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Sustainability of employee ownership: the role of capital structure in ESOP plan terminations

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Abstract

Purpose – The paper studies the relationship between central features of the capital structure and terminations of ESOP plans in the US.
Design/methodology/approach – The research methodology is primarily based on reviewing the existing literature and includes elements of original comparative analysis.
Findings – We find that externally imposed repurchase obligation, the stochastic element to repurchase obligation and the discontinuous vesting of ICA shares undermines the sustainability of employee ownership in the Employee Stock Ownership Plan model.
Research limitations/implications – Strengthening employee-owned firm the structural architecture of employee-owned firms (EOF) can help to improve sustainability of the socially preferable alternative in the market economy.
Practical implications – In light of the increasing global interest in employee ownership, our research underscores the need for institutional learning to adapt EOFs to contemporary economic environments.
Social implications – Strengthening employee-owned firm the structural architecture of employee-owned firms (EOF) can help to build the case for the socially preferrable business ownership model for the market economy.
Originality/value – This paper contributes to the employee ownership literature by providing understanding of the role of capital structure in the US ESOP model and terminations of ESOP plans and suggesting some novel ideas in addressing the challenges.

Keywords Employee ownership, Employee stock ownership plan (ESOP), ESOP terminations, Repurchase obligation, Roll-over

Paper type Conceptual paper

1. Introduction

An Employee Stock Ownership Plan or ESOP is one of the more widely adopted contemporary models of employee-owned firms (EOF) in the US, if not in the world. Based on the data provided by the National Centre for Employee Ownership in the US (NCEO, 2024), there were 14.7 million ESOP beneficiaries and more than 6,500 ESOP firms in the US in 2023. ESOP is a mechanism that facilitates leveraged employee buyouts through a dedicated trust, which holds stock in the name of employees. The model of leveraged employee buyouts through a special purpose vehicle has been replicated in the UK in 2014 through Employee Ownership Trusts or EOT (Mygind, 2023; Pendleton *et al*., 2023), it was adopted by the Canadian government in 2024 (Hemingway and Simon, 2024) and is currently being considered as the central employee ownership model in many countries around the world, including Slovenia, Denmark, Ireland and some countries of Latin America (Nuttal, 2022; Ellerman *et al*., 2022; Ellerman and Gonza, 2024) [1].

The scaling success of the ESOP model in the US and, as of recently, in the UK can partially be explained by the institutional support (e.g. regulatory framework, tax incentives, dedicated financial instruments, support of technical assistance organizations such as the ESOP Association, the Foundation for Enterprise Development and the National Centre for

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Employee Ownership, etc.) (Kroncke, 2017). Additionally, leveraged financing, which allows workers to access ownership without needing to invest their personal savings, certainly plays a role in the success of the ESOP model (Gonza *et al*., 2024). Despite broad political, institutional, business and civil support, the number of ESOP firms has been stagnating in the US, and even declining in recent years, where ESOP terminations play a big part in the trend.

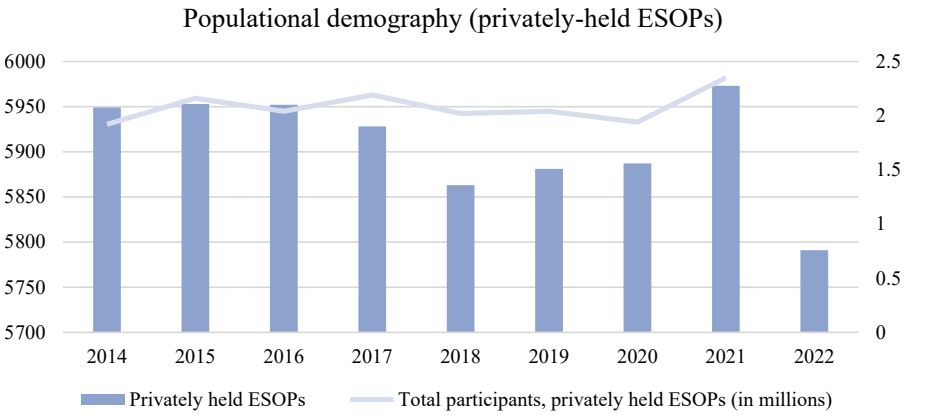
Corey Rosen, one of the leading experts on employee ownership, recently stated that the "sustainability" of the ESOP model "has become one of the most talked-about ESOP issues" [2]. In this paper, we analyze the reasons behind ESOP terminations and discuss the issue of sustainability of the ESOP model. Some have speculated that the repurchase obligation has contributed to the problem (Brown and Van Horn, 2021; King, 2008; Thompson *et al*., 2014), while others doubt that the repurchase obligation is the primary cause of ESOP terminations (Wiefek and Rodgers, 2023; Nicholson *et al.*, 2023). In the context of that conversation, we analyse how the capital structure of the ESOP model affects the issues surrounding the repurchase obligation, and how that in turn affects ESOP terminations.

