathbf{X_{ct}}$ as noted in the literature (Beck et al (2007)), like inflation, growth in trade openness, and growth in real GDP per capita. $\boldsymbol{\alpha_c}$ and $\boldsymbol{\alpha_t}$ refers to country fixed effects and year-fixed effect to control for non-time varying unobservable factors and for macro-economic shocks, respectively. Additionally, in certain specifications we take lag of $\boldsymbol{EPL_{ct}}$ to address the reverse causality concerns and include country-specific trends to account for spurious correlations stemming from such trends in economic inequality and in enacting employment protection laws. Here the hypothesis is $\boldsymbol{\beta_0} > 0$ in case of *Q1* and $\boldsymbol{\beta_0} < 0$ in case of *Gini*.

To understand the mechanism through which EPLs effect the income distribution in a given country, we test the how EPLs effects the wage distribution and production technology within an industry in a country. As discussed before, Botero et al. (2004) find empirically that heavier regulation of labor leads to adverse consequences for labor market participation and unemployment. So, it is important to test this hypothesis. As labour laws effects could vary across industry, so to understand the mechanism we test our hypotheses 2 digit-SIC industry-country-year level. We use three variables (1) *Wages paid/Value Added,* (2) *No. of Employees/Value Added* and (3) *Log (Avg. Wage Rate)* to test various effects of EPLs at industry

level. *Wages paid/Value Added* and *No. of Employees/Value Added* proxies for the labour intensity. In other words, *Wages paid/Value Added* can be rewritten as $\frac{wL}{f(K,L)}$ and *No. of Employees/Value Added* as $\frac{L}{f(K,L)}$, w is the wage rate per employee, *L* as units of labour and *K* as units of capital. Assuming *cobb-douglas* production function with constant returns to scale / decreasing returns to scale, higher $\frac{L}{f(K,L)}$ or $\frac{wL}{f(K,L)}$ implies higher $\frac{L}{K}$. In other words, higher this ratio implies more labour-intensive technology. While, *Log (Avg. Wage Rate)* measures the effect on w i.e. wage rate per employee in an industry in a year.

Employment protection laws have short-term and long-term effects. Stricter labour laws make labour a relative expensive source of production compare to capital, so the short-term partial equilibrium effect is higher w and less use of labour, while the general equilibrium effect is a rise use of capital compare to labour i.e. high $\frac{K}{L}$ or low $\frac{L}{K}$. Given, high $\frac{K}{L}$ production technology with strict EPLs, the long-term term effect on wage-rate w is not very clear. We use following regression equation to test the hypotheses:

$$\boldsymbol{Y_{i\,ct} = \beta_c + \beta_t + \beta_i * \beta_c + \beta_i * t + \beta_0 EPL_{ct} + \beta \mathbf{X_{ct}} + \varepsilon_{ict}} \quad \textbf{..... (2)}$$

In the above equation, we use (1) *Wages paid/Value Added,* (2) *No. of Employees/Value Added* and (3) *Log (Avg. Wage Rate)* as $\boldsymbol{Y_{i\,ct}}$ in different specifications for the i^{th} industry in c^{th} country and t^{th} year. The first two variables test the labour-laws implication on production technology, while the third variable tests the effect on price of labour.

We hypothesize $\boldsymbol{\beta_0 < 0}$ in case of (1) and (2). For wages paid to serve as a channel to reduce income inequality, we hypothesize $\boldsymbol{\beta_0 > 0}$ in case (3). In the above model we also include country, year to control for non-time varying country-specific unobservable factors, year

fixed effects for macro economic shocks affecting labour-market together in all countries, industry-country cross effects to control for country-specific industry level missing variables and industry-year trend to account for spurious correlations stemming from such trends in use of labour and enactment of employment protection laws.

Equation (2) tests for the effects of EPLs on labour/wage distributions within an industry in a country. The EPLs can have varied effects across industries within a country. To understand this channel through which labour laws can affect income inequality, we test for the effect of labour laws on relative wages paid in labour- intensive industry compare to capital intensive industry. As discussed before in data section, for this we identify labor intensive industries by ranking the industries on the basis of (1) Wage share /Share of Value Added and (2) Employment Share/Share of value of output in a given country-year. We calculate the 75th percentile and 25th percentile of the ratios. Here, 75th percentile industry is more labor intensive compared to 25th percentile. We calculate the ratio and difference between wage rate between the 75th percentile and 25th percentile industries. We use the following regression equation:

$$\boldsymbol{Y_{ct} = \alpha_c + \alpha_t + \alpha_c * t + \beta_0 EPL_{ct} + \varepsilon_{ct}} \quad \boldsymbol{\ldots\ldots (3)}$$

In above equation we use (1) *Relative Wage* i.e the ratio of wages paid per worker in relatively more labour intensive industry to wages paid per worker in the more labour intensive industry and (2) *Difference wage* i.e. the difference between the wages paid per worker in relatively more labour intensive industry to wages paid per worker in the more labour intensive industry, as dependent variable, $\boldsymbol{Y_{ct}}$. We also include country-fixed effects to control for country specific effects on wage differences, year-fixed effects for macro economic shocks and country-year trend to account for spurious correlations stemming from such trends in wage differences

and enactment of employment protection laws. Here, we hypothesize $\boldsymbol{\beta_0 > 0}$, i.e. strict labour laws increases the relative wages paid per worker in more labor-intensive industry.

In addition to identify the channel through which EPLs effects income inequality, we also do a placebo test. We check how EPLs affects the income share of the rich. We have re-run equation (1) with income share of the (i) Top 10%, (ii) Top 5 %, (iii) Top 1% and (iv) Top 0.5% of the population as $\boldsymbol{Y_{ct}}$ in various specifications. We hypothesize $\boldsymbol{\beta_0 < 0}$, in case of (i) and (ii), and $\boldsymbol{\beta_0 = 0}$ in case of (iii) and (iv).

Results

A) Income Inequality and Employment Protection Laws

Table 4 reports the regression results of the equation (1). Panel A reports the regression results with *Q1* as dependent variable and Panel B with *Gini* coefficient as dependent variable. P-values reported in the table are based on clustered adjusted standard errors at country level. In col 1 -3 and col 6-8, we test our hypotheses with contemporaneous EPL index and in col 4-5 and col 9-10 we use 3 year lag of the EPL index to avoid the possible reverse causality concerns. We find $\boldsymbol{\beta_0 < 0}$ in case if *Q1* and $\boldsymbol{\beta_0 > 0}$ in case if *Gini* coefficient and statistically significant in most of the columns. In fact the results become much stronger after controlling for the country-specific trends to account for spurious correlations stemming from such trends in economic inequality and in enacting employment protection laws. The results confirm our hypotheses that strict EPLs in favor of labour increases the income share of the poorest 20% of population and reduces the disparity in the distribution measured by *Gini coefficient.*

Economic Significance: As the results discussed above are based on with-in country. Let us take case of Spain over the sample period. Since 1980's there is a reducing trend in the index

suggesting relation of labour laws. The relaxation includes, in 1984, the law increased the range of permissible fixed-term contracts, later in 1994, and temporary work agencies permitted and prior administrative authorization for dismissals for economic reasons was abolished. Also, objective grounds for collective redundancies extended and procedural requirements made less time-consuming, and maximum compensation pay for unfair dismissal was reduced from 45 to 33 days per year of service. In 1985, the actual Q1 and Gini coefficient for Spain were 0.087 (i.e. 8.7%) and 28.95, respectively. The EPL index 3 years before i.e. in 1982 was 3.8. In year 2003, the actual Q1 and Gini coefficient for Spain were 0.061 (i.e. 6.11%) and 37.86, respectively, while the EPL index 3 years before i.e. in 2000 was 2.3. The actual changes in Q1 and Gini coefficient were -0.026 (i.e. -2.6 %) and 8.91 respectively. Let's see how our model predicts these changes.

As discussed before, in Spain over the period of 1985 to 2003, the EPL index has reduced from 3.8 to 2.3 i.e. a change of about 1.5 which is quite close to one-standard deviation of the complete sample which is about 1.1. The predicted $\boldsymbol{\beta_0}$ is 0.007 in case of *Q1* (Panel A col 4) and -2.485 in case of Gini (Panel B col 9). The estimated change in *Q1* and *Gini* for a change in EPL index by -1.5 amounts to -0.0105 (i.e. -1.05%) and 3.72 respectively. These predicted changes are about 40 to 45% of the actual changes, suggesting the importance of employment protection laws on income inequality.

