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Minimum Wage in Estonia and its Impact on Employment and Wage Distribution

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INTRODUCTION

In November 2017, the European Commission proclaimed the European Pillar of Social Rights, a set of 20 principles and rights that included the right to fair wages and minimum income. The rights, among others, have sought to ensure adequate minimum wages for workers to allow them to have a decent standard of living and safeguard the ability of low-skilled and young workers to find employment, while providing incentives to (re)integrate into the labour market.

According to the European Commission, the term 'minimum wage' refers to the various legal restrictions governing the lowest rate payable by employers to workers, regulated by formal laws or statutes. There is a national minimum wage in 22 of the 28 member states of the European Union and data from the OECD show the minimum wage in 2016 was around 40% of the average monthly wage in those countries. This ratio varied widely between countries, from 31% in Spain to 49% in France. In Estonia, the ratio in 2016 was 37.5%, which increased to 38.5% in 2017, and is currently at 37%.

The Estonian wage setting process is characterised by a low union density rate and a low collective coverage rate (25% in 2016). Most of the agreements are concluded at the enterprise level. There are no collective agreements at the national level except agreements about minimum wages and very few agreements at the industry level. In 2003-2017 minimum wages were agreed in negotiations between the Employers Confederation and Trade Union Confederation. Before 2003 minimum wages were agreed in tripartite negotiations, which involved both social partners and the government. In 2018 tripartite negotiations were re-established. It was agreed in the national minimum wage agreement, that as of 2019 until 2022 the minimum wage increase will be calculated annually on the basis of labour productivity and economic growth, instead of on classic negotiations between the social partners.

This report focuses on the minimum wage and its impact on employment and wage distribution in Estonia. Section 2 provides a brief overview of the literature, especially research covering Central and East European countries, on the impact of the minimum wage. Section 3 describes the institutional features of minimum wage negotiations in Estonia and discusses the trends in the minimum wage starting from the middle of the last decade. The section also discusses the possible reasons for the steady increase in the level of minimum wages in the last five years, and describes the shifting nature of the minimum wage negotiations in Estonia. Section 4 summarises the results in two recent peer reviewed articles that studied the impact of minimum wages on employment and wage distributions, and section 5 offers some conclusions.

LITERATURE REVIEW

There is growing interest among academics and policymakers in the minimum wage as a policy tool for rewarding work, reducing poverty and improving the living standards of low-wage workers. While the motivation behind the setting of the minimum wage to improve the living conditions of low-earning is laudable, it remains a contentious and hotly-debated issue; precisely because raising the minimum wage can potentially lead to those very low-earning individuals whose living standard it seeks to raise losing their jobs.

Neumark and Wascher (2007) (see also Neumark et al. 2014) review a huge body of literature on the employment effects of minimum wage and point out that there is a wide range of existing estimates and, accordingly, a lack of consensus over the overall effects of an increase in the minimum wage on low-wage employment. They also state that economic theory does not provide an unambiguous prediction about the employment effects of minimum wages. There are some economists, the "marginalists," who claim that the low-wage labour market is competitive in nature, so a rise in the minimum wage would lead to unemployment. Then there are, "the institutionalists," who claim that it would not, and that labour markets do not behave like commodity markets.

According to the institutionalists, the model of competitive wage determination is inconsistent with existing business practices and the assumption that labour markets behaved as if they were commodity markets could lead to erroneous conclusions about the employment effects of minimum wages. The models proposed by the institutionalists incorporate a variety of market frictions, including monopsony (e.g., Aaronson and French 2007), search costs (e.g., Ahn, Arcidiacono and Wessles 2005; Flinn 2006), informational asymmetries (Drazen 1986), and efficiency wages (Rebitzer and Taylor 1995). These models predict that employment effects depend on the types of workers affected, and on the specific conditions of the labour markets concerned.

The ongoing debate and research on the appropriate theoretical model of the low-wage labour market, Neumark and Wascher (2007) nevertheless find that a sizeable majority of the studies on the employment effects of minimum wages in the United States, as well as in other countries, give a relatively consistent (although not always statistically significant) indication of the negative employment effects of minimum wages. Two important conclusions emerge from their

review. Firstly, very few studies provide convincing evidence of the positive employment effects of minimum wages, especially from those studies that focus on the broader groups for which the competitive model predicts disemployment effects. Secondly, the studies that focus on the least-skilled groups provide relatively overwhelming evidence of stronger disemployment effects for these groups.