We continue the paper with a section on the recent data on the population demography of the ESOP model. In third section, we analyse how features of ESOP's capital structure (share-based individual capital accounts and the corresponding rules of the repurchase obligation) could help us understand ESOP terminations. In section four we describe structural solutions that could help to address the identified problem. The final section concludes and situates the paper in a broader discussion on employee ownership.

2. Population demography of the ESOP model

The historical scaling success of the ESOP model has been curtailed by the decade-long stagnation in the number of ESOP firms. While the topic is becoming increasingly popular, the research in the field remains limited. We start the exploration of the reasons behind the trends in the numbers of ESOP plans by taking a closer look at the population demography.

The number of ESOP firms has been stagnating—even declining—in the last ten years [3]. Figure 1 shows the population demography of the ESOP model between 2014 and 2022



Note(s): [1] Data from the 2024 ESOP Database on the number of privately held ESOP firms available only until 2021. Based on the NCEO data on total number of ESOP firms in 2022, we calculated the number of privately held ESOP. We assumed that the number of publicly held ESOP firms did not change between 2021 and 2022

Source(s): Gonza (2024)[1]

Figure 1. Total number of privately held ESOPs and beneficiaries from 2014 to 2022

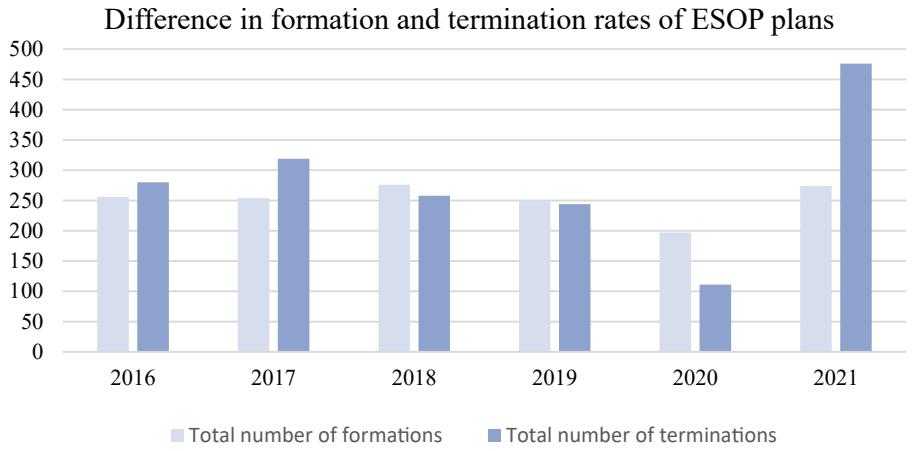
(source: NCEO data base). In 2021, there were 5,973 privately held ESOP firms employing 2.36 million workers, holding almost 280 billion dollars in assets for the workers). In 2022, there were 5,790 privately held ESOP firms in the US economy [4]. Between 2014 and 2022, the total number of privately held ESOP firms decreased by 178 [5].

The changes in the population demography of ESOP firms can be explained through the formation rates and the sustainability rates ("survivability" of the ESOP plan) (Gonza, 2016, 2024). In the academic literature and in professional circles, many have, in recent years, focused on the challenges with formation rates. In the light of the data on formation rates, this is rather perplexing [6]. Reports indicate an impressive adoption rate ever since the early 90s; the average formation rate was close to 3% annually over the past 15 years. In the six years between 2016 and 2021, 1,507 new ESOP firms were created, on average around 250 annually [7].