Correlation of employment protection law passages to changes in government: An important concern stems from the fact that changes in a country's employment protection laws are likely to be correlated with changes in elected governments. In particular, to cater to their political constituencies, more left-leaning governments may be inclined to strengthen labor laws. Botero, et al. (2004) find evidence that labor market regulation is often driven by political

considerations: countries with a longer history of leftist governments have more stringent labor regulation. Deakin, et al. (2007) also document that the primary motivation for labor market (de)regulation is political. They find that a rapid decline in the intensity of labor market regulation in the United Kingdom coincided with the election of a Conservative government committed to a policy of labor market deregulation. Similarly, a limited revival of regulation of the labor markets in the United Kingdom coincided with the return to office in 1997 of a Labor government which ended United Kingdom's opting out of the EU Social Charter. Furthermore, they find that in France, the election of a socialist government in 1981 led to a series of labor law reforms – the "Auroux laws". These laws, which were enacted in 1982, affected a wide range of aspects in both individual and collective labor law. Since that time, French labor law has tracked the changing political fortunes of the main parties.

Since leftist governments are more likely to introduce policy (in addition to stricter labour laws) to reduce income inequality, it is possible that the effect of employment protection laws on privatization documented above is, in fact, caused by other factors coinciding with changes in government rather than changes in employment protection laws. We examine this concern by including time-varying proxies for the political leanings of a country's government. These variables are constructed using the variable Government from Armingeon, et al. (2008), which captures the balance of power between left and right-leaning parties in a given country's parliament. This variable takes on values from one to five, with one denoting a hegemony of right-wing (and centre) parties, and five denoting a hegemony of social-democratic and other left parties. As expected, it is strongly positively correlated with the EPL index (the correlation is 0.62), which implies that stricter employment protection laws are indeed enacted in a country when the government is leftist in its political leanings.

Table V reports the results with the inclusion of the type of government. We find that the estimated value of $\boldsymbol{\beta_0}$ remains statistically significant with the inclusion of the variable indicating type of government. We find that coefficient of the government type variable remains insignificant. So, our initial results are robust to change in inequality caused by type of government.

B) Wage Distribution and Employment Protection Laws:

This section provides the results on the mechanism through which EPLs could affect the income inequality. Table VI provides the regression results of equation (3). Panel A and B reports the results with *Wages paid/Value Added* and *No. of Employees/Value Added* as dependent variable, respectively. The negative and significant estimated value of $\boldsymbol{\beta_0}$ in most of the specifications suggests that stricter employment protection laws lead more use of capital intensive techniques within an industry, after controlling for time trends within an industry to take care of the general tendency of the industries within a country to employ capital intensive techniques over the sample period. Panel C reports the regression result of equation 3 with *Log (Avg. Wage Rate)* as the dependent variable. The negative and significant $\boldsymbol{\beta_0}$ in specification 11 and 12 suggest that stricter EPLs within an industry in a country lead to fall in average wage rate. Essentially, the short-term partial equilibrium effect of strict EPLs implies less use of labour as a factor of production and the long-term effect implies fall in average wage rate. The results are consistent with the previous evidence in the literature.

The above results indicate the within-industry within-country effects of strict employment protection laws. We also test for the effect of EPLs across industries. As discussed before we identify labor intensive industries by ranking the industries on the basis of (1) Wage share /Share of Value Added and (2) Employment Share/Share of value of output in a given

country-year. We calculate the 75th percentile and 25th percentile of the ratios. Here, 75th percentile industry is more labor intensive compared to 25th percentile. Panel A and B reports the results of relative wage and difference wage as dependent variable in case Wage share /Share of Value Added and Employment share / Value added share, respectively. In panel A, we find that in col 1-4, estimated value of $\boldsymbol{\beta_0}$ is positive and significant. While in panel B, the estimated value of $\boldsymbol{\beta_0}$ is not statistically. Overall, the results suggest that stringent EPLs increases the relative wages paid in more labour intensive industries. This could be a possible channel for fall in income inequality.

C) Top Income and Employment Protection Laws:

Table VIII below provides the result of the placebo test. For a sample of 15-16 countries we test how the EPLs affect the income of the rich. Panel A, B, C and D provides the regression results for affect of EPLs on income share of top 10, 5, 1 and 0. 5 % of the population, respectively. We observe that estimated value of $\boldsymbol{\beta_0}$ is negative and significant in panel A and B. While in panel C and D it remains negative but insignificant. It also appears that affect of strict EPLs more severe on income share of the top 10% compared to top 5%. We further test this observation by taking the difference in income share of top 10 & top 5, top 5 and top 1, and top 1 and top 0.5. The results are reported in Panel E of Table VIII. We find that the corresponding coefficient of EPL is negative and significant, thus further confirms the results. We also check the source of income for this top group. Appendix 1 provides the wage and non-wage distribution of the income of Top 10, 5, 1, and 0.1% of the population in sample of 5 countries for which the data was available. In almost all countries except Italy, wage income accounts for 70 to 80 % of the total income of the top 10% and top 5 % of the population. While, wage income is about 50-60 % of the total income of the top 1% and top 0.5 % of the population. The

results further support our observation that strict EPLs helps in redistribution on income by changing the distribution of wages among the workers.

Conclusion

Using the sample discussed above we find that stringent EPLs are negatively associated with income inequality. We find that EPL index is positively associated with the income share of the poorest 20% of the population of the country (Q1) and negatively with the Gini coefficient. The results are robust to country and year fixed effects and also to the inclusion of country-specific trends to account for spurious correlations stemming from such trends in economic inequality and in enacting employment protection laws. The reverse causality between economic inequality and enactment of employment protection laws could be a cause of concern. We take 3-year lag of EPL index to address this issue. Though the effect of EPL index on inequality has reduced, but it remained statistically significant. We also test for endogenous changes in employment protection laws caused by changes in country's government specifically adopting or rejecting a left-of-center political stance. The results are robust to such changes. All the results are robust to clustered adjusted standard errors at country level.

Additionally, we look at the industry level data to understand the channels through which EPLs could affect the income inequality. We do find that stringent employment protection laws implies less use of labor-intensive technology within an industry in a country, after controlling for various country, year, industry-country fixed effects and industry-year trends. We find that the ratios (1) Wages/Value added and (2) No. of Employees/Value added are negatively associated with the EPL index. This implies less use of labor or an increase in K/L ratio. The short-term partial equilibrium effect of stringent labor laws makes labor expensive as a means of production compare to capital. But in long run the effect of such laws on price of labor is

unknown. We find that this effect is negative. These results are based on within industry variation.

Next we test how EPLs affect the wage-distribution across industries. For this we identify labor intensive industries by ranking the industries on the basis of (1) Wage share /Share of Value Added and (2) Employment Share/Share of value of output in a given country-year. We calculate the 75th percentile and 25th percentile of the ratios. Here, 75th percentile industry is more labor intensive compared to 25th percentile. We calculate the ratio and difference between wage rate between the 75th percentile and 25th percentile industries. We find that the relative wages and difference wages are positively associated EPL index. In other words, the results suggest that stringent EPLs increases the relative wages paid in more labour intensive industries. This could be a possible channel for fall in income inequality.

We also conduct a placebo test. We check how EPLs affect the income share of the Top 10, 5, 1 and 0.5 % of the population. As expected, we find that EPL index is negatively associated with income share of Top 10% and 5% of the population, given most of their income comprise wages, salaries and pensions (around 70 to 75% in case of USA). Also, the negative effect of EPL is more for the income share of the Top 10% group and less for Top 5% group. On the other hand, EPL index is uncorrelated with income share of Top 1% and 0.5% of the population, given most of their income comprise non-wage income sources like entrepreneurial income, dividends, interest income and rents (around 45 to 50% in case of USA).

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Table I: Summary Statistics-Country Wise

The following table provides the time series mean and standard deviation of Q1, Gini and EPL. Here we use panel data for the period of 1960-2003 for 21 OECD countries.

