

Does Household Indebtedness Contribute to the Decline of Union Density?

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- Author Accepted Manuscript – Forthcoming in *New Political Economy* -

Abstract

This paper argues that rising household indebtedness is associated with the decline of organised labour. Over the last decades, the financial system is increasingly financing working-class households, and recent research shows that indebted employees become more risk-averse at the workplace on the fear of losing their job and defaulting. Thus, since union formation or participation is commonly punished with redundancy, rising household indebtedness is likely to be associated with the aggregate reduction in unionisation. This study examines this argument for a high-, a mid-, and low-unionisation economy over the period 1965-2018: Sweden, Japan, and South Korea, respectively. Regression analysis provides robust support in favour of this argument. The results also suggest that financial regulation and social norms about personal insolvency matter for the size of the effects of household debt on unionisation.

Keywords: Union Density, Organised Labour, Financialisation, Household Debt

Acknowledgements: I am grateful to David Calnitsky, Thibault Darcillon, Alex Guschanski, Thomas Rabensteiner, Rafael Wildauer, Ella Wind, and two anonymous referees for their comments and suggestions. Thanks are also due to participants of the 15th Annual *People & Organizations Conference 2022* (Center for Human Resources - Wharton School, UPenn), the 2022 *SASE Annual Conference* (University of Amsterdam), and the 2022 *EAEPE conference* (University of Naples) for their feedback.

1. Introduction

This paper explores the impact of household indebtedness on union density. Since at least the 1970s, financial institutions have been increasingly financing households, particularly middle- and low-income households. This development has made the largest share of workers more risk-averse and self-disciplined in the workplace due to the fear of losing their employment and defaulting (Langley 2007; Lazzarato 2012; Gouzoulis 2021, Gouzoulis et al. 2023a,b; Gouzoulis 2023). Interestingly, with few exceptions, the broader literature on financialisation does not discuss thoroughly the labour market implications of financialisation. At the same time, the industrial relations literature rarely looks at how external market constraints like personal indebtedness shape workplace behaviour and labour militancy. This paper argues that given that

union membership or the formation of new unions often incentivises employers to replace unionised employees (Stelzner 2017; Gourevitch 2018; Lafer and Loustaunau 2020), indebted employees are more likely to avoid unionising. Hence, this study theorises and demonstrates empirically that rising household debt ratios are associated with the decline of aggregate union density rates over the last five decades. Yet, household bankruptcy protection and social stigmas related to personal insolvency can limit and aggravate the self-disciplining effects of household debt, respectively (Wood 2017; Gouzoulis 2021, 2022; Lee and Rhee 2007; Naoi et al. 2019; Garrido et al. 2020).

Overall, the secular decline of organised labour has been identified as one of the most important – if not the most important - driving forces behind worsening working conditions over the last decades (Oskarsson 2003; Rosenfeld 2014; Pontusson 2013; Bengtsson 2014; Barth et al. 2020; Trif et al. 2023). Hence, the interest in the drivers of union density has been increasing. Micro and macro level studies show empirically that key determinants of unionisation are the size of the public sector, industrial employment, inflation, globalisation, labour market institutions, the political orientation of the governing majority, and other structural factors (e.g., Scruggs and Lange 2002; Checchi and Visser 2005; Brady 2007; Schnabel 2013; Trentini 2022; Kristal 2019). More recently, there is a growing interest in how the financialisation of non-financial firms and the rise of shareholder value orientation influences union density. Financialisation broadly refers to the increasing influence of financial actors and institutions over the decisions and behaviour of non-financial firms and households, which has particularly intensified since the early 1980s. Related econometric studies show that the increase in employment in the low union density Finance, Insurance, and Real Estate (FIRE) sectors, and the replacement of unionised employees with low-cost non-unionised ones by financialised non-financial corporations have contributed to the decline of unionisation in advanced economies (Peters 2011; Darcillon 2015; Kollmeyer and Peters 2019; Meyer 2019; Dupuis et al. 2020). Yet, financialisation is a complex, multidimensional phenomenon, since it is not only non-financial firms that have become financialised, but also households (van der Zwan 2014).

To evaluate empirically to what extent rising household indebtedness is associated with the aggregate decline of union density, this study provides a time series-based analysis of the drivers of unionisation in a high, a middle, and a low-union density economy: Sweden, Japan, and South Korea, respectively. All three economies have been becoming increasingly financialised, as measured by household and corporate debt ratios as well as stock market activity. Nevertheless, a crucial difference is that in Sweden the state regulates finance and protects poorer households, while in Japan and South Korea the financial systems are largely deregulated and personal insolvency comes with a negative social stigma. For these reasons, it is expected that the disciplinary effects of household debt will be stronger in Japan and South Korea. The econometric findings obtained via the unrestricted error-correction model for the period 1965-2018 show that the effect of household indebtedness is strongly negative for all three economies. Also, as

expected, these negative effects are substantially stronger in Japan and South Korea. Corporate financialisation also exhibits some negative effects, but overall the relevant proxies are weaker predictors as compared to household debt. This potentially reflects the fact that household debt is more directly linked to the decision of joining/staying in a union at the individual level, whilst corporate financialisation is rather indirectly associated with the declining unionisation trend via incentivising corporate managers to undermine unions. Last, similar to existing studies, the findings for the rest explanatory variables show that their effects depend on context-specific characteristics and institutions.

The rest sections of this paper are organised as follows. Section two discusses existing literature on the drivers of union density. Section three presents existing arguments on the negative effects of corporate financialisation on unionisation and argues why household debt should also be considered a negative driver. Section four reports stylised facts on unionisation and household debt in Sweden, Japan, and South Korea, and section five presents the econometric approach and the data sources. Section six reports and discusses the key findings. Finally, section seven concludes.

2. Financialisation, Union Density, & the Role of Household Debt

Most of the early literature on financialisation focused on the growth of the FIRE sectors and capital markets, and how these have made shareholder value maximisation the principal goal of non-financial firms (Froud et al. 2000; Lazonick and O'Sullivan 2000). A very common practice via which non-financial corporations boost share prices to maximise dividend payments to shareholders is share buybacks funded via corporate loans. The deteriorating financial position of firms due to the rising interest and dividend payments has been associated with declining investment, downsizing, and workforce casualisation as a means of counterbalancing balance sheets via lower labour costs (e.g., Gospel and Pendleton 2003; Thompson 2003, 2013; Appelbaum et al. 2013; Appelbaum and Batt 2014; Alvarez 2015; Darcillon 2016; Dünhaupt 2017).