Knowing formation rates and the total number of ESOP firms, it is possible to calculate sustainability rates. The numbers indicate that ESOP terminations have exceeded ESOP formation rates almost every year since 2016, as illustrated by Figure 2. Based on our calculations, 281,33 ESOP firms were terminated between 2016 and 2021 on average every year, which means that in the past six years, a total of 1,688 ESOP plans have been terminated. This is consistent with the data provided by the NCEO, stating that between 3 and 4% of ESOP firms are terminated annually (NCEO, 2018). When putting the formation and termination numbers together, the result is a net reduction of the ESOP population by 181 ESOP firms over the past six years.

The data on the population demography of the ESOP model points to challenges with the sustainability of ESOP plans. There are two possible sources of sustainability problems (Mygind and Poulsen 2021); ESOPs may disappear because of financial reasons or because employee ownership is terminated.

The business performance of ESOP firms has been a widely researched topic. A meta-analysis from 2016 compares the results of 102 empirical studies representing 56,984 firms on the link between the ESOP structure and corporate performance, showing that the link is generally positive (O'Boyle *et al.*, 2016), and other meta-analyses indicate the same (Kruse, 2022). Can economic performance account for ESOP terminations? To answer this question, we need to compare bankruptcy rates with termination rates. One study found that bankruptcy rates are twice as low for ESOP firms than for conventional forms, with a 0.2% annual



Source(s): Gonza (2024)

Figure 2. Total formation and termination numbers (privately held ESOPs) from 2016 to 2021

bankruptcy rate among ESOP firms (Kurtulus and Kruse, 2017). Compared to 3–4% annual termination rates among the ESOP firms, it appears that economic performance cannot explain terminations. Indeed, one recent report notes that bankruptcies present a "modest" share of ESOP terminations (Brown and Van Horn, 2021).

Terminations of employee ownership provides a better explanation of challenges with ESOP sustainability. Some argue that a major reason for ESOP terminations "is the partial or total sale of the employer's stock or assets through a third party" (Brown and Van Horn, 2021, p. 1). An outdated study indicates that in 61.13% of cases of ESOP terminations, employee ownership is dismantled because ESOP shares are acquired by an investor or a competitor (Fernandez *et al*., 1996). A more recent study shows that in 51% of cases, ESOP firms are terminated through the sale of ESOP shares to a third party because the "offer is too attractive to refuse" (Thompson *et al*., 2014, p. 4). Mygind (2023) points out that most terminations are indeed due to sale of the ESOP stock to external investors that are able to offer a premium exceeding the fair price offered by the ESOP plan.

ESOP terminations have also been related to the repurchase obligation, where the operating company is required to pay for the acquisition debt and workers' departures (Brown and Van Horn, 2021; King, 2008; Thompson *et al*., 2014). In 2008, NCEO published a study showing that repurchase liability was directly or indirectly responsible for 26.3% of ESOP terminations (Thompson *et al*., 2014). Some have opposed that conclusion (Nicholson *et al*., 2023); however, even their data seems to contradict the skepticism about the role of the repurchase obligation in terminations: While very few ESOP representatives estimate that there is a 50% chance (or higher) that the repurchase obligation will lead to ESOP termination, almost 20% of study correspondents agreed that managing the repurchase obligation is moderately or much worse than expected (Thompson *et al*., 2014). For 60% of respondents, the repurchase obligation took up 25% of free cash flow, but for 14%, the repurchase obligation consumed more than 50% of the available cash flow. In the survey, 32% of ESOP firms are "somewhat concerned" with the ability to cover the repurchase obligation and 16% say that they are "likely" to have difficulties in covering the repurchase obligation (Wiefek and Rodgers, 2023). While these numbers may not seem alarming, they might be perceived differently in the light of the data that the ESOP termination rate is between 3 and 4% annually.

3. Explaining ESOP terminations: share-based ICAs and the repurchase obligation

Data on ESOP terminations and speculation about how they related to repurchase obligations require further scholarly exploration. In the words of Keeling (2019, second to last paragraph), "as employee ownership advocates, we need to address why so many ESOP companies walk away from broad-based ownership". In this section, we focus on the role of internal structures in the sustainability of the ESOP model. Internal structure of economic firms affect incentives, delegate power and shape "attitudes and behavior of employee-owners" (McHugh *et al*., 2005, p. 280). Capital structure, as the central institution of internal structure, plays an important role in affecting the sustainability of employee-owned firms (Gonza, 2024).