			Mean (Standard Deviation)		
Country	**Code**	**OBS**	**Q1**	**Gini**	**EPL**
Australia	**AUS**	43	7.34 (1.6)	31.81 (5.59)	0.5 (0.47)
Austria	**AUT**	16	8.95 (1.47)	25.63 (3.69)	2.29 (0.46)
Belgium	**BEL**	18	7.69 (1.88)	31.64 (7.37)	2.16 (0.58)
Canada	**CAN**	31	7.57 (1.33)	29.95 (3.55)	0.67 (0.56)
Switzerland	**CHE**	7	7.41 (0.93)	32.02 (1.89)	1.19 (0.41)
Germany	**DEU**	34	7.68 (1.8)	31.63 (7.39)	2.33 (0.64)
Denmark	**DNK**	32	7.25 (2.29)	33.47 (7.24)	1.7 (0.56)
Spain	**ESP**	18	6.84 (1.13)	33.84 (4.2)	2.74 (0.49)
Finland	**FIN**	24	8.56 (1.72)	27.58 (5.13)	1.93 (0.7)
France	**FRA**	19	7.18 (1.84)	33.38 (7.93)	2.45 (0.91)
United Kingdom	**GBR**	44	8.6 (1.34)	28 (4.45)	1.05 (0.49)
Greece	**GRC**	24	5.38 (0.92)	39.87 (5.57)	2.58 (1.06)
Ireland	**IRL**	11	7.18 (1.85)	32.98 (4.75)	1.44 (0.36)
Italy	**ITA**	28	5.52 (1.24)	39.08 (5.18)	3.36 (0.32)
Japan	**JPN**	31	6.78 (1.21)	34.54 (3.68)	1.57 (0.16)
Netherlands	**NLD**	24	6.97 (1.42)	33.78 (4.45)	2.18 (0.36)
Norway	**NOR**	26	5.97 (2.43)	33.83 (5.52)	2.72 (0.23)
New Zealand	**NZL**	34	4.75 (1.99)	42.75 (10.89)	0.53 (0.25)
Portugal	**PRT**	10	5.89 (0.88)	37.01 (2.34)	3.72 (0.15)
Sweden	**SWE**	44	7.51 (3.31)	33.25 (12.54)	2.66 (0.9)
United States of America	**USA**	44	4.33 (0.64)	43.7 (2.15)	0.27 (0.24)
Total		562	6.86 (2.17)	34.11 (8.07)	1.73 (1.1)

Table II: Description of Variables and their sources

This table gives the list of variables used in the empirical study together with their brief description, their source and coverage.

Variable	*Variable Description*	*Source*	*Coverage*
Q1	Q1 refers to the income share of the poorest 20% of a country's population. In cases where deciles, and not quintiles, are available, Q1 is calculated as D1+D2. If no data on either quintiles or deciles are available, Q1 is calculated using gini by assuming a lognormal income distribution as per Dollar and Kraay (2002).	UNU-WIDER WIID (V2.0c May 2008)	From before 1960 to 2006 covering 159 countries
GINI	The gini co-efficient is the ratio of the area between the Lorenz Curve, which plots cumulative population against cumulative income share, and the diagonal to the area below the diagonal, multiplied by 100. A value of 100 indicates perfect inequality while a value of 0 means no inequality.	UNU-WIDER WIID (V2.0c May 2008)	From before 1960 to 2006 covering 159 countries
EPL	Employment Protection Legislation Index	Gayle Allard, "Measuring Job Security Over Time Search of a Historical Indicator for EPL"	1960-2003, covering 21 OECD countries
Government Party Index	Government (Schmidt-Index): (1) hegemony of right-wing (and centre) parties (gov_left=0), (2) dominance of right-wing (and centre) parties (gov_left<33.3), (3) balance of power between left and right (33.3<gov_left<66.6), (4) dominance of social-democratic and other left parties (gov_left>66.6), (5) hegemony of social-democratic and other left parties (gov_left=100).	Klaus Armingeon, Sarah Engler, Panajotis Potoli Marlène Gerber, Phillip Leimgruber, "Compara Political Data Set I, 1960-2008"	1960-2008, covering 23 OECD countries
Wages paid/Value Added	Total wages of all employees working in given industry in given country-year *scaled* by the corresponding Value added by the industry in given country-year	UNIDO Industrial Statistics Database (INDSTAT2 2010 ISIC Rev.3)	1963-2007, covering 162 countries

No. of Employees/Value Added	Number of employees working in given industry in given country-year *scaled* by the corresponding Value added by the industry in given country-year	UNIDO Industrial Statistics Database (INDSTAT2 2010 ISIC Rev.3)	1963-2007, covering 162 countries
Average Wages paid per employee (in $)	Total wages of all employees working in given industry in given country-year in USD scaled by Number of employees working in given industry in given country-year	UNIDO Industrial Statistics Database (INDSTAT2 2010 ISIC Rev.3)	1963-2007, covering 162 countries
Relative/Difference Wage Rate	We identify labor intensive industries by ranking the industries on the basis of (1) Wage share /Share of Value Added and (2) Employment Share/Share of value of output in a given country-year. We calculate the 75th percentile and 25th percentile of the ratios. Here, 75th percentile industry is more labor intensive compared to 25th percentile. We calculate the ratio and difference between average wage rate between the 75th percentile and 25th percentile industries to construct relative wage rate and difference wage rate, respectively for each country-year.	UNIDO Industrial Statistics Database (INDSTAT2 2010 ISIC Rev.3)	1963-2007, covering 162 countries
Top x% Income Share	*Top x% Income Share* refers to the income share of the richest *x* % of a country's population. We have the data for top 10, 5, 1 and 0.5 % income share.	Top income database, http://g-mond.parisschoolofeconomics.eu/topincomes/	Before 1930 to 2008, covering 22 countries
Private Credit to GDP	Ratio of Private credit by deposit money banks and other financial institutions to GDP	World Bank Financial Structure Dataset (rev. April 2010)	1960-2007, covering 160 countries
Growth in Real GDP per Capita	Growth rate of Real GDP per capita (Constant Prices: Laspeyres), derived from growth rates of c, g, i, unit: I$	Penn World Table 6.3, August 2009	1950-2007, covering 189 countries
Growth in Trade Openness	Growth in Trade Openness where Trade openness is defined as exports plus imports divided by GDP (at contant prices)	Penn World Table 6.3, August 2009	1950-2007, covering 189 countries
Inflation	Our measure of inflation is the GDP deflator which we calculate using the values of GDP at current and constant prices as per the Penn World Table	Penn World Table 6.3, August 2009	1950-2007, covering 189 countries

Table III: Summary Statistics

The following table provides the summary statistics of the variables that we use in regression analysis. Here we use panel data for the period of 1960-2003 for 21 OECD countries.

Variables	N	Min	P25	P50	Mean	P75	Max	SD
Q1	562	1.91	5.00	6.55	6.53	7.98	10.70	1.96
GINI Coefficient	562	19.80	29.95	34.97	35.53	40.45	59.90	7.18
EPL index	562	0.00	0.70	1.60	1.73	2.70	4.10	1.10
Pvt. Credit to GDP	554	0.10	0.40	0.74	0.73	0.94	1.97	0.38
Growth in Real GDP per capita	555	-0.10	0.01	0.03	0.03	0.04	0.13	0.03
Inflation	555	-0.06	0.02	0.03	0.03	0.05	0.13	0.03
Growth in Trade Openness	555	-0.09	0.01	0.03	0.03	0.04	0.21	0.03
Government Party Index	554	1.00	1.00	2.00	2.40	4.00	5.00	1.60
Relative Wage Rate (Sorted by Wage share /Value added share)	666	0.24	0.77	0.91	0.93	1.04	6.72	0.32
Difference Wages (Sorted by Wage share /Value added share)	666	-39883.42	-3367.98	-640.27	-1947.89	269.85	17057.98	5109.11
Relative Wage Rate (Sorted by Employment share /Value added share)	675	0.40	0.76	0.83	0.86	0.94	2.41	0.17
Difference Wages (Sorted by Employment share /Value added share)	675	-27429.74	-4747.41	-1629.92	-2951.95	-336.98	22389.09	4241.22
Top 10% income share	491	18.77	28.10	31.06	30.92	33.38	43.11	4.68
Top 5% income share	557	12.10	17.99	20.53	20.43	22.38	31.51	3.39
Top 1% income share	558	3.49	6.25	7.75	7.72	8.77	16.49	2.14
Top 0.5% income share	505	2.38	4.11	5.08	5.22	5.90	12.78	1.72
Wages paid/Value Added	12475	0.03	0.40	0.49	0.48	0.58	3.70	0.15
No. of Employees/Value Added	13370	-108.61	19.84	39.42	80.23	97.96	2397.33	106.40
Average Wages paid per employee (in $)	12572	397.13	5669.97	13261.66	16135.62	24417.00	123923.50	12380.31

Table IV: Income Inequality and Employment Protection Laws

The following table provides regression results of the income inequality on employment protection laws. We use two measures of income inequality (1) Q1, income share of the poorest 20% of the population and (2) Gini coefficient. The results are based on panel data for the period of 1960-2003 for 21 OECD countries. We use following regression equation for estimation.

$$Y_{ct} = \alpha_c + \alpha_t + \alpha_c * t + \beta_0 EPL_{ct} + \beta X_{ct} + \varepsilon_{ct}$$