Building on this body of work, recent studies link the financialisation of non-financial firms and corporate governance to the liberalisation of labour market institutions, and, particularly the decline of organised labour. Peters (2011) examines 13 OECD economies and offers descriptive evidence that the rise of shareholder-oriented corporate systems and mergers and acquisitions between 1980 and 2005 is strongly correlated with the decline of unionisation. Focusing on the shareholder value orientation hypothesis, Darcillon (2015) examines to what extent value added and employment in financial intermediation and the FIRE sectors decrease workers' bargaining power and induce the liberalisation of employment protection laws. The econometric findings for a panel of 16 OECD economies over the period 1970-2009 provide robust support for both hypotheses. In this study, workers' bargaining power is measured via a composite index that includes bargaining coordination, collective bargaining coverage, and union

density. While such an index has certain advantages, given the discussion of the previous section, the dynamics of each element are distinct and casual relationships among them might exist.

By the same token, Kollmeyer and Peters (2019) examine whether corporate financialisation and financial openness decrease union density for a sample of 18 advanced economies between 1970 and 2012. Their proxies for financialisation include a stock market index (including market capitalisation and trading activity), a composite (de facto and de jure) foreign portfolio investment index, financial sector size, and corporate indebtedness. There are two arguments behind the hypothesised negative effects. First, similar to Darcillon, the FIRE sectors mainly employ service and managerial workers who are rarely unionised, thus, the larger the size of this sector, the lower unionisation is. Second, Kollmeyer and Peters (2019, p. 6-7) argue that increased financial commitments for firms can lead to layoffs of unionised staff to decrease labour costs by avoiding paying union wage premia. Thus, workers have incentives to not unionise or leave their union to reduce the risk of redundancy. Indeed, the econometric results of this study demonstrate that the growth of stock markets has indeed contributed to the decline of organised labour across different varieties of capitalism. While traditionally being unionised is considered to offer protection against dismissal, over the last decades, the liberalisation of dismissal laws has greatly weakened the positive association between union power and dismissal protection (Emmenegger 2014, Ch. 5).¹ In a comparable study, Meyer (2019) shows that equity market development has impacted negatively union institutional structures and not union density *per se*, using a sample of 21 OECD economies that covers the period 1970-2010. Focusing on Canada, Dupuis et al. (2020) provide similar sectoral-level evidence that corporate financialisation and the growth of the FIRE sector have decreased unionisation between 1997 and 2017. Lastly, Mohamed and Darcillon (2023) show that the share of assets held by institutional investors is negatively associated with trade union power using a sample of 20 OECD over the period 1980-2017.

Summarising, the aforementioned studies indeed show that certain dimensions of corporate financialisation have contributed to the decline of union membership rates, with some variation. Yet, the main shortcoming is that financialisation is a multidimensional process that affects not only non-financial corporations but also households, i.e., employees. Since the late 1970s – early 1980s, part of financial liberalisation and securitisation has been to lower the income and collateral requirements for obtaining credit. Consequently, household debt has become widespread across almost all income quintiles (e.g., see ONS, 2016; Cox et al. 2007; Betti et al. 2007). Yet, not all households have become over-indebted. The richest households typically borrow to invest in financial markets and real estate. Since households in upper income quintiles who own significant collaterals typically borrow on better terms, household debt rarely becomes

¹ Emmenegger (2015a) argues that the union power-dismissal protection linkage has been historically weaker than it is typically assumed to be, since, strong trade union movements prioritise institutional control over statutory labour protection reforms.

a burden for them. In contrast, middle and low-middle income households are those who borrow on worse terms and, thus, carry the burden of household debt in the form of mortgages, healthcare, and educational debt (see Hou-Lin and Neely 2022). Therefore, given that this part of the population it is a potentially major omission to overlook how the financialisation of everyday life has a *direct* impact on employees' decisions with respect to unionisation.

Overall, it is becoming more widely acknowledged that the literature on the financialisation-employment relations nexus has been rather myopically focused on the effects of corporate financialisation, hence, drawing connections between the household financialisation literature and industrial relations can offer useful insights. Langley (2007) and Lazzarato (2012) argue that rising household indebtedness involves an increased risk of default for households, which significantly increases their insecurity. Thus, indebted households become more self-disciplined and risk-averse in their economic and political decisions. That includes their labour market decisions, since maintaining a steady income flow over their period of debt repayment is essential to avoid defaulting. In this respect, aggressive individual-level wage negotiating strategies that involve the risk of replacement are avoided, and indebted employees may even comply with lowering their wages to maintain their employment.

Related empirical studies provide robust evidence that household indebtedness decreases the labour share across advanced and developing economies (Wood 2017; Gouzoulis 2021; Gouzoulis et al. 2021). In addition, Grady and Simms (2019) claim that household indebtedness may be a reason behind the declining strike duration in the UK since walkouts involve a loss of income which can delay debt repayments and increase the risk of default. Building on the same rationale of debt-induced self-discipline, Gouzoulis et al. (2022) demonstrate that increasing household indebtedness and, thus, the rising number of overindebted working-class households, has made them more compliant to accept working under contingent employment contracts. Given this growing empirical evidence on household financialisation and labour market outcomes, the question that emerges is whether the rising risk averseness and self-discipline of workers due to increasing debt repayment commitments may also be linked to declining unionisation rates.

As described above, high personal indebtedness increases the fear of debt default for workers and, thus, their individual risk averseness regarding the cost of job loss. Thus, part of such a self-disciplined strategy that prioritises employment stability and a minimum steady flow of income to finance debt repayments over wage gains can also be to avoid *collective* actions that can be considered demanding by employers. As unionisation is one of the main collective levers of pressure against employers, avoiding organising in unions can be a reasonable choice to decrease the risk of redundancy and secure a steady income flow in times. While in the past being unionised offered significant protection against unfair dismissals and unions were able to generate strong network externalities regarding wages, the liberalisation of industrial relations

systems has weakened dramatically the positive association between union power and dismissal protection across the vast majority of sectors (Emmenegger 2014, Ch. 5).

Recent attempts to form unions within Google, Amazon, and Boeing, among other major corporations, may have been partly successful but, in many cases, they have been punished with collective redundancies (Sainato 2019; BBC 2020; Silver-Greenberg and Abrams 2021). Further, evidence also shows that even joining an existing union often leads to firing union members (Stelzner 2017; Gourevitch 2018; Lafer and Loustaunau 2020). Thus, the higher the default risk an employee faces, the more unlikely is to unionise or remain a member of a union. The shift of the financial sector to financing heavily middle- and low-income households with little or no assets has made the distribution of household credit more widespread across all income quintiles (e.g., see ONS, 2016; Cox et al. 2007; Betti et al. 2007). Since middle- and low-income households historically constitute the part of the population that is actively involved in unions, debt-induced disciplining effects are likely to affect them significantly, especially as they become over-indebted. Hence, the main argument that this paper evaluates is *whether household indebtedness is negatively associated with union density*.