One of the most important features of the capital structure in the case of the ESOP model are individual capital accounts (ICAs). ESOP's ICAs are share-based, meaning that internal shares are allocated to individual accounts of workers. When an ESOP trust buys a company's stock through debt leverage, ESOP shares are assigned to a temporary account that holds internal shares until the ESOP starts paying off the acquisition debt, when the shares are allocated to ICAs in proportion to the consolidated debt. This is called a vesting period. During the vesting period, workers of ESOP firms receive shares allocated to their ICAs without having to invest their own personal assets.

ICA shares assure workers' claims over capital growth and profit rights, but neither traditional governance rights nor transferability rights are assured (Rosen and Scott, 2014). Workers cannot trade, sell or buy internal shares; the shares are allocated, assigned and purchased from the ICAs through a set of pre-defined rules to ensure that ownership remains

anchored with the current generation of workers over the long term, even with the fluctuation of employees (Gonza, 2024).

ICAs are an innovative structural feature that can help to address challenges found in other EOFs (Ellerman, 2020; Tortia, 2007; Wasserbauer, 2015; Gonza, 2024; Ellerman *et al*., 2022; Ellerman and Gonza, 2024). One of the main functions of ICAs is that the repurchase obligation is collectivized, meaning that the capital value claimed by individual workers is consolidated through the free cash flows of the operating company rather than by workers individually. In this way, the ICA model helps to address one of the main challenges with sustainability that some EOF models have historically faced, which is ensuring the continuation of employee ownership despite the fluctuation of workers.

However, the rules structuring ICAs in the ESOP model (share-based ICAs) and the repurchase obligation introduce certain challenges that hamper the sustainability of the ESOP model. We discuss these issues in the following sub-sections.

3.1 Externally imposed repurchase obligation

When workers depart from the ESOP firm, either due to retirement or for other reasons, the ESOP needs to repurchase their internal shares. The buy-out is financed through cash flows of the underlying company. The repurchase obligation is imposed by external legal rules (maximum period and external appraisal), which neglect the ongoing financial condition of the underlying firm. The repurchase obligation (RO) in share-based ICAs is determined by two variables:

(1) The repurchase value (RV) is the value of internal shares allocated to ICAs. The value of internal shares is based on the value of ESOP stock, which, by law, must be appraised based on fair market valuation (comparable market transactions) by independent appraisers.

(2) The repurchase period (RP) is the maximum period in which the internal shares must be repurchased from departing workers. The maximum period is between one and six years, depending on the reason that triggered the repurchase obligation event.

RO is determined by RV and RP. When a worker leaves the ESOP firm, the underlying business must pay out an externally defined value within an externally defined period regardless of the cash flow availabilities. In the US ESOP model, the annual repurchase obligation becomes a dependent variable, so that:

$$\mathrm{RO} = \mathrm{RV} / \mathrm{RP}$$

The problem with this is that where RP and the RV may leave open some flexibility (they are, to a degree, almost arbitrary), the cash flow capacities—how much cash a business can pay out on annual basis—are objectively limited by the ongoing financial condition of the ESOP firm, which may be affected by factors internal (e.g. investment cycle) or external (e.g. macroeconomic cycles) to the firm. In situations when the annual RO exceeds the available cash flow, a few alternatives remain for the trustee of the ESOP fund:

(1) If cash capacities are below the cash requirements, the ESOP firm may raise additional debt to finance the RO. While external debt in effect extends the repurchase period, this option is more expensive due to interest payments, and it may not always be available. Indeed, ESOP firms generally avoid that. 67% of ESOP firms finance the RO through free cash flows and only 2% is financed through external debt (Wiefek and Rodgers, 2023).