	Panel A					Panel B				
	Q1	**Q1**	**Q1**	**Q1**	**Log of Q1**	**Gini**	**Gini**	**Gini**	**Gini**	**Log of Gini**
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
EPL Index	0.007	0.008	.011***			-2.608	-2.704	-3.860**		
	{.131}	{.128}	{.005}			{.165}	{.157}	{.014}		
EPL(t-3)				.007**	.090*				-2.485**	-.079**
				{.023}	{.056}				{.016}	{.011}
Log of lag Pvt. Credit to GDP		-.015**	-0.004	-0.004	-0.082		5.399**	1.762	1.872	0.047
		{.034}	{.256}	{.237}	{.270}		{.034}	{.338}	{.300}	{.297}
Growth in Real GDP per capita		-0.015	0.03	0.04	0.636		11.841	-2.911	-6.529	-0.197
		{.750}	{.429}	{.317}	{.303}		{.404}	{.798}	{.592}	{.586}
Inflation		.079**	.077***	.074**	1.280**		-25.274*	-25.411**	-23.895**	-.640**
		{.044}	{.008}	{.015}	{.019}		{.086}	{.043}	{.044}	{.045}
Growth in Trade Openness		-0.029	-0.017	-0.017	-0.242		4.912	1.153	1.388	0.08
		{.205}	{.432}	{.446}	{.578}		{.581}	{.855}	{.836}	{.651}
Country FE	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
Year FE	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
Country-Year Trend	**NO**	**NO**	**YES**	**YES**	**YES**	**NO**	**NO**	**YES**	**YES**	**YES**
Adj. R-squared	0.394	0.429	0.612	0.582	0.606	0.436	0.471	0.676	0.645	0.619
Observations	562	533	533	522	522	562	533	533	522	522
No. of Countries	21	21	21	21	21	21	21	21	21	21

Standard errors are cluster adjusted at country level. P-values are reported in brackets. Level of Significance: * 0.10, ** 0.05, *** 0.01

Table V: Income Inequality and Employment Protection Laws-Type of Government

The following table provides regression results of the income inequality on employment protection laws. We use two measures of income inequality (1) Q1, income share of the poorest 20% of the population and (2) *Gini* coefficient. The results are based on panel data for the period of 1960-2003 for 21 OECD countries. Here we test for the endogenous changes in EPLs caused by changes in the government at the center. We use following regression equation for estimation.

$$\boldsymbol{Y_{ct} = \alpha_c + \alpha_t + \alpha_c * t + \beta_0 EPL_{ct} + \gamma GOV_{ct} + \beta_G EPL_{ct} * GOV_{ct} + \beta X_{ct} + \varepsilon_{ct}}$$

	Panel A: Log of Q1				**Panel B: Log of Gini**			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
EPL Index	.170***		.178***		-.118**		-.124***	
	{.009}		{.005}		{.012}		{.006}	
EPL(t-3)		.084*		.086*		-.076**		-.079**
		{.069}		{.086}		{.012}		{.016}
Government	0.007		0.013		0		-0.004	
	{.557}		{.160}		{.978}		{.621}	
Government(t-3)		-0.013		-0.012		0.008		0.006
		{.164}		{.361}		{.157}		{.453}
EPL Index * Government			-0.003				0.002	
			{.702}				{.649}	
EPL(t-3)*Government(t-3)				0				0.001
				{.956}				{.818}
Controls	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
Country FE, Year FE and Country-Year Trend	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
Adj. R-squared	0.635	0.605	0.634	0.604	0.642	0.615	0.641	0.614
Observations	526	517	526	517	526	517	526	517
No. of Countries	21	21	21	21	21	21	21	21

Standard errors are cluster adjusted at country level. P-values are reported in brackets. Level of Significance: * 0.10, ** 0.05, *** 0.01

Table VI: Wage Distribution and Employment Protection Laws-Industry, Country and Year Level

The following table provides regression results of the wages paid, use of labor and wage rate on employment protection laws. We use two measures for wage distribution (1) Total wages paid in the industry scaled by total value added in the industry i.e. *Wages paid/Value Added,* (2) No. of employees scaled by value added. For average wage rate (in Mn $), we use Total wages paid /no. of employees. The results are based on industry level data (UNIDO database) for 19 industries at ISIC level in 21 OECD countries for the period of 1960-2003. We use following regression equation for estimation.

$$Y_{i\,ct} = \beta_c + \beta_t + \beta_i * \beta_c + \beta_i * t + \beta_0 EPL_{ct} + \beta X_{ct} + \varepsilon_{ict}$$

	Panel A				**Panel B**				**Panel C**			
	Wages paid/Value Added				**No. of Employees/Value Added**				**Log (Avg. Wage Rate)**			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
EPL Index	-.011*		-.022***		-17.3**		-5.3*		-0.033		-.050**	
	{.093}		{.007}		{.025}		{.087}		{.109}		{.029}	
EPL(t-3)		-.010*		-.021***		-19.1***		-6.1**		-0.023		-.066***
		{.065}		{.004}		{.010}		{.048}		{.302}		{.008}
Log of lag Pvt. Credit to GDP			-.035***	-.036***			-10.8***	-11.1***			0.035	0.032
			{.002}	{.001}			{.001}	{.000}			{.321}	{.382}
Growth in Real GDP per capita			-.323***	-.348***			203.0***	196.2***			-1.6***	-1.69***
			{.000}	{.000}			{.000}	{.000}			{.000}	{.000}
Inflation			-.149*	-0.117			72.2***	80.4***			-.749***	-.632***
			{.054}	{.134}			{.002}	{.001}			{.000}	{.002}
Growth in Trade Openness			-0.022	-0.031			111.1***	109.3***			-1.11***	-1.13***
			{.535}	{.372}			{.000}	{.000}			{.000}	{.000}
Country FE and Year FE	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
Industry*Country FE	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
Industry*Year FE	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
Adj. R-squared	0.557	0.557	0.581	0.581	0.734	0.735	0.817	0.817	0.947	0.947	0.944	0.945
Observations	11701	11701	7607	7607	12596	12596	7723	7723	11758	11758	7641	7641
No. of Countries	21	21	21	21	21	21	21	21	21	21	21	21
No. of Industries	19	19	19	19	19	19	19	19	19	19	19	19

Standard errors are cluster adjusted at industry-country level. P-values are reported in brackets. Level of Significance: * 0.10, ** 0.05, *** 0.01

Table VII: Relative Wages and Employment Protection Laws

The following table provides regression results of the relative wages paid in labour intensive industry on employment protection laws. For this we identify labor intensive industries by ranking the industries on the basis of (1) Wage share /Share of Value Added and (2) Employment Share/Share of value of output in a given country-year. We calculate the 75th percentile and 25th percentile of the ratios. Here, 75th percentile industry is more labor intensive compared to 25th percentile. We calculate the ratio and difference between wage rate between the 75th percentile and 25th percentile industries. The results are based on industry level data (UNIDO database) for 19 industries at ISIC level in 20 OECD countries for the period of 1960-2003. We use following regression equation for estimation.

$$Y_{ct} = \alpha_c + \alpha_t + \alpha_c * t + \beta_0 EPL_{ct} + \varepsilon_{ct}$$

	Panel A: Wage share /Value added share				**Panel B: Employment share / Value added share**			
	Relative Wage		**Difference Wages**		**Relative Wage**		**Difference Wages Share**	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
EPL Index	.056*		987.134**		-0.018		326.635	
	{.089}		{.014}		{.424}		{.545}	
EPL(t-3)		.054**		1184.672**		-0.015		447.53
		{.046}		{.019}		{.487}		{.341}
Country FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Country-Year Trend	YES	YES	YES	YES	YES	YES	YES	YES
Adj. R-squared	-0.007	-0.007	0.151	0.154	0.045	0.044	0.339	0.34
Observations	666	666	666	666	675	675	675	675
No. of Countries	20	20	20	20	20	20	20	20

Standard errors are cluster adjusted at country level. P-values are reported in brackets. Level of Significance: * 0.10, ** 0.05, *** 0.01

Table VIII: Top Income and Employment Protection Laws-Placebo Test

The following table provides regression results of the income share of the Top 10, 5, 1 and 0.5 of the population on employment protection laws. The results are based on data from Top income database for available 15-16 OECD countries for the period of 1960-2003. We use following regression equation for estimation.

$$Y_{ct} = \alpha_c + \alpha_t + \alpha_c * t + \beta_0 EPL_{ct} + \beta X_{ct} + \varepsilon_{ct}$$