Everything else constant, the higher the level of household debt-to-GDP ratio in an economy or sector, the stronger the negative effects on the respective union density rate should be. However, financial institutions and social norms around private indebtedness vary dramatically across countries, both of which are crucial for the potential effects of indebtedness on labour market outcomes. For instance, Wood (2017) and Gouzoulis (2021) show that despite household debt ratios increasing fast in Nordic economies, their impact on the wage demands of workers is moderate. This is because in Nordic countries, first, the personal bankruptcy law is fairly pro-debtor, and, second, household credit is heavily regulated by the state or even directly provided by state-owned banks to less advantaged households. Accordingly, it is reasonable to expect that *in countries with a more liberal/pro-creditor bankruptcy law is in a country, the negative association between household debt and union density will be less strong*.

Beyond formal institutions, informal institutions and social norms also shape financial subjectivities, and, consequently, the financial system-labour market nexus. Gouzoulis (2022) compares the effects of financial claims and private debt on the income share of workers in the manufacturing sectors of Iran and Thailand since the mid-to-late 1960s and shows that they are negative in both, but much stronger in the former. The main reason is that in Thailand, despite its private debt ratio being almost three times higher than Iran's, the financial system is heavily influenced by the Buddhist tradition which prioritises mutual trust and non-conflictual business relations. Accordingly, financial institutions are less demanding about debt repayments and the bankruptcy law provides significant protection for over-indebted non-financial firms and households. In contrast, in societies like Japan and South Korea, not being able to finance your financial commitments comes with the social stigma of being a 'failed' entrepreneur/individual,

thus, personal indebtedness is strongly associated with rising risk averseness (Lee and Rhee 2007; Naoi et al. 2019; Garrido et al. 2020). Hence, *the more negatively personal insolvency is viewed in a country, the stronger the negative association between household debt and union density will be.*

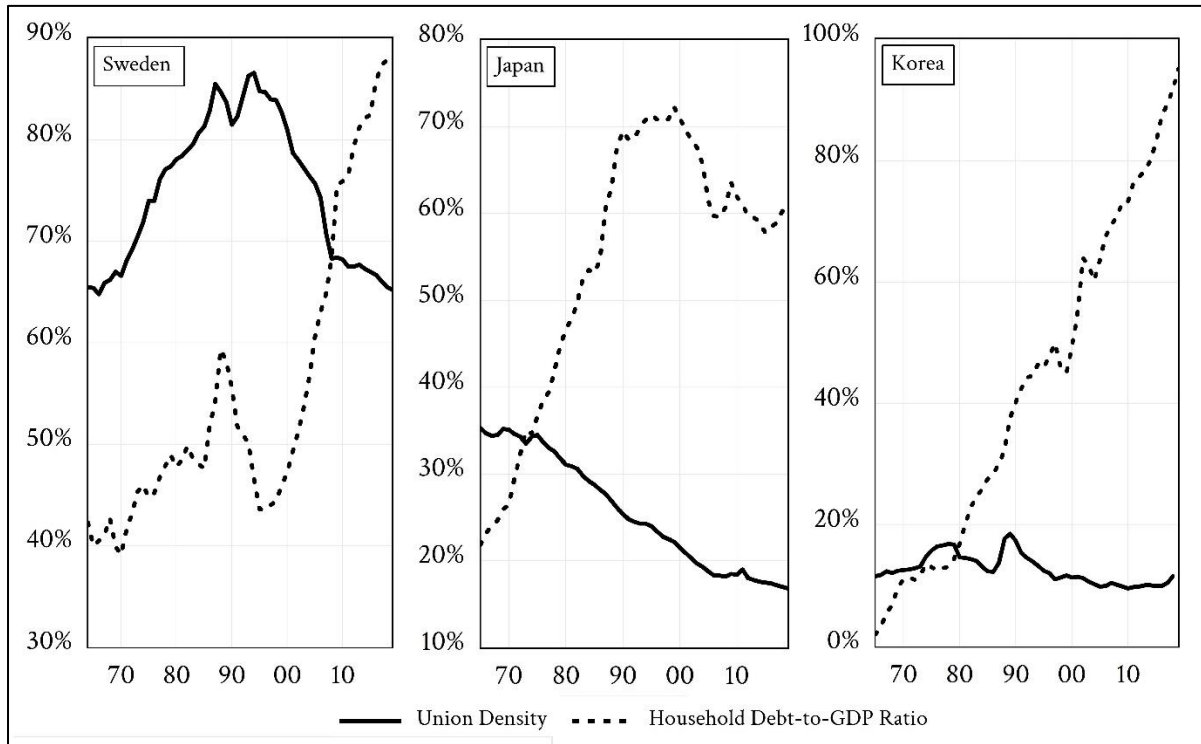
Taken together, the disciplinary effects of household indebtedness and the impact of labour management restructuring due to shareholder value orientation are likely to be playing complementary but independent roles in undermining unionisation rates. On the one hand, managers who try to maximise returns to shareholders are more likely to undermine unions and hire lower cost, non-unionised workers. Thus, workers might observe this process and avoid unionising to secure their job. On the other hand, regardless of whether the firm they work in is financialised, indebted workers are likely to avoid organising and not resist against attacks on unions on the fear of becoming redundant and defaulting.

3. Household Debt, Discipline, & Varieties of Union Decline

Overall, most of the literature on unionisation is concerned with the experience of the formerly high-unionisation Anglo-Saxon economies or examines large panel datasets (e.g., Brady and Wallace 2000; Scruggs and Lange 2002; Schnabel 2003; Checchi and Visser 2005; Visser 2006; Slaughter 2007; Boulhol et al. 2011). Yet, the steady reduction in unionisation rates is not a phenomenon that is unique to the formerly high-unionisation economies, since union density has been declining across high-, middle-, and low-unionisation economies over the last 40 years.

Despite most economies converging towards a more liberal growth model, institutional heterogeneity and path dependency have generated distinct trajectories of trade union decline and patterns of financialisation. Given the distinctiveness in the evolution of national financial systems and the varying rates of union decline, comparative analyses of national economies can offer important insights regarding the association between the two trends. Thus, based on a '*most different systems*' design approach and aiming to assess whether the mechanism presented in Section 2 holds across varieties of capitalism, this paper focuses on three examples of highly financialised economies that, however, represent three distinct varieties of unionisation and debtor protection systems: (i) Sweden a high-unionisation Nordic economy with significant protection for the indebted; (ii) Japan a corporatist, moderate unionisation economy with minimal protection for indebted households; and (iii) South Korea a liberal, low unionisation economy with some limited protection for the indebted after 2008. Figure 1 reports the trends of household indebtedness and union density in the three countries between 1964 and 2018.

Figure 1: Union Density and Household Indebtedness, 1964-2018



Notes: Union Density is the percentage of employees who are union members as a share of total employees (Source: Visser 2019). The Household Debt Ratio is the share of household debt, loans, and debt securities as a percentage of GDP (Source: IMF).

3.1 Sweden

In Sweden, as reported in Figure 1, unionisation increases steadily from 1960 to the early 1980s, a period during which its household debt ratio increased but at a moderate rate. Since the early 1990s, the rapid rise in household indebtedness and the deregulation of employment intermediation in Sweden coincides with the equally steep decrease in unionisation that continues to date (Anxo 2017). Interestingly, the all-time peak of unionisation in the country coincides with the major decline in household debt from the late 1980s to the early 1990s.