While there are many country-specific studies on the impact of minimum wages on employment in western European countries (see Neumark and Wascher 2007), very few studies cover Central and East European (CEE) countries. The few studies that are there, however, do not present uniform findings as to the effect of the impact of minimum wages on employment. Using administrative data from Slovenia to study the impact of an increase in the minimum wage in 2010 on employment retention, Vodopivec (2015) finds that the increase had a negative effect on employment retention for the workers directly affected by the rise. While Majchrowska et al. (2016), who study the effects of changes in the minimum wage on overall employment in Poland during the period 1999-2012, find no effect for the labour market as a whole, but do find negative effects for young workers in disadvantaged regions. Baranowska-Rataj and Magda (2015) focus on young workers in Poland and discover a substantial negative effect on their employment.

Bodnár et al. (2018) report on a survey conducted during 2010-2013 in several CEE countries, where firms were asked how they had reacted to increases in the minimum wage. They find that the most important channels thorough which adjustments were made in response to a rise in minimum wages turned out to be increases in productivity, cuts in non-labour costs and price increases; while the least important channel was firing of staff. The relative unimportance of firing of staff was particularly prevalent in Estonia, where less than 10% of the firms surveyed cited this as a relevant adjustment channel.

Estonia shares many economic and institutional features with other European post-communist and CEE countries, where labour markets are largely unorganised, employment protection is weakly enforced, and collective wage bargaining plays a very limited role (see Eamets et al. 2005). It therefore becomes interesting to compare the effects of minimum wage on employment with those of Western European and other CEE countries. The two formal econometric analyses of the employment effects of the minimum wage for Estonia, reviewed in section 4, are the studies by Hinnosaar and Rõõm (2003) and Ferraro et al. (2018a). While Hinnosaar and Rõõm (2003) find a substantial negative effect on employment retention for those directly affected by the changes in the minimum wage, Ferraro et al. (2018a) find that a rise in the minimum wage has little or no effect on employment retention.

The minimum wage set can have far-reaching implications. It can also affect income distribution and inequality through spillover effects. While the rise in the minimum wage is intended to lift wages for those directly affected by the minimum wage, i.e., those who earn wages below the new minimum wage, it may also affect the wage distribution for those with wages above the new minimum wage. The latter effect is called the spillover effect.

The spillover effects of a minimum wage on wage distribution may occur for several reasons. Firstly, since a rise in the minimum wage raises the relative price of low-skilled labour, it may lead to a higher demand for certain types of more skilled labour (depending on substitutability) and hence to increased wage rates for certain types of workers already above the minimum. Secondly, it may prompt firms to reorganise how they use their workforce to realign the marginal products of their minimum wage workers with the new minimum; and this may have effects on the marginal products of other workers. Thirdly, it may lead to increases in wages for some workers above the minimum in cases where employers seek to maintain a given wage structure or 'hierarchy' if the efforts of employees depend on their relative wage (Grossman 1983; Akerlof and Yellen 1990). Fourthly, the rise may increase the reservation wages of those looking for jobs in certain sectors; and hence push up the wages that employers must pay in those sectors to recruit. Falk et al. (2006) find that because minimum wage affects subjects' fairness perceptions, minimum wages have a significant effect on subjects' reservation wages. Flinn (2006) shows that minimum wages can also affect workers' reservation wages in search and matching models with wage bargaining.

Given the increase in distributional concerns after the global financial crisis and the consequent economic slowdown, Ferraro et al. (2018b) note that it is surprising that there is virtually no research on the effects of the minimum wage on wage inequality in CEE countries, especially since many post-transition countries have very unequal wage and income distribution. According to an OECD publication, the Baltic states were among the most unequal economies in Europe in 2015. Measured by the Gini coefficient, income equality in Estonia since 2003 has fluctuated between 37% and 31%; the coefficient was at 32.7% in 2015.