	Panel A		**Panel B**		**Panel C**		**Panel D**		**Panel E**		
	Top 10% income share		**Top 5% income share**		**Top 1% income share**		**Top 0.5% income share**		**Top 10-5% income share**	**Top 5-1% income share**	**Top 1-0.5% income share**
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
EPL(t-3)	-.902*	-.966***	-.652*	-.604**	-0.114	-0.081	-0.044	-0.007	-.447**	-.483**	0.009
	{.055}	{.003}	{.062}	{.011}	{.554}	{.722}	{.698}	{.959}	{.012}	{.035}	{.731}
Log of lag Pvt. Credit to GDP		-0.289		-0.124		0.017		0.241	-0.225	0.033	0.156
		{.675}		{.882}		{.976}		{.412}	{.347}	{.924}	{.133}
Growth in Real GDP per capita		6.013***		4.449**		2.846**		2.042	1.474	1.197	.549**
		{.008}		{.012}		{.041}		{.165}	{.175}	{.331}	{.034}
Inflation		10.011		6.93		3.669		4.469	1.878	3.106	0.952
		{.257}		{.309}		{.422}		{.203}	{.449}	{.239}	{.205}
Growth in Trade Openness		-5.004		-2.649		-1.165		-0.962	-1.121	-1.869	-0.444
		{.146}		{.364}		{.531}		{.549}	{.194}	{.159}	{.258}
Country FE and Year FE	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
Country-Year Trend	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
Adj. R-squared	0.924	0.948	0.897	0.925	0.898	0.917	0.92	0.925	0.892	0.914	0.927
Observations	467	357	527	388	527	388	477	360	335	365	360
No. of Countries	15	15	16	16	16	16	15	15	14	15	15

Standard errors are cluster adjusted at country level. P-values are reported in brackets. Level of Significance: * 0.10, ** 0.05, *** 0.01

Table IX: Income Inequality and Employment Protection Laws-Evidence from Wrongful Discharge laws in USA

The following table provides difference-in-difference estimates of the passage of wrongful discharge laws on income inequality. The results are based on data from Beck et.al (2010) for the period of 1976-1999. We use following regression equation for estimation.

$$Y_{st} = \alpha_s + \alpha_t + \alpha_s * t + \beta_0 WDL_{st} + \beta X_{st} + \varepsilon_{st}$$

	Logistic Gini	**Log Gini**	**Log Theil**	**Log 90/10**	**Log 75/25**	**Top 10%**	**Top 5 %**	**Top 1%**
Implied Contract	**-0.025****	**-0.014*****	**-0.032*****	**-0.092***	**-0.017**	**-0.006**	**-0.022***	**-0.023***
	{0.011}	**{0.009}**	**{0.005}**	**{0.085}**	**{0.214}**	**{0.557}**	**{0.054}**	**{0.075}**
Public Policy	**-0.017***	**-0.010***	**-0.020***	**-0.04**	**-0.027**	**-0.021****	**-0.020***	**-0.023***
	{0.082}	**{0.076}**	**{0.083}**	**{0.465}**	**{0.119}**	**{0.030}**	**{0.079}**	**{0.075}**
Good Faith regulation	**-0.002**	**-0.001**	**-0.001**	**0.026**	**-0.013**	**-0.036**	**-0.031**	**-0.008**
	{0.883}	**{0.891}**	**{0.951}**	**{0.703}**	**{0.586}**	**{0.153}**	**{0.174}**	**{0.701}**
Bank Deregulation	**-0.018***	**-0.010***	**-0.018**	**-0.056**	**-0.045*****	**-0.022***	**-0.013**	**-0.018**
	{0.088}	**{0.090}**	**{0.138}**	**{0.261}**	**{0.009}**	**{0.054}**	**{0.295}**	**{0.179}**
Growth rate of per capita Gross State Product (2000 dollars)	0.008	0.007	0.021	-0.055	-0.07	-0.02	0.005	-0.011
	{0.890}	{0.821}	{0.731}	{0.803}	{0.513}	{0.783}	{0.925}	{0.858}
Proportion blacks	-0.293	-0.162	-0.322	-0.207	-0.073	-0.347***	-0.442***	-0.363**
	{0.183}	{0.207}	{0.230}	{0.867}	{0.831}	{0.007}	{0.001}	{0.046}
Proportion high-school dropouts	0.225*	0.125*	0.169	0.486	-0.016	-0.256**	-0.154	-0.018
	{0.059}	{0.069}	{0.216}	{0.484}	{0.922}	{0.017}	{0.113}	{0.916}
Proportion female-headed households	0.135	0.076	0.154	0.471	0.217	-0.082	-0.052	0.058
	{0.150}	{0.154}	{0.196}	{0.408}	{0.142}	{0.412}	{0.654}	{0.762}
Unemployment rate	0.013***	0.007***	0.015***	0.071***	0.025***	-0.009***	-0.008***	-0.009**
	{0.000}	{0.000}	{0.000}	{0.000}	{0.000}	{0.000}	{0.003}	{0.010}
R-squared	**0.47**	**0.46**	**0.5**	**0.74**	**0.6**	**0.5**	**0.5**	**0.51**
Observations	**1176**	**1176**	**1176**	**1176**	**1176**	**1176**	**1176**	**1176**

* p<0.10, ** p<0.05, *** p<0.01

Appendix 1: Wage and Non-wage distribution of the income of Top 10, 5, 1, and 0.1% of the population

Country	*Mean*	*OBS*	Top 10%	Top 5%	Top 1%	Top 0.5%
Canada	**Wages, salaries and pensions**	**31**	**79.24**	**73.09**	**57.91**	**54.85**
	Non-Wage Income	**31**	**20.70**	**26.91**	**42.09**	**45.15**
	Professional income	31	6.41	9.34	18.02	19.61
	Business income	31	3.20	3.61	3.51	3.00
	Dividends	31	3.38	4.65	8.14	9.44
	Interest Income	31	4.84	5.70	7.51	7.97
	Investment income	31	2.94	3.62	4.92	5.14
France	**Wages, salaries and pensions**	**14**	**71.19**	**64.22**	**46.88**	**42.14**
	Non-Wage Income	**14**	**28.81**	**35.79**	**53.13**	**57.87**
	Capital income	14	7.88	9.90	16.27	19.64
	Mixed income	14	20.93	25.90	36.86	38.23
Italy	**Wages, salaries and pensions**	**18**	**64.14**	**55.11**	**37.98**	**31.65**
	Non-Wage Income	**18**	**35.86**	**44.89**	**62.02**	**68.35**
	Self-employment income	18	11.00	14.94	23.76	26.64
	Entrepreneurial income	18	8.42	9.67	10.47	10.57
	Capital income	18	12.04	15.37	22.55	25.97
	Rents	18	4.40	4.91	5.25	5.17
Spain	**Wages, salaries and pensions**	**16**	**74.36**	**69.14**	**53.80**	**46.74**
	Non-Wage Income	**16**	**25.64**	**30.86**	**46.20**	**53.26**
	Entrepreneurial income	16	12.39	14.50	20.32	22.43
	Capital income	16	8.24	9.68	13.76	15.71
	Capital gains	16	5.00	6.68	12.13	15.12
USA	**Wages, salaries and pensions**	**44**	**75.60**	**68.79**	**54.95**	**51.30**
	Non-Wage Income	**44**	**24.40**	**31.21**	**45.05**	**48.70**
	Entrepreneurial income	44	13.41	17.25	23.66	23.78
	Dividends	44	4.85	6.51	11.32	13.96
	Interest Income	44	4.93	5.76	7.27	7.75
	Rents	44	1.21	1.69	2.81	3.21

Figure 1A

The following figure provides the times series for Q1 for the sample of 21 OECD countries during 1960-2003