(2) Another possibility is to sell ESOP stock to finance departures. The shares assigned to ICAs of departing members may, under clear fiduciary guidelines, be sold to external investors rather than back to the ESOP trust. Likewise, the departing worker may,

again under certain circumstances, receive shares rather than cash as compensation during departure (Nicholson *et al.*, 2023). Of course, this option is the least desirable if we are motivated to maintain employee ownership. This route is not a common choice for ESOP firms. Only 2% of ESOP firms make contributions in form of shares rather than cash payments to departing workers (Wiefek and Rodgers, 2023).

(3) Next, an ESOP firm may engage in stock buybacks rather than the ESOP fund buying the shares from the departing workers. This alternative dilutes ESOP ownership and increases external ownership in non-100%-ESOP firms (Pratt, 2004). In 26% of cases, ESOP firms engage in stock buybacks, leading to dilution of ESOP ownership (Wiefek and Rodgers, 2023). This option does not, however, help with liquidity demands on the underlying company (in effect, RO is the same).

(4) Finally, an ESOP trustee may estimate that the future financial capacities of the ESOP firm will not be able to cover the repurchase obligation and decide to terminate the ESOP plan (Brown and Van Horn, 2021).

We can imagine a number of scenarios where the externally imposed repurchase obligation may lead to terminations of ESOP plans. For example, if many older workers (with large stock value on ICAs) retire, it may be difficult to finance, within the available window of a few years, a larger departure of workers. An additional concern is valuation based on fair market value, which may not take into consideration the liquidity of the operating firm.

The New Belgium Brewery, once a successful 100% ESOP, was sold off to an external investor in 2019. Reports state that the sale was the result of various factors, including the need for external equity funding to strengthen the firm's market position in the highly competitive microbrewery industry, and the desire to fund growth and expansion plans. However, some have argued that there was a mismatch between the valuation and the available cash flows to finance the ESOP purchase, where a strategic buyer could outbid the ESOP on the share price because of the advantage gained by consolidating the market (Mackin, 2020). In his comment on the ESOP termination of the New Belgium Brewery, Michael Keeling pointed out that in successful ESOP companies "the price of shares keeps going up", and that "the growing repurchase obligation put such pressure on the company's ability to thrive or even survive — by investing in growth, hiring more employees, and so on — that company leadership concludes it cannot remain competitive" (Keeling, 2019).

Data supports the theory that in some cases an externally imposed repurchase obligation may lead to sustainability challenges. In 2005, the NCEO report on the repurchase obligation identified the "circular relationship between value and the repurchase obligation" as one of the "most unsettled areas of ESOP practice" (Wiefek and Rodgers, 2023, p. 60). Only 25% of ESOP firms prepared a repurchase obligations report that year, while the number increased to 63% in 2023, indicating the increased attention directed towards the issue among ESOP firms. Despite greater focus on the management of RO, ESOP firms expressed concerns that the inflated appraisal could "inflate the cost of the ESOP and damage the company and the value of shares of remaining participants" (Wiefek and Rodgers, 2023).

3.2 Stochastic nature of the repurchase obligation

Stochastic departures of workers from ESOP plans—death, disability or, most commonly, job changes—trigger the repurchase obligation in the ESOP model. Stochastic departures are, by their nature, difficult to anticipate, where the repurchase obligation in those cases may be difficult to manage.

The RO is triggered by three categories of events: (1) diversification of the ICA value upon the age of 55 (with sufficient tenure to open for diversification), (2) retirement from the ESOP firm and (3) departure or other type of unanticipated event. Experts generally suggest that all ESOP firms should carefully anticipate and manage the liquidity requirements that stem from repurchase liability; however, this is not always possible (Cromlish, 2015). Thus, share-based

ICAs lead to two types of event-triggered repurchase obligation – anticipated or planned obligation and unanticipated or stochastic obligation (Buxton and Gilbert, 2004). The repurchase obligation may be triggered by the following stochastic events that are difficult to anticipate:

(1) Change in employment leading to exit from the ESOP plan.

(2) Death or disability of the worker.

(3) A speculative exit may happen when the firm is a market-maker for the ICA shares and is required to purchase the shares upon exit. If workers speculate about the decrease of the price of the ESOP share or anticipate a crisis, they may exit to secure the value on their ICAs [8].

(4) A bank run is a possible continuation of the speculative exit, where workers may observe exits by other workers and perpetuate further exits (Ellerman *et al*., 2022; Wasserbauer, 2015).