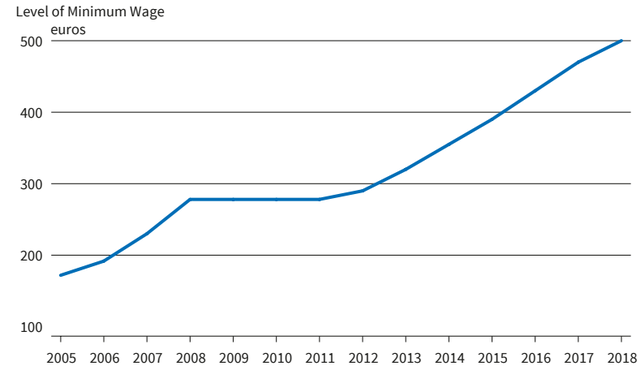
Ferraro et al. (2018b) is one of the first papers to address the distributional effects of the minimum wage in Estonia, a CEE country in the EU. The authors find that the minimum wage has had substantial spillover effects on wages in the Estonian economy, that the increases in the minimum wage have helped to lower wage inequality, and that this has particularly benefited low-wage workers.

INSTITUTIONAL MECHANISM OF AND TRENDS IN THE MINIMUM WAGE

The institution of collective bargaining facilitates the direct involvement of social partners in deciding on minimum wages. In Estonia, national minimum wages since 1992 have been agreed between social partners in bipartite meetings between the Estonian Trade Union Confederation (EAKL) and Estonian Employers' Confederation (ETTK). Since 2001, the national minimum wage for cultural workers has been negotiated between TALO and the Ministry of Culture.

Figure 1

Nominal Monthly Minimum Wage in Estonia



Source: Statistics Estonia (2018). © ifo Institute

The Estonian Employers' Confederation *(Eesti Tööandjate Keskliit)* ETTK is the only employer organisation recognised as a national-level social partner representing employers. Its members include associations as well as enterprises. Although there are no representative criteria set in Estonia, ETTK is the largest employer organisation involved in collective bargaining, and the only employer organisations involved in national level collective bargaining. It is therefore considered to be a national-level social partner.

Estonian Trade Union Confederation *(Eesti Ametiühingute Keskliit)* EAKL is the largest trade union in Estonia and the main national level trade union partner in national minimum wage negotiations. The second largest trade union organisation is Estonian Employees' Unions' Confederation *(Teenistujate Ametiliitude Keskorganisatsioon)* (TALO), which mostly represents cultural workers and public servants.

Usually social partners bargain annually, although in 2016 and 2017 negotiations were conducted biennially. The negotiations open with a proposal from the trade unions to raise the minimum wage next year, and employers respond with their own proposal. Intensive discussions mainly take place in the autumn, when the statistics on the average wage in the second quarter of the current year are published by Statistics Estonia, and the Ministry of Finance releases its economic forecast. The agreed minimum wage is generally lower than the first proposal of the trade unions, while the lower boundary of the initial proposal of employers is the current minimum wage level.

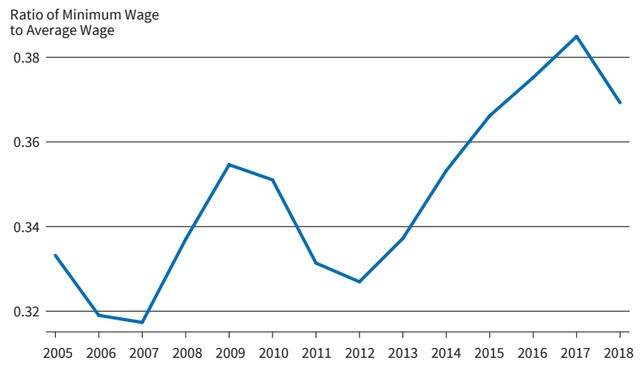
Once an agreement on minimum wages has been reached, it is made statutory by government decree. Changes in the minimum wage take effect from 1st January the following year. The Employment Contracts Act forbids the payment of wages below the minimum wage to full-time employees.

Since 1999, the national monthly minimum wage has increased from 79.90 euros in 1999 to 500 euros in 2018. Until 2008, an agreement signed in 2001 between the ETKL and the EAKL played an important part in negotiations of the minimum wage, as it called for the minimum wage to be raised to 41% of the average monthly wage by 2008, this being the average level in the European Union.