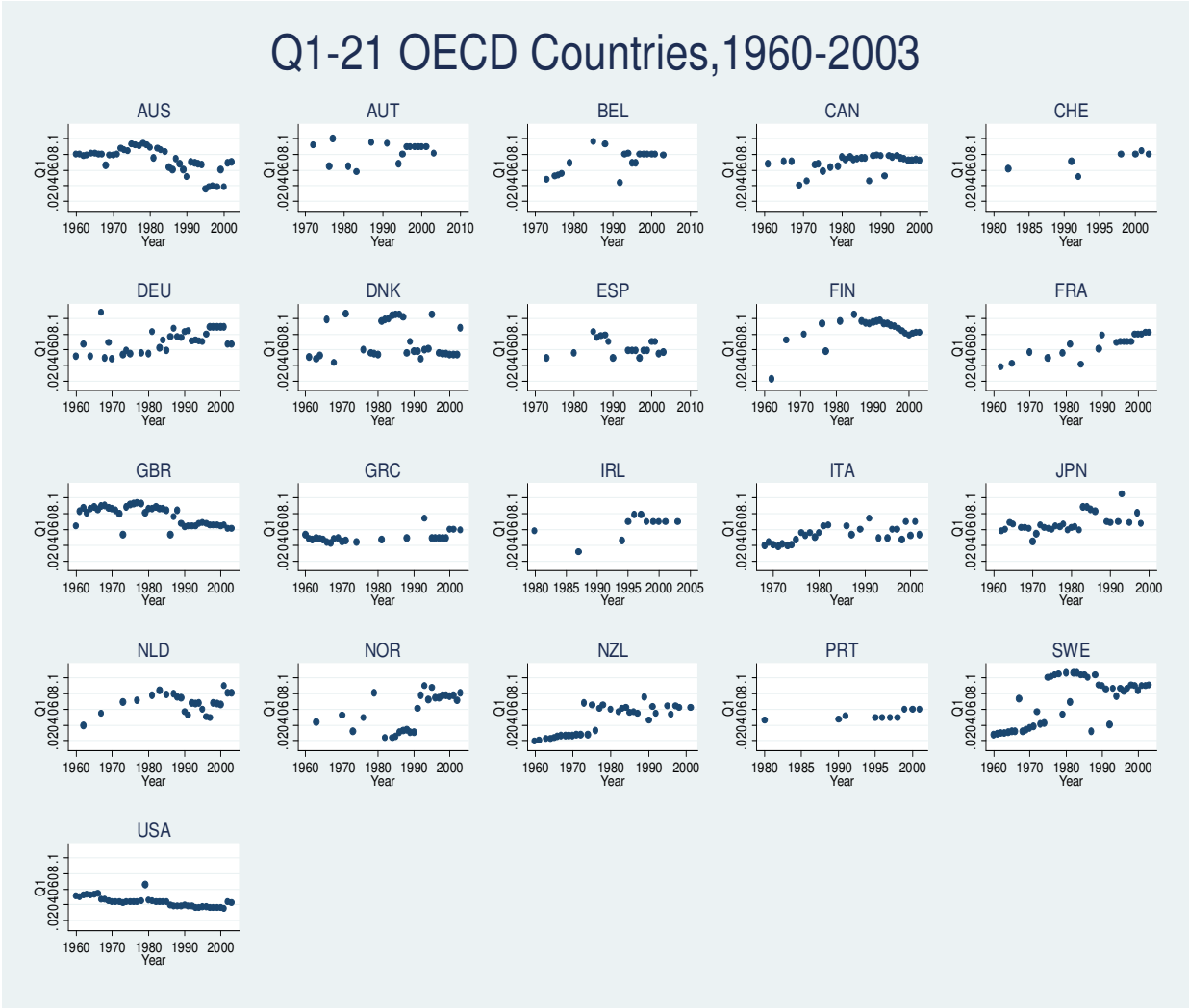


Figure 1B

The following figure provides the times series for Gini Coefficient for the sample of 21 OECD countries during 1960-2003

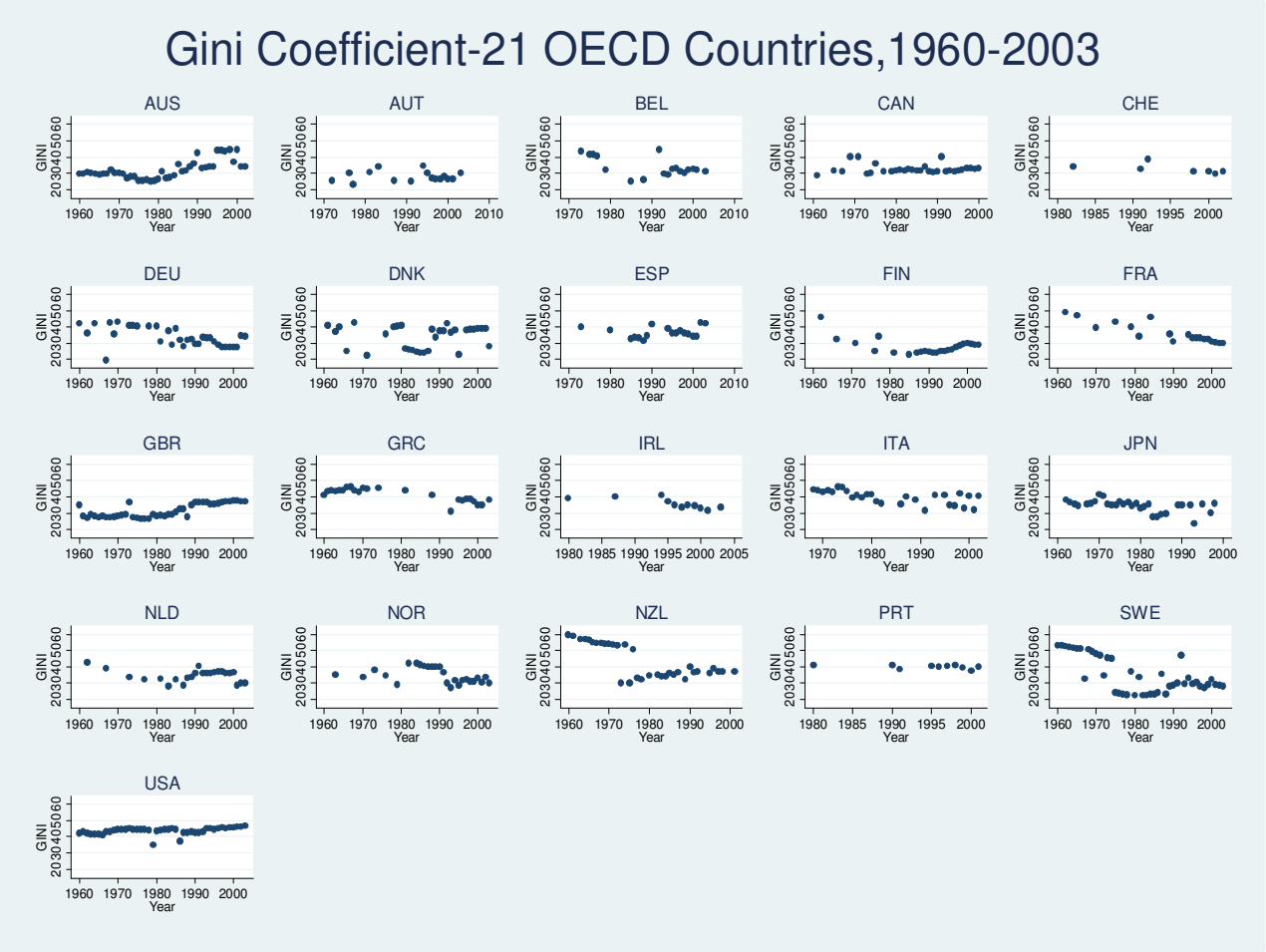


Figure 1C

The following figure provides the times series for Employment Protection Laws Index for the sample of 21 OECD countries during 1960-2003