Here, it is worth noting that, historically, in Sweden household credit (particularly mortgages) is provided either by public credit institutions with favourable conditions or by the private sector with the state providing significant protection for the indebted persons (Johansson 1938; Blackwell and Kohl 2018). Hence, the risk of debt default is lower compared to more liberal financial systems (Gouzoulis 2021, 2022; Wood 2017). This approach is influenced by the Nordic perception of housing provision as a social right, which shapes accordingly the attitudes of creditors, debtors, and the government towards related debt commitments (*ibid.*). While the post-1980 international trend towards financial liberalisation has also reached Sweden, comparatively, its economy remains one of the most regulated national economies globally. Given these social and institutional characteristics, the negative impact of household debt on unionisation rates will likely be less strong compared to the more liberal economies of Japan and South Korea.

Here it is also important to note that since the 1990s Swedish trade unions have been particularly focused on protecting workers on open-ended contracts at the expense of the deregulation of temporary workers (Emmenegger 2015b). This is particularly important at the aggregate level, since the share of fixed-term contracts in Sweden is among the highest across Europe (Eichhorst and Marx 2021). Linking this development to the household debt-unionisation nexus, the negative association seems to become much stronger indeed over this period. This potentially reflects that in the absence of unions offering protection to the majority of the workforces, indebted workers abandoned unions to avoid conflicts with their employers and increase the possibility of maintaining their job.

3.2 Japan

In Japan, according to Figure 1, the decline of union density begins earlier than in the other two countries in the early 1960s and accelerates in the mid-1970s when industrial managers actively undermined unions as a response to the growth slowdown of this period (Freeman and Rebeck 1989; Flath 2022). Interestingly, the most acute increase in the household debt-to-GDP ratio takes place during the same time, from the early 1960s to the late 1980s. This is the period when the government liberalised the country's financial system and decreased interest rates under international pressure to abandon interventionism (Gotoh 2021). Despite household indebtedness decreasing to some extent from the mid-1990s to the early 2000s, the ratio has become fairly stationary at a level that is approximately three times larger than its early 1960s value. Since the mid-2000s the rate of decline of unionisation also slowed down with the stabilisation of household indebtedness.

Regarding the link between the two, it is worth noting that Japanese households tend to be quite risk-averse concerning personal debt decisions as the possibility of missing payments or defaulting socially stigmatises the debtor (Naoi et al. 2019; Garrido et al. 2020). On top of the social stigma of over-indebtedness, social safety nets for indebted households are minimalistic and the legal framework for personal bankruptcy is complex and largely shaped in favour of creditors – fairly similar to the US standards (Lee 2002; Martin 2005). Thus, due to differences in risk perception and the legal consequences of personal insolvency, similar amounts of household indebtedness can trigger greater negative attitudes towards unionisation in more risk-averse economies, like Japan, as compared to economies where employees might be in general less risk-averse concerning personal indebtedness, like Sweden.

In terms of labour market regulation and worker rights, historically, cases of abusive dismissal have been handled by Japanese courts, and it is the 2007 Article 16 of the Labour Contracts Act (LCA) that established stricter rules about dismissal procedures. Yet, the newly established procedures are highly problematic since they are costly, time-consuming, and the expected compensation for the employee in the case of winning the unlawful dismissal case is low (Arita 2022). Thus, redundancy risk remains high for most Japanese workers.

3.3 South Korea

In South Korea, unions become more influential in the post-1987 democratisation era and offered some protection to workers. Yet, since the early 1990s and especially after the 1997 Asian financial crisis the dismissal law has been deregulated as part of the new growth agenda allowing numerical flexibility as a means of adjusting to economic conditions (Fleckenstein and Lee 2019). Under these circumstances, unjust dismissals have been rising dramatically - especially in the high-unionisation, small and medium-sized enterprises - and the costly tribunals against such decisions have a very low win rate (Cho et al. 2011).

Figure 1 shows that union density in South Korea moderately increases from the early 1960s to the early 1990s indeed, despite the country's household debt ratio also increasing rapidly during the same period. The increase in unionisation took place during the period of democratic transition which brought the decline of state control over unions and encouraged workers to unionise (Kwon and O'Donnell 1999). Since the early 1990s, the increase in household debt accumulation accelerates further and surpasses Japan's rate in the early 2000s and Sweden's rate in the early 2010s. The first stage of this rapid increase in household debt is associated with the end of the Cold War and the opening of international financial markets (Choi 2022). The second major development that further accelerated household debt accumulation is the decision of the government to address the aftermath of the 1997 financial crisis by providing credit to households to increase their spending (*ibid.*). As a consequence, South Korea's financial system remains deregulated with mass credit provision to households even while their disposable income is falling (Lee and Lim 2015). Similar to Japan and other ASEAN economies, in South Korea, defaulting on personal indebtedness stigmatises socially the bankrupt individual/households (Lee and Rhee 2007; Garrido et al. 2020). Not surprisingly, as reported in Figure 1, during the period of the rise of household financialisation in South Korea, unionisation drops from approximately 20 percent in the early 1990s to almost 10 percent in the mid-2000s, where it has fairly stabilised since.

Yet, a fundamental difference between South Korea and other ASEAN countries is that, after the 2008 global financial crisis, the government has taken some personal debt relief measures. These include support loans to low-income households guaranteed by local and central governments to reduce their default risk (Yun 2012; Jones and Kim 2014).² Therefore, a significant part of the sustained expansion of household debt after 2008 is these government-backed loans. Ergo, the negative association between household debt and union density in South Korea is likely to be stronger than in Sweden due to the debt-related social stigmas and the high default risk. However, this negative association in South Korea should be - to some extent - weaker compared to Japan where no government-supported programme for over-indebted was implemented before or after 2008.

² The two main government-supported schemes are the *Miso Finance* (2008) and the *Sunshine Loans* (2010) programmes (*ibid.*).

4. Hypotheses, Data, & Econometric Methodology

4.1 Main Hypotheses

Beyond the effects of financialisation discussed above, the steep decline in unionisation since the late 1970s/early 1980s has been puzzling industrial relations scholars, labour economists, and sociologists of work for years. Early models of trade union growth typically examine it as a cost-benefit problem from the perspectives of the union and the individual worker (Ashenfelter and Pencavel 1969). Business spending against organising can negatively affect employees' views on unions and undermine unionisation (Freeman 1998). Hogler et al.'s (2004) expansion of Freedman's (1998) model shows explicitly how union growth is affected negatively by employers' opposition and positively by pro-labour employment laws.