Figure 2 below shows that the minimum wage as a percentage of the average monthly wage ranged from 32-39% between 2005 and 2018, and has settled at around 37% in recent years. This is the second highest level in Central and Eastern Europe after Slovenia. The ratio of the minimum wage to the average wage fell in 2005-2006, because negotiations failed to anticipate the rapid rise in the average wage as the economy grew. When economic growth peaked in 2006 and 2007,

Figure 2

Comparison of Minimum Wage with Average Monthly Wage



Source: Statistics Estonia (2018). © ifo Institute

the trade unions bargained to raise the minimum wage to around 40% of the average wage. This meant that the agreed minimum wage would be 20% higher than that in 2005-2006. This rate of 20%, however, turned out to be higher than the rise in the average wage in 2008, as wage growth was brought down by the recession in the economy.

Following the recession, the minimum wage was constant during the period 2008 to 2011 and was raised moderately in 2012, but has increased by around 10% each year from 2013 to 2017. Since 2013 the trade unions and the employers have agreed the minimum wage for the following two years. In 2013 the EAKL and the ETKL were essentially agreed on the minimum wage for 2014 and 2015.

Soosaar and Urke (2017) note that in 2015, however, state arbitration became necessary due to a major difference between the minimum wages proposed by the two parties. While the trade unions proposed that the minimum wage should be raised by 25% in each of the next two years, the employers' association held that the minimum wage should increase at about the same rate as the average monthly wage. The state arbitrator seeking to resolve the stalemate proposed that the minimum wage be raised in 2016 to reach 41% of the average wage. In 2017, a tax rebate for the low paid workers was introduced. Hence the minimum wage that was approved in 2017 accounted for the fact that the rebate increased the net incomes of low-paid workers.

The negotiating strength of the trade unions and employers is reflected by how far the agreed rate lies from the minimum wages proposed by the two parties. As can be seen from Figure 3, following 2012, when the growth rate of the economy started to pick up and unemployment started declining, the bargaining power of the trade unions also increased. Low unemployment, strong demand for labour and faster GDP growth made it easier for the trade unions to argue that the minimum wage should rise faster than the average wage in the years ahead.

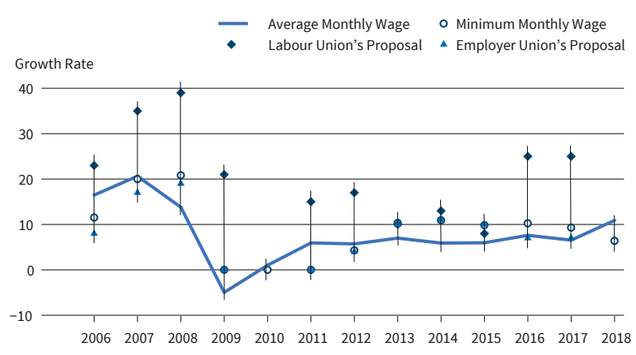
The European Foundation for the Improvement of Living and Working Conditions (Eurofond 2018) published a report on statutory minimum wages in EU member states. The report notes that in Estonia, because of the large difference between the minimum wage proposed by the Trade Union and the Employers' Association, the negotiations became complicated. Since the new income tax reforms planned to increase net wages, especially of those earning lower wages, by up to 64 euros per month, employers wanted no change in the minimum wage. They also argued that an increase in the minimum wage would artificially increase wage levels without any actual growth in productivity, and suggested alternative sustainable and long-term solutions, such as linking increases to economic indicators. However, the trade unions disagreed and requested that the minimum wage be increased to 535 euros in 2018, proportionate to increases in the national average wage. They also proposed long-term goals like increasing the minimum wage level to 50% of the national average wage over the next five to ten years (currently at around 37%). The government encouraged employers to agree on the increase for 2018 as regular increases in the minimum wage have led to a fall in levels of undeclared work, social inequality and emigration. After negotiations lasting four months, the social partners finally agreed to raise the minimum wage to 500 euros in October 2017.