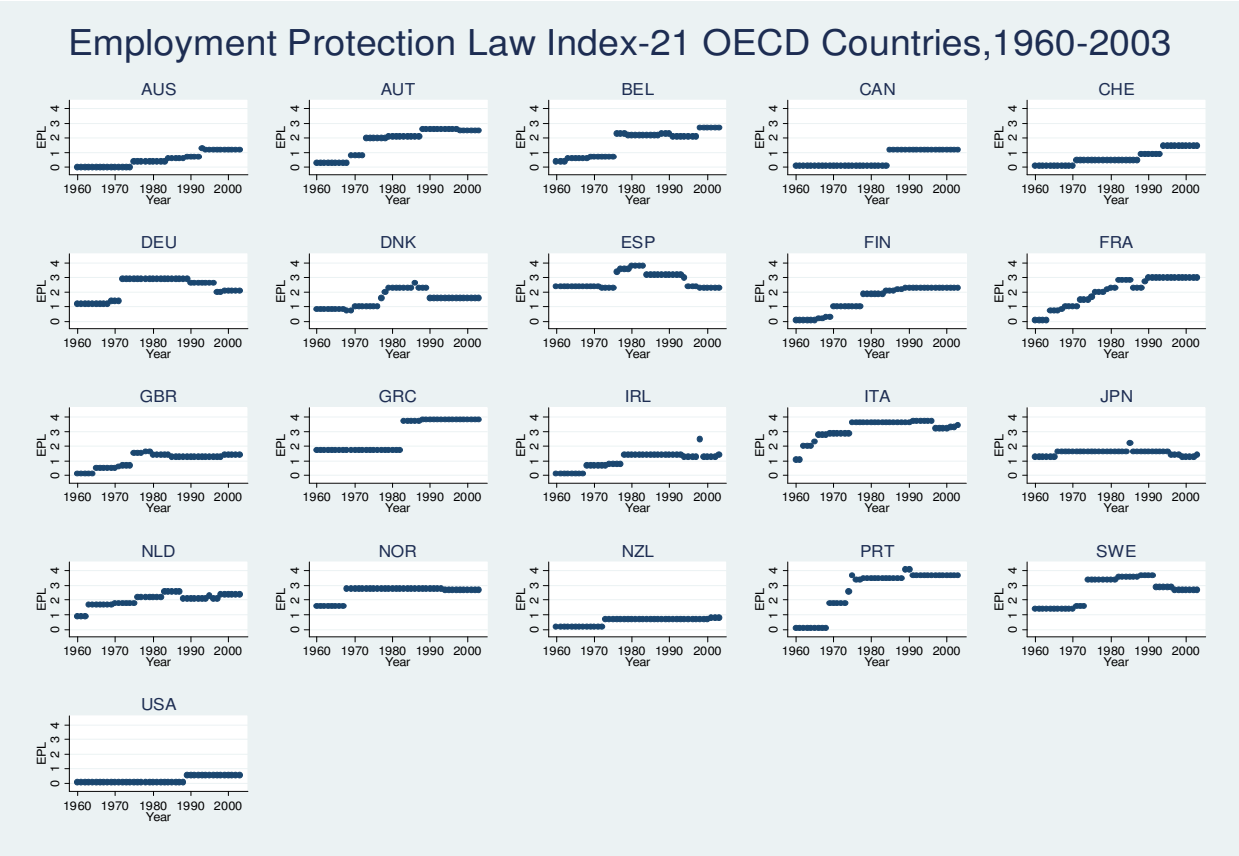


Figure 2A

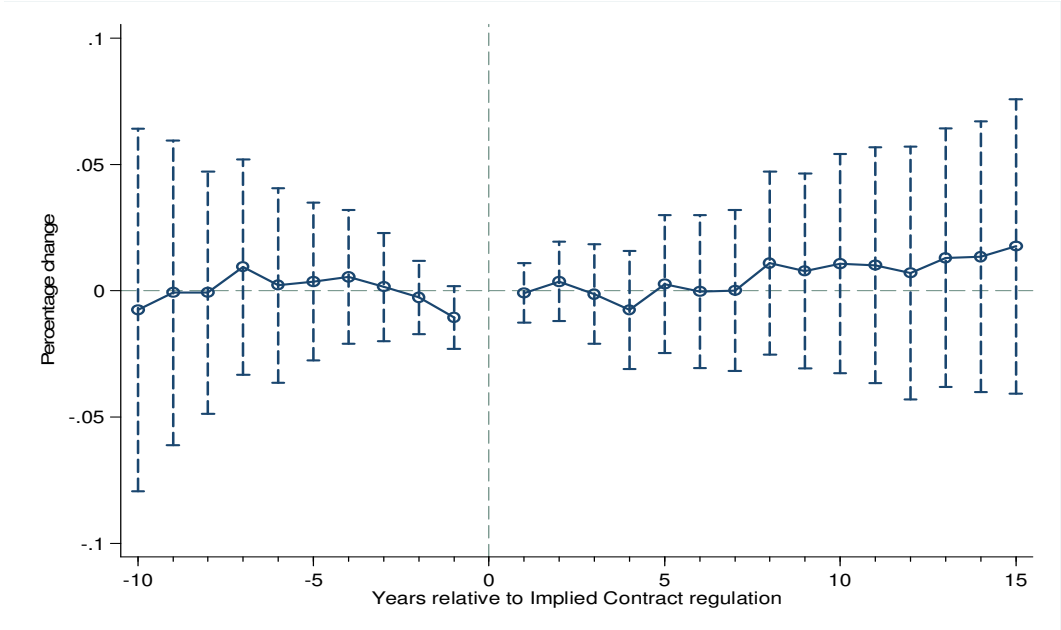


Figure 2B

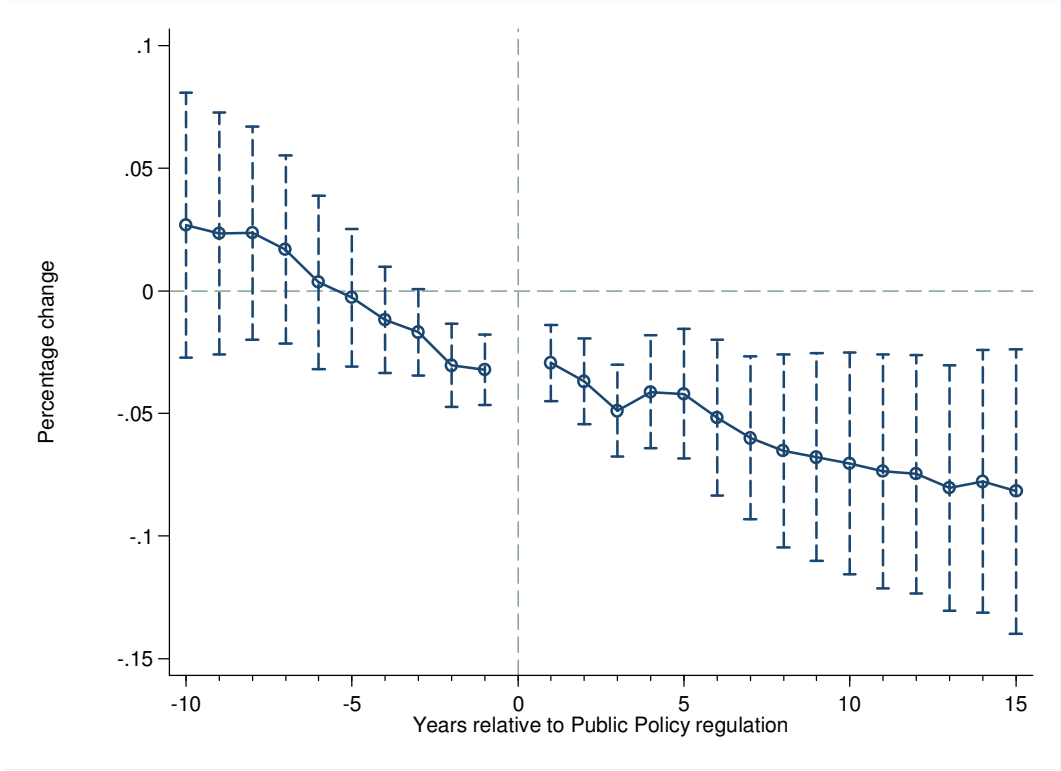


Figure 2C

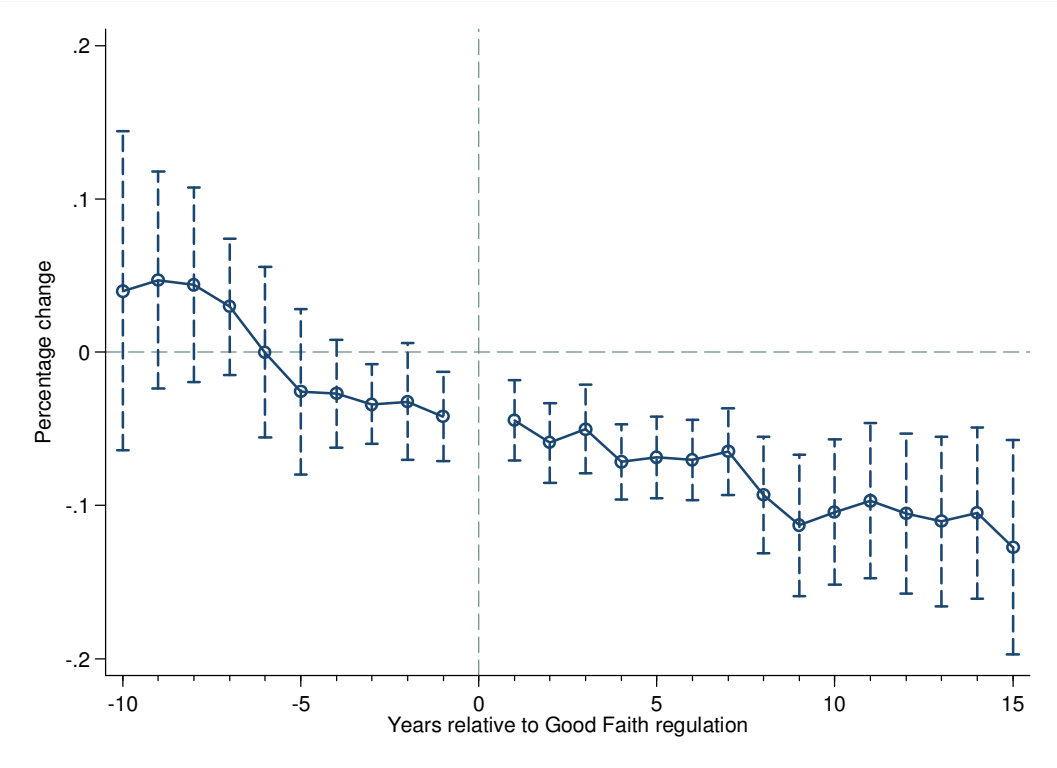

.2
.1
0
-.1
-.2
Percentage change
-10
-5
0
5
10
15
Years relative to Good Faith regulation