Palley's and LaJeunesse's (2007) reformulation of Freeman's model shows that employees' willingness to join a union depends positively not only on union wage premia, union spending, and pro-labour laws but also on employees' attitudes towards unions. They emphasise that employees' attitudes towards unions are strongly path-dependent. High union density denotes a consensus in favour of trade unions and collective action among workers, which is typically transferred to relatives, children, and new generations of workers, and vice versa. As a strong sense of group identification is a well-established positive driver of individual union participation (Kelly and Kelly 1994), strong unions can strengthen the sense of group identification and attract more members. Inversely, the opposite might be true as well. For example, Greek employees have a sceptic stance against unionism since during the 1967-74 military coup union leaders were appointed by the dictators and, later, certain trade unions are affiliated with specific political parties (Papadopoulou and Gouzoulis 2020).

Beyond theoretical models, the existing empirical literature on the determinants of unionisation shows that the decline of organised labour has been the outcome of various structural and institutional factors. A well-established structural driver of declining aggregate unionisation is the movement of the workforce from high to low union density sectors. Over the last decades, this involves two parallel processes. First, the process of de-industrialisation and shift to the low unionisation service sectors and freelancing has reduced union density across nations (e.g., Blaschke 2000; Lee 2005; Polachek 2004; Schnabel 2013; Jensen 2020). This decline is particularly pronounced in workplaces where computerisation has become prominent, allowing stricter control at the shop floor level by employers and managers (Kristal 2019). Second, the rise of fiscal discipline and austerity that has lowered employment in the public sector, a traditionally high unionisation part of the economy, has also undermined aggregate union density (e.g., Visser 2006; Schnabel 2003; Checchi and Visser 2005).

Another important structural factor that affects employees' choice to join a union is their real purchasing power, i.e., the rate of consumer price inflation (Bain and Elsheikh 1976). As powerful unions usually succeed in increasing salaries, during periods of high inflation like the

1970s, more workers join unions aiming to increase their income and avoid losing purchasing power due to inflation. Indeed, econometric evidence shows that rising inflation rates can cause significant increases in union density, particularly in economies where non-unionised workers are covered by union agreements (e.g., Western 1997; Checchi and Visser 2005).

Regarding institutional sources of power for trade unions and their impact on union density, it is widely acknowledged that economic institutions and government ideology determine how effective unions can be (Masters and Delaney 2005; Gumbrell-McCormick and Hyman 2013; Rigby and Garcia Calavia 2018). However, their impact is not necessarily straightforward. For instance, in more regulated labour market regimes, where unions can exert more influence on the wage setting process and other negotiations over working conditions, employees may have more incentives to join unions and enjoy related tangible benefits. Yet, there is a possibility that wider bargaining coverage that covers both unionised and non-unionised employees can generate incentives towards ‘free-riding’, and, thus, lower union density (Olson 1965; Freeman and Medoff 1984; Bryson 2008).

Regarding government ideology, its effects on unionisation can also be complicated. In general, left-wing governments typically shape the institutional environment in a way that fosters cooperation with trade unions and strengthens employee voice (Korpi 1983; Western 1995, 1997; Sassoon 1996; Brady 2007; Trentini 2022). Consequently, joining unions allows workers’ voices to be heard and exhibit influence on political and economic decisions. In contrast, close ties between trade unions and certain political parties can discourage employees who disagree with the broader agenda of these parties to join the union movement.

Furthermore, another well-established negative driver of union density is the globalisation of trade and production networks (Bluestone and Harrison 1982; Harrison and Bluestone 1988). In general, enhanced capital mobility has allowed employers to relocate production to geographical areas with unregulated labour markets, where unions are weaker and labour costs low. Thus, the relocation threat has undermined organised labour across the world (Sassoon 1996; Wallace & Brady 2001). Further, the coordination problem between local unions and foreign employers makes unions less effective and disincentivises employees to join them (Western 1997). In terms of quantitative studies, the evidence is largely mixed. Brady and Wallace (2000), Slaughter (2007), and Boulhol et al. (2011) show that trade openness, FDI, and import penetration reduce the organisational capacity of labour in the USA and the UK. Contrariwise, Scruggs and Lange (2002) use a panel dataset of sixteen advanced economies and find that trade openness and FDI have only moderate negative and mostly statistically insignificant effects on union density.

4.2 Specifications and Data

To evaluate the effects of household debt on union density in Sweden, Japan, and South Korea, this study adopts a single-equation, time-series-based approach. Moreover, the specifications

include other well-established drivers related to corporate financialisation, public sector size, industrial employment, inflation, trade openness, labour market institutions, and government ideology, as discussed above. Accordingly, the econometric equation is of the following form:

$$\textit{Union Density} = f(\textit{Household Debt}, \textit{Corporate Financialisation}, \textit{Public Sector Size}, \\ \textit{Industrial Employment}, \textit{Trade Globalisation}, \textit{Inflation})$$

Union Density is measured as the percentage of employees who are union members as a share of total employees from the dataset of Visser (2019).

The *Household Debt Ratio* is the share of household debt, loans, and debt securities as a percentage of GDP from the IMF. *Corporate Financialisation* is proxied via different commonly used variables that capture shareholder value orientation. These include the equity *Dividend Yield* from Jordà et al. (2019) for Sweden and Japan, *Dividend Payments* from OECD (*NFD42R-to-capital income (NFD4R) ratio; S11: non-financial corporations*) for South Korea, and *Stock Market Capitalisation* (share of GDP) for all three countries.³

Regarding the rest explanatory variables, *Public Sector Size* is proxied by the general government final consumption expenditure (share of GDP) from the World Bank, which includes both the public wage bill and public labour market spending that decreases the cost of job loss. *Industrial Employment* is the level of employment in the manufacturing/industry from UNCTAD, and since this indicator is in levels, the log transformation of it is used to account for exponential change. Following relevant studies in the literature, *Trade Globalisation* is captured via trade openness (imports plus exports %GDP), net foreign direct investment inflows (%GDP), and import penetration (imports %GDP) from the World Bank. *Inflation* is measured via the consumer price index from OECD and trade openness (exports plus imports as a share of GDP) from Jordà et al. (2017).

To evaluate the robustness of the main findings additional controls for labour market regulation/labour rights and government ideology are included. The proxy for *Bargaining Centralisation* is ‘*BargCent: Centralisation of wage bargaining*’ from Visser (2019).⁴ This indicator but also other available similar proxies for the regulation of labour market institutions remain unchanged for Japan and South Korea during the whole period. As an alternative for South Korea,

³ To extend the series before 1975 for Sweden and Japan, data from Roine et al. (2009) are combined with the World Bank series. For Sweden, where the WB series end on 2003, the series for 2004-12 come from FRED and for 2013-17 come from CEIC.