To sum up, over the last five years there has been a steady increase in minimum wages in Estonia. This is remarkable, given that there has been a continuous decline in trade union membership, except for a few sectors like medicine and maritime transportation, and collective bargaining coverage. Both trade union membership and density have been decreasing over the last ten years. The share of employees who belong to a trade union declined from 10.7% in 2009 to 7.2% in 2015. The share in 2015 was higher among employees in the non-governmental, non-profit sector (17%) and in the public sector (12%), while it was lower in private sector organisations (5%). As far as collective agreements are concerned, the number of agreements signed has declined from 88 in 2007 to 40 in 2015.

As noted by Espenberg et al. (2016) and Soosaar and Urke (2017), the increases in the minimum wage over the last few years have been accompanied by the rapid increase in average wages and the labour shortage in many economic fields in Estonia.

Figure 3

Growth Rates of Proposed and Agreed Minimum Wages and Average Wage



Source: Statistics Estonia (2018).

This could have facilitated agreements on the demands to increase the minimum wage.

Moreover, as Espenberg et al. (2016) note, even although there has been a decline in trade union membership and collective bargaining coverage, some important changes have been made since 2013 as far as social partners and social dialogue are concerned. They document that trade unions and their members, as well as workers in general, have developed a better understanding of the need for trade unions and the roles they play in the labour market and state policy development. Employers and their associations have also started to take trade unions more seriously and have become more responsible in terms of collective negotiations. The authors find that even in cases of disagreement, the negotiation culture has improved.

Today, both the EAKL and the ETTK have a presence on several bodies, including the supervisory board the Estonian Unemployment Fund and the council of the Estonian Health Insurance Fund. It has been noted that the social dialogue has moved from parties rigidly holding on to their positions to cooperation during negotiations. State level relations between social partners has also improved, with the Ministry of Social Affairs involving employees' and employers' representatives on a more comprehensive basis. Espenberg et al. (2016) partly attribute these changes to the influences of the EU level developments.

TWO STUDIES ON THE IMPACT OF MINIMUM WAGES IN ESTONIA

In view of the fact that the annual increases in minimum wages were above the inflation rate and the growth rate of average monthly wages during the period 2012 and 2017, the minimum wage saw a substantial increase in real terms. Given that the minimum wage was constant in 2008-2011 and rose moderately in 2012, the substantial rises in the minimum wage in Estonia in 2013-2016 provide an excellent opportunity to analyse the effects of the minimum wage on employment.

As the average wage has risen more slowly, the minimum wage has also increased in proportion to the average wage. The higher the minimum wage as a ratio to the average wage, the larger the role it plays in setting the wages for the economy in general. In particular, due to spillover effects, changes in minimum wages could affect the wage and income distributions.

In this section, we summarise the results in Ferraro et al. (2018a), in which the impact of minimum wage on employment retention is analysed, and Ferraro et al. (2018b), who study the impact of minimum wages on wage distribution.

Ferraro et al. (2018a) assess whether the probability of workers retaining full-time employment across the wage distribution was affected by the rises in the minimum wage during the period 2013-2016. They employ the difference-in-differences methodology, whereby the probability of a worker retaining employment during the "treatment" period 2013-2016 is compared with the probability in the "reference" period 2009-2011 when the minimum wage was constant.

They find that, except for workers who report wage income below the minimum wage, the probability of retaining employment for different wage groups during the period of rises in the minimum wage was not different to the probability of retaining employment for comparable wage groups during the years 2009-2011 when there were no increases in the minimum wage. This suggests that the increases in 2013-2016 had little or no effect on employment retention during this period.

Their results are not in line with the results in Hinnosaar and Rõõm (2003), who, using the data from 1995 to 2000, found that an increase in the minimum wage had a negative effect on the employment of those directly affected by it. This, they argue, may be for various reasons. Firstly, the difference in the results could be due to the different methodologies used in the two papers. Secondly, there were very large rises in the minimum wage and intensive worker reallocation during the period 1995-2000, while in the sample considered in Ferraro et al. (2018a) the increases in minimum wages were moderate and there was less intensive reallocation of workers (Meriküll 2016).

Their results support the findings in Bodnár et al. (2018) where only about 10% of Estonian firms reported firing staff in response to increases in the minimum wage. They argue that the results are in line with a number of studies from other countries, which find little or no effect of minimum wages on employment retention as long as increases in the minimum wage are moderate and employers have other adjustment mechanisms available to channel increases in minimum wages.