Figure 3A

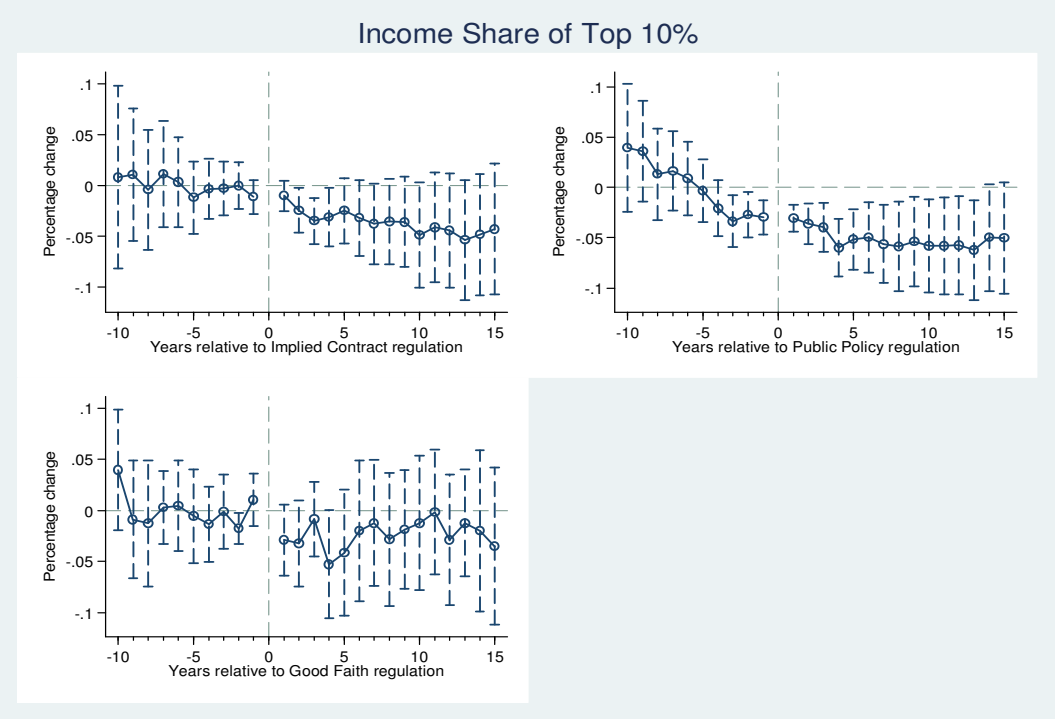


Figure 3B

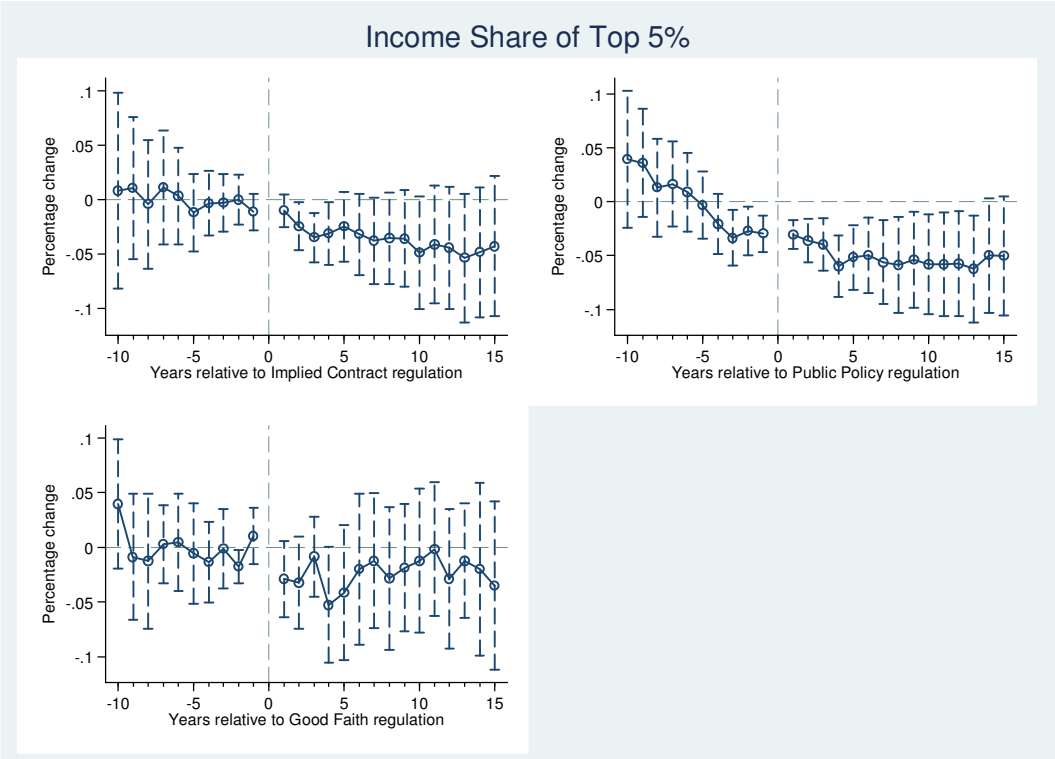
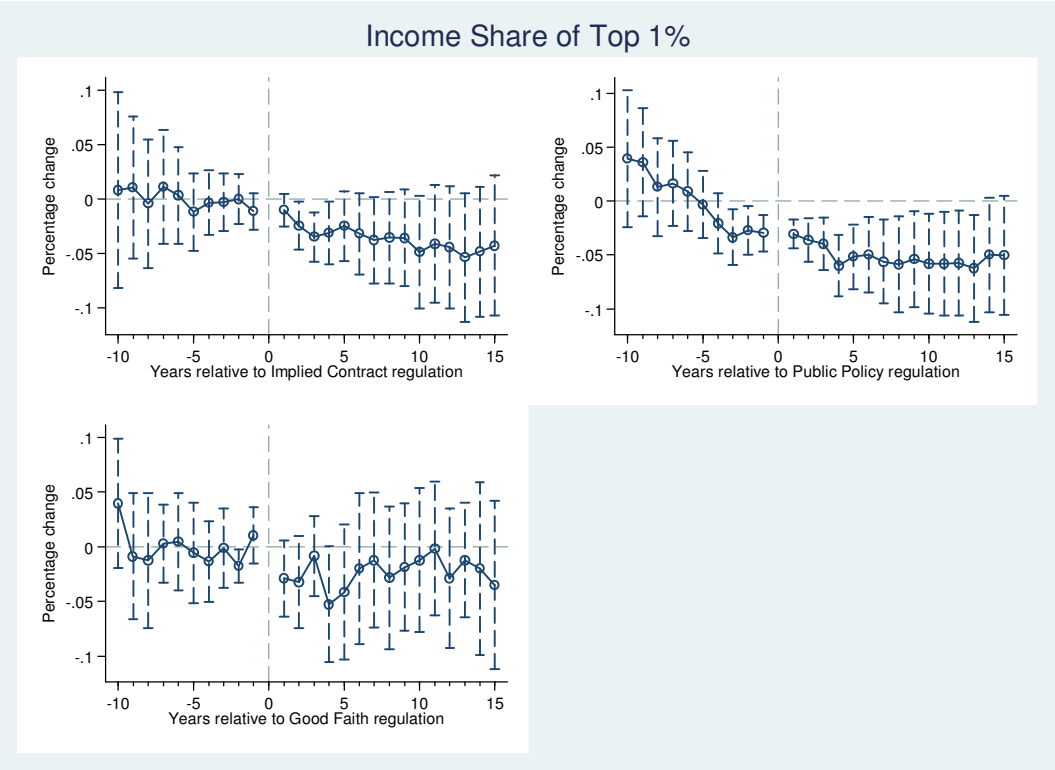


Figure 3C


Income Share of Top 1%
Percentage change
.1
.05
0
-.05
-.1
-10
-5
0
5
10
15
Years relative to Implied Contract regulation
Years relative to Public Policy regulation
Years relative to Good Faith regulation