⁴ This indicator is a discrete variable that ranges from 1 (decentralised) to 5 (cross-industry centralisation). The calculation take into account the dominant level of bargaining as well as “...the incidence of and control over additional bargaining at enterprise level; the ‘space’ that central or sectoral agreements assign, delegate or allow for such additional bargaining to take place; and the degree to which agreements can be perforated through the use of ‘opening clauses” (Visser 2019, p. 9).

a time dummy for changes in the right-to-association is included (Source: Visser (2019)).⁵ Unlike South Korea, in Japan no major changes related to the right-to-association have taken place, hence, this variable is unchanged over the period examined. Finally, the *Left-Right Index* is used as a proxy for the political orientation of the government for Sweden and Japan. The indicator used is the weighted seat share of left-wing parties as a percentage of the total parliamentary seat share of all governing parties (*left_gov2*) from Armingeon et al. (2021). Due to the nature of the political/electoral system in South Korea the left-right cabinet distinction does not apply, hence, this variable is used only for Sweden and Japan.

4.3 Econometric Approach

In terms of econometric approach, the two criteria that guide the selection of an appropriate estimation methodology in time series analysis are the stationarity of the respective series and the presence of a cointegrating relationship. As reported in Table A1 in the online appendix, all variables used in this study are stationary either in levels or first-differences. Thus, estimating our equations via Ordinary Least Squares (OLS) in levels would generate spurious results. To test for cointegration, the standard two-step Engle and Granger (1987) process is followed. First, a static regression between the dependent variable and the explanatory variables at levels is estimated for each equation. Then, the stationarity of the respective residuals is evaluated via the Augmented Dickey–Fuller (ADF) test. These are indeed stationary in all cases, hence, a cointegrating/long-run relationship exists.

Given the mix of stationary and non-stationary series in our dataset, and the presence of cointegration, the standard approach in such cases is the Unrestricted Error-Correction Model (UECM) of Sargan (1964) and Davidson et al. (1978). Since in the vast majority of cases time series datasets include a mix of stationary and non-stationary series, the UECM approach is widely used in the union density literature (e.g., Kristal 2019; Kollmeyer and Peters 2019; Vachon et al. 2016; Checchi and Visser 2005) and in other industrial relations studies (e.g., Kristal 2010; Bengtsson 2014; Gouzoulis 2021, 2022; Gouzoulis et al. 2021).

Overall, the key advantage of the UECM (especially in the context of relatively small macroeconomic samples) is that it addresses the common autocorrelation issues of the standard ordinary least squares (OLS) regression analysis in levels. This is done by incorporating the explanatory variables in first-differences (short-run effects) and levels (level effects). In addition, it is common practice to also include the first lag of the dependent variable as a first-differenced/short-run and a level independent variable. The norm in the related literature is to include the level coefficients in first lags to address simultaneity biases. Given the long-term horizon of this study, our interest is centred on the level coefficients rather than on short-run

⁵ The variable in the dataset is named '*RA_m: Right of Association, market sector*' (3=yes; 2=yes, with minor restrictions; 1=yes, with major restrictions; 0=no).

adjustments captured by the first-differenced/short-run coefficients. Consequently, the UECM specification used is the following:

$$\Delta(\text{Union Density})_t = \beta_0 + \beta_1(\text{Union Density})_{t-1} + \sum_{n=2}^N \beta_n x_{t-1} + \delta_1 \Delta(\text{Union Density})_{t-1} + \sum_{n=2}^N \delta_n \Delta x + \varepsilon_t$$

where the vector x includes the explanatory variables. The terms β_0 and ε_t are the constant and the error terms, respectively. The estimates are derived via the Newey-West estimator (heteroskedasticity and autocorrelation-consistent errors).

5. Econometric Findings and Discussion

Tables 1, 2, and 3 present the econometric findings for Sweden, Japan, and South Korea, respectively. The coefficients reported are standardised, i.e., each coefficient shows how a one standard deviation unit change in the relevant independent variable affects the dependent variable.

Table 1: Determinants of Union Density – Sweden, 1964-2018

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Household Debt</i> _{t-1}	-0.32*	-0.49*	-0.40**				-0.69***	-0.39	-0.64**
<i>(Household Debt</i> _{t-1}) ²				-0.29	-0.55***	-0.42**			
<i>Dividend Yield</i> _{t-1}			-0.05			-0.08			
<i>Stock Market Cap.</i> _{t-1}									-1.09***
<i>Public Sector Size</i> _{t-1}	0.62*	0.62**	0.84***	0.65**	0.67***	0.90***	0.25**	0.64**	0.76***
<i>Log(Ind. Empl.)</i> _{t-1}	-0.26	-0.62**	-0.82***	-0.21	-0.69***	-0.84***	-0.52**	-0.56*	-0.98***
<i>Inflation</i> _{t-1}	-0.02	-0.01	0.12	-0.06	0.01	0.11	-0.26	-0.02	-0.24
<i>Trade Openness</i> _{t-1}	-0.79**	-0.27	-0.35	-0.81**	-0.33	-0.42			0.57
<i>FDI (Inflows)</i> _{t-1}							-0.36***		
<i>Imp. Penetration</i> _{t-1}								-0.39	
<i>Barg. Centralisation</i> _{t-1}		0.67*	0.75**		0.65**	0.73**	0.60*	0.65*	0.86**
<i>Left-Right Index</i> _{t-1}		0.27	0.49***		0.29**	0.50***	0.29**	0.27	0.43***
<i>LDV</i>	-0.48***	-0.46**	-0.66***	-0.50***	-0.54***	-0.73**	-0.37**	-0.44**	-0.76***
<i>Adjusted R²</i>	0.53	0.57	0.59	0.53	0.57	0.59	0.65	0.57	0.66
<i>BG Test</i>	0.68	0.45	0.09	0.74	0.37	0.09	0.24	0.51	0.11
<i>Harvey Test</i>	0.12	0.52	0.56	0.14	0.60	0.51	0.47	0.29	0.91
<i>Observations</i>	55	54	52	55	54	52	47	54	54

Notes: Statistical significance at 10%, 5%, and 1% levels is denoted by *, **, and ***, respectively. The dependent variable is in first-differences. The coefficients reported are standardised by multiplying the obtained coefficient with the ratio of the standard deviation of the explanatory variable over the standard deviation of the dependent variable. Breusch-Godfrey (BG) test for up to 2 lags (p-values reported). *LDV* denotes the lagged dependent variable. Constant terms and short-run (first-differenced) coefficients are included in the estimations, but not reported.