Ferraro et al. (2018a), however, caution that the absence of any disemployment effects related to minimum wage hikes in their study does not necessarily mean that a higher minimum wage has no overall employment effects. The minimum wage could, for instance, make it harder for the unemployed to enter the labour market; or the labour market could be subject to substitution and complementarity effects that are not captured in their study. Moreover, their study considers the job retention of workers who are employed full time. It is possible that increases in the minimum wage affect employment at the intensive margin by affecting the number of working hours of unskilled workers. Future research should consider the broader and long-term effects of rises in the minimum wage using other empirical models.

Compared to older EU member states, Estonia has fairly unequal wage and income distributions, which is partly due to the low-profile presence of collective bargaining, its modest social safety net and the flat income tax system. Therefore, it becomes particularly interesting to see how minimum wages affect income and wage distribution. Ferraro et al. (2018b) look at the effect of the statutory minimum wage on wage distribution in Estonia.

Ferraro et al. (2018b) use data from the Estonian Labour Force Survey covering the period 2001–2014. They consider only full-time wage-earners who are Estonian residents, while excluding those who work part-time, are self-employed or currently reside abroad. The net wage comprises take-home pay after income taxation, while the minimum wage is set in gross terms and is therefore converted to net terms using the rules of the income tax system.

They adapt the method developed by Lee (1999) to study the implications of minimum wage on wage distribution. The underlying idea in Lee (1999) is that the effect of the minimum wage on the wage distribution will vary depending on the existing wage distributions in different well-defined labour markets. In labour markets, where wages are typically high, few workers will be affected and so the minimum wage will have little impact on wage distribution. By contrast, labour markets with typically low wages will see many workers affected and the minimum wage will have a substantial impact on wage distribution.

Lee (1999) defines each labour market in terms of location and time. Given that there are a limited number of regions in Estonia, to attain enough observation points Ferraro et al. (2018b) define labour market by location, time, as well as by sectoral activity. To check robustness, they also define labour market by occupation instead of by sectors. Given the relatively low degree of mobility in the Estonian labour market, not only geographically but also across sectors and occupations, the variation in wage distribution and the *effective* minimum wage across the labour markets defined along sectoral or occupational lines allows the authors to identify the effect of the minimum wage on wage distribution.

Ferraro et al. (2018b) show that for the full sample, there are substantial spill-over effects from the minimum wage to the lower percentiles of the wage distribution, but the spill-over effect declines as the wage approaches the median wage. They conclude that the minimum wage appears to have contributed to lower wage inequality in Estonia. They also find that the spill-over at given percentiles of the wage distribution is larger for women than for men. The spill-over effect is also larger for wage-earners aged over 45.

The substantial spill-over effects, they conclude, may be tied to several structural features of the Estonian economy such as the virtual absence of collective bargaining, the relatively low level of wages immediately above the minimum in Estonia, and the indexation of some fees and prices to the minimum wage.

CONCLUSION

This report documents recent trends in minimum wages in Estonia. It describes the institution of collective bargaining of minimum wages and describes the social partners – the trade unions (EAKL and TALO) and the employers' confederation (ETTK) – involved in this bargaining. We document a sustained increase in the minimum wage since 2012, despite a decline in trade union membership and collective bargaining coverage since 2008. We discuss possible reasons for this phenomenon. We also discuss the changing nature of the social dialogue between the partners.

The report also reviews recent studies on the impact of changes in minimum wages on employment and wage distribution. Ferraro et al. (2018b), who study the impact of minimum wages on wage distribution, find that the minimum wage has had substantial spillover effects on wages in the Estonian economy, that the increases in the minimum wage has helped to lower wage inequality, and that it has particularly benefited low-paid workers.

Ferraro et al. (2018a), who study the impact of increases in minimum wages during the period 2013-2016 on employment retention, find that when compared to the period, 2009-2011 during which minimum wages were constant, increases in 2013-2016 had little or no effect on employment retention. However, as noted earlier, this does not necessarily mean that a higher minimum wage has no overall and long-term employment effects, and there is still scope for future research. Such research could also study the impact of increases in minimum wages on prices, as well as the spending and debt responses of households in CEE countries.

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