Table 2: Determinants of Union Density – Japan, 1965-2018

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Household Debt</i> _{t-1}	-1.83***	-1.83***	-1.40*				-1.12**	-1.68***	-1.81***
(<i>Household Debt</i> _{t-1}) ²				-1.18**	-1.19**	-1.05*			
<i>Dividend Yield</i> _{t-1}			0.86**			1.09***			
<i>Stock Market Cap.</i> _{t-1}									-0.35
<i>Public Sector Size</i> _{t-1}	0.02	0.08	0.54	-0.70	-0.64	0.26	0.62	1.81**	0.48
<i>Log(Ind. Empl.)</i> _{t-1}	1.19**	1.07**	1.49***	0.67	0.55	1.44***	0.99*	1.06*	1.26**
<i>Inflation</i> _{t-1}	0.38*	0.41**	0.63**	0.37	0.40	0.64**	0.90***	1.28***	0.42*
<i>Trade Openness</i> _{t-1}	-0.20*	-0.16	0.10	-0.18	-0.14	0.11			-0.15
<i>FDI (Inflows)</i> _{t-1}							-0.11		
<i>Imp. Penetration</i> _{t-1}								-0.76	
<i>Left-Right Index</i> _{t-1}		0.17*	0.23**		0.18*	0.24**	0.24**	0.26***	0.13
<i>LDV</i>	-2.62***	-2.48***	-2.67***	-2.44***	-2.30***	-2.73***	-2.07***	-1.96***	-2.96***
<i>Adjusted R</i> ²	0.28	0.27	0.35	0.22	0.21	0.36	0.34	0.42	0.27
<i>BG Test</i>	0.54	0.55	0.05	0.79	0.82	0.05	0.52	0.58	0.61
<i>Harvey Test</i>	0.35	0.02	0.50	0.63	0.12	0.92	0.28	0.56	0.28
<i>Observations</i>	54	54	51	54	54	51	48	48	54

Notes: Statistical significance at 10%, 5%, and 1% levels is denoted by *, **, and ***, respectively. The dependent variable is in first-differences. The coefficients reported are standardised by multiplying the obtained coefficient with the ratio of the standard deviation of the explanatory variable over the standard deviation of the dependent variable. Breusch-Godfrey (BG) test for up to 2 lags (p-values reported). *LDV* denotes the lagged dependent variable. Constant terms and short-run (first-differenced) coefficients are included in the estimations, but not reported.

Table 3: Determinants of Union Density – South Korea, 1965-2018

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Household Debt</i> _{t-1}	-1.15**	-1.51*	-2.34**				-1.14	-1.50**	-2.03**
(<i>Household Debt</i> _{t-1}) ²				-0.51	-0.38	0.20			
<i>Dividend Payments</i> _{t-1}			-0.26			0.35			
<i>Stock Market Cap.</i> _{t-1}									-0.09
<i>Public Sector Size</i> _{t-1}	0.28	0.44	1.23*	0.08	-0.01	-0.62	0.13	0.52	0.89
<i>Log(Ind. Empl.)</i> _{t-1}	0.99**	1.03*	0.84*	0.58	0.63	0.36	0.40	1.02**	0.96**
<i>Inflation</i> _{t-1}	0.43	0.43	0.70*	0.57*	0.55	0.88*	0.33	0.52	0.21
<i>Trade Openness</i> _{t-1}	-0.20	-0.26	-0.33	-0.11	-0.09	-0.04			-0.06
<i>FDI (Inflows)</i> _{t-1}							-0.21		
<i>Imp. Penetration</i> _{t-1}								-0.34	
<i>Right-to-Assoc. Dummy</i>		0.27	0.41		-0.16	0.35	0.35	0.27	0.37
<i>LDV</i>	-1.15***	-1.13***	-1.41***	-0.98**	-1.02***	-0.97**	-1.04	-1.14***	-1.10**
<i>Adjusted R</i> ²	0.36	0.36	0.46	0.31	0.30	0.35	0.34	0.38	0.40
<i>BG Test</i>	0.60	0.58	0.00	0.55	0.51	0.06	0.64	0.56	0.06
<i>Harvey Test</i>	0.90	0.92	0.57	0.83	0.55	0.36	0.43	0.97	0.59
<i>Observations</i>	54	54	43	54	54	43	48	54	39

Notes: Statistical significance at 10%, 5%, and 1% levels is denoted by *, **, and ***, respectively. The dependent variable is in first-differences. The coefficients reported are standardised by multiplying the obtained coefficient with the ratio of the standard deviation of the explanatory variable over the standard deviation of the dependent variable. Breusch-Godfrey (BG) test for up to 2 lags (p-values reported). *LDV* denotes the lagged dependent variable. Constant terms and short-run (first-differenced) coefficients are included in the estimations, but not reported.

Overall, the most noteworthy finding is that household indebtedness is the most consistent driver across countries and within different specifications for each country. Its level coefficients are negative in all specifications for each country and they are statistically significant in 21 out of 27 specifications. Given these results, the aggregate rise in household debt is indeed strongly associated with the decline of aggregate union density. In specifications (4), (5), and (6), the possibility of a non-linear association between household debt and unionisation is explored via the inclusion of the former in squared form. As argued by Gouzoulis et al. (2023), this allows to better capture the impact of over-indebtedness. Given the trends presented in Figure 1, some form of non-linear relationship seems to be present in the case of Sweden and, to some extent, Japan. Indeed, the results of the regression analysis confirms this, since the squared terms of household indebtedness are statistically significant and substantial in size both for Sweden and Japan. This potentially suggests that there is a noticeable threshold over which personal debt becomes a burden in Sweden and Japan, unlike South Korea.

Furthermore, the results show that the negative level coefficients of household debt are larger in Japan and South Korea compared to Sweden. As discussed earlier there are two potential explanations that are not non-mutually exclusive. First, household finance regulation is likely to be important in the case of Sweden, since household credit in the country and particularly the mortgage market, is state-led with significant protection for indebted persons. Hence, the fear of debt default is potentially less strong compared to more liberal financial systems (Gouzoulis 2021, 2022; Wood 2017). Second, the larger negative effects for Japan and South Korea could reflect the broader risk-averse stance of households concerning financial decisions in the two countries due to the negative social attitude toward insolvent households (Naoui et al. 2019; Lee and Rhee 2007; Garrido et al. 2020). Consequently, household bankruptcy protection and the social stigma related to personal insolvency in certain societies indeed may be among the underlying causes of the varying disciplining effects of household debt between the three countries. Yet, given the nature of the data used in this study it is not possible to provide a definitive answer, which is left for follow-up research.

Regarding corporate financialisation, the results are largely inconclusive, since in most cases the level coefficients of the relevant proxies are negative but statistically insignificant and smaller in size compared to the household debt coefficients. These results can be explained by the fact that corporate financialisation is linked to declining union density rates through motivating managers to weaken the influence of unions, while the household debt-related fear of personal insolvency is more directly linked to individual workers' decision to join or stay in a union. Overall, therefore, household financialisation is found to be a better (negative) predictor of union density as compared to corporate financialisation, at least for these three case studies. Concerning the size of the public sector, this variable exhibits the expected positive effect on union density in all three cases. The impact of industrial employment on unionisation is strongly positive and statistically significant for Japan and South Korea. Contrariwise, its immediate/level effect for Sweden is negative and statistically significant almost all cases. Taken together, de-industrialisation in the cases of Japan and South Korea has potentially induced the move of the

workforce to low-unionisation sectors which is reflected in an aggregate decrease in union density, but this is not the case for Sweden where the opposite occurred. This could be potentially related to the increase in municipal employment between the early 1960s and the 1990s (Anxo and Ericson 2012).

The effects of inflation on unionisation are found to be influential only in the case of Japan, which suggests that Japanese employees join unions to preserve their living standards/consumption patterns. That does not seem to be the case in Sweden or South Korea. As regards trade globalisation, the relevant level coefficients are largely negative but insignificant in most specifications for all three case studies. This result is not entirely surprising since, despite the three countries being globalised, they occupy dominant positions in global value chains, hence, the possibility of relocation and/or implementation of competitive pricing strategies based on cutting labour costs is low. Regarding labour market institutions, bargaining centralisation indeed encourages unionisation in Sweden. These results imply that Swedish workers pursue strengthening unions when they have more influence. Also, in Sweden and Japan, the presence of social-democratic and other left-wing parties increases workers' propensity to join unions since they potentially feel that through unions they can have a say on broader economic and political decisions.

6. Conclusions

This paper shows that the aggregate rise in household indebtedness is an important missing factor in the declining union density puzzle across high-, mid-, and low-unionisation economies. Building on recent work which shows that indebted employees become more self-disciplined on the fear of becoming unemployed and defaulting on their debt, this study argues that self-disciplined, indebted workers are likely to also avoid participating in unions. This is because joining or forming unions often comes with a higher risk of being permanently replaced. These findings complement recent contributions which demonstrate that corporate financialisation can be a negative driver of union density (Peters 2011; Darcillon 2015; Kollmeyer and Peters 2019; Meyer 2019; Dupuis et al. 2020).

Going beyond the narrow focus on the Anglo-Saxon experience of both financialisation and union decline, the empirical analysis of this study focuses on three largely overlooked case studies: Sweden, Japan, and South Korea. These represent high, mid, and low union density countries, respectively. The results of the UECM-based time-series econometric analysis presented in section four cover roughly the last five decades and demonstrate that the effect of the household debt-to-GDP ratio on union density is indeed strongly negative. This result is the most consistent driver of unionisation across the three case studies in terms of signs and statistical significance. Yet, the cross-country differences show that formal and informal institutions matter for the size of these negative effects since they shape the actual and perceived default risk for indebted households. This, in turn, determine workers' degree of self-discipline at the workplace.

The main insight that this paper offers is that the self-disciplined behaviour indebted employees adopt to avoid losing income and defaulting does not only make them more risk-averse in their individual wage negotiations, but also makes them less willing to unionise. While the macro-level evidence offered here provides a strong indication that personal indebtedness is a key missing driver of union membership, this should be complemented by micro-level analysis using labour surveys that include information on union membership and indebtedness. In addition, semi-structured interviews may also be a very useful tool that can offer deeper insights into how formal and informal institutions can shape the household debt-unionisation nexus. Still, hopefully, this paper makes a significant step towards a better understanding of the declining union density puzzle.

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Appendix

Table A1: Descriptive Statistics & Augmented Dickey-Fuller (ADF) Tests

	Mean	Median	Max.	Min.	Std. Dev.	Obs	ADF Levels	ADF 1st diff.
SWEDEN								
<i>Union Density</i>	75.35	76.40	86.60	64.80	7.12	55	0.63	0.00
<i>Household Debt Ratio</i>	52.76	48.42	82.44	39.13	12.19	55	0.97	0.00
<i>Dividend Yield</i>	3.23	3.38	4.99	1.45	1.00	52	0.40	0.00
<i>Stock Market Capitalisation</i>	54.92	32.77	143.77	4.15	44.94	55	0.82	0.00
<i>Public Sector Size</i>	24.09	25.16	27.52	16.31	2.95	55	0.92	0.00
<i>Log(Industrial Employment)</i>	6.63	6.64	6.83	6.28	0.15	55	0.31	0.00
<i>Inflation</i>	4.61	3.44	13.71	-0.49	3.81	55	0.12	0.00
<i>Trade Openness</i>	63.10	59.22	92.56	38.52	16.11	55	0.96	0.00
<i>FDI (Inflows)</i>	2.61	0.79	22.95	-1.48	4.11	48	0.01	0.00
<i>Import Penetration</i>	30.88	30.36	43.48	19.32	7.01	55	0.93	0.00
<i>Bargaining Centralisation</i>	3.49	2.60	4.60	2.30	1.06	55	0.05	0.00
<i>Left-Right Index</i>	67.89	100.00	100.00	0.00	44.85	55	0.10	0.00
JAPAN								
<i>Union Density</i>	26.34	25.75	35.50	16.80	6.71	60	0.99	0.00
<i>Household Debt Ratio</i>	53.52	59.55	72.26	20.34	15.95	56	0.20	0.00
<i>Dividend Yield</i>	1.89	1.47	5.29	0.45	1.26	56	0.00	0.00
<i>Stock Market Capitalisation</i>	59.92	56.88	139.46	2.98	33.32	60	0.56	0.00
<i>Public Sector Size</i>	13.76	13.84	20.25	7.33	4.43	59	0.90	0.00
<i>Log(Industrial Employment)</i>	9.14	9.21	9.34	8.85	0.16	56	0.84	0.00
<i>Inflation</i>	3.04	1.83	23.22	-1.35	4.12	60	0.10	0.00
<i>Trade Openness</i>	19.98	18.74	36.82	3.13	6.20	60	0.00	0.00
<i>FDI (Inflows)</i>	13.41	4.53	83.20	-5.29	19.97	50	0.99	0.00
<i>Import Penetration</i>	11.68	10.98	20.01	6.94	3.58	50	0.78	0.00
<i>Left-Right Index</i>	1.42	0.00	25.00	0.00	5.29	59	0.00	0.00
SOUTH KOREA								
<i>Union Density</i>	12.62	12.20	18.60	9.40	2.41	56	0.20	0.00
<i>Household Debt Ratio</i>	40.42	41.36	95.20	1.39	28.29	58	0.99	0.00
<i>Dividends Payments</i>	36.53	34.43	76.40	13.98	16.66	44	0.65	0.00
<i>Stock Market Capitalisation</i>	48.72	42.71	109.11	5.00	32.30	41	0.41	0.00
<i>Public Sector Size</i>	11.66	10.97	16.05	8.21	1.96	59	0.76	0.00
<i>Log(Industrial Employment)</i>	7.56	7.83	8.21	5.94	0.59	56	0.00	0.00
<i>Inflation</i>	7.89	4.86	29.46	0.38	7.25	60	0.04	0.00
<i>Trade Openness</i>	57.25	57.45	105.57	14.60	21.85	60	0.38	0.00
<i>FDI (Inflows)</i>	0.73	0.58	4.57	0.01	0.74	50	0.00	0.00
<i>Import Penetration</i>	29.47	28.52	52.22	11.96	9.01	60	0.78	0.00
<i>Right-to-Association Dummy</i>	1.89	2.00	3.00	1.00	0.90	59	0.92	0.00

Note: ADF tests do not include trends or intercepts. Values reported are *p-values*.