(5) Additional unpredictable events, such as natural disasters, market crashes or changes in the economic landscape, may lead to a decrease in the value of ESOP shares and create diversification pressures.

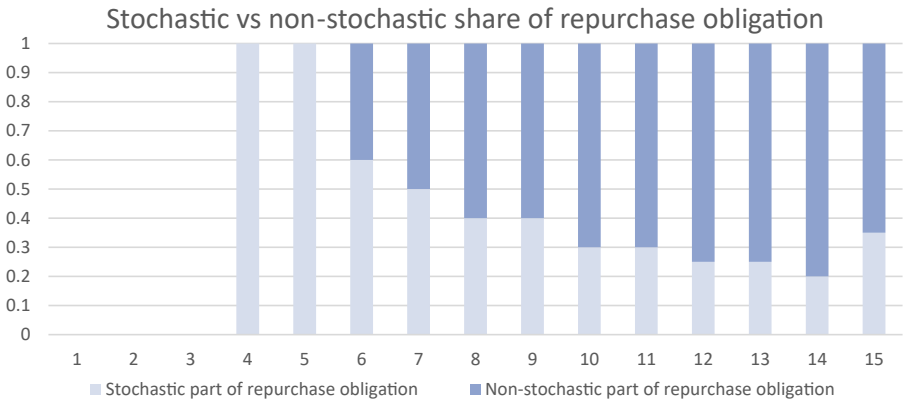
The stochastic part of the repurchase obligation may create stochastic liquidity pressures that can severely impact the financial stability or threaten employee ownership in ESOP firms. When it comes to unanticipated departures, in some cases, ESOP firms may establish their own disbursement rules; however, the law limits the flexibility even in the cases of stochastic triggers of RO. In the case of objective reasons (retirement due to age, disability or death), ERISA law requires that the value of their ICAs be paid out to them on the last day of the following financial year, typically in the form of cash buybacks (Gordy *et al*., 2013). In the case of diversification after the age of 55, workers must be able to diversify 25% of their shares in the next five years and 50% in six years, often creating heavy liquidity requirements for the operating company (Rosen and Scott, 2014). In the case of non-objective reasons (e.g. changing jobs, speculative exit, etc.), the full value payout must be finalized within five years after the acquisition debt is paid off (Gordy *et al*., 2013).

A study by the Private Capital Corporation indicated that a significant share of the repurchase obligation can be unanticipated [9]. The example in Figure 3 below demonstrates "a typical trend"; we can see that the stochastic share of the repurchase obligation is high in the initial years of the ESOP plan, where there are not yet any retirement or diversification. The stochastic part of the repurchase obligation gradually decreases and ranges between 20 and 35% after 10 years of plan existence, which is still significant.

Recent research confirms that the retirement of ESOP members presents a manageable part of the repurchase obligation. 30% of ESOP firms are able to make lump-sum payments when workers retire, with 32% of firms paying out workers through instalments and 39% using a combination of both (Wiefek and Rodgers, 2023). In rare cases of disability or death, ESOP firms pay lump-sum payments in 40 and 42% of cases, respectively; however, only 24% of ESOP firms pay departing shares in a lump-sum for reasons other than retirement, disability or death (Wiefek and Rodgers, 2023). In the case of stochastic exits, 34% of ESOP firms use the maximum legal limit on the repurchase period to pay out the value of departing shares. These results may indicate challenges in paying out the stochastic part of the repurchase obligation, especially in the cases of employee fluctuation.

3.3 Discontinuous vesting of internal shares to ICAs

Vesting of internal shares to ICAs is an irregular event conditioned by internal shares being released either from the temporary account or from other ICAs. The discontinuous nature of the vesting schedule may exclude, temporarily, new workers from profit rights and capital



Note(s): [1] Accessed on 20th of September 2024 at the website https://esopservices.com/articles-press/articles/esop-a-four-letter-word/
Source(s): Private Capital Corporation[1]

Figure 3. Stochastic and non-stochastic element of the repurchase obligation – a typical trend

growth, and may concentrate ownership rights in the hands of the cohort of workers that has been present during the vesting period. In the ESOP model, vesting of ICA shares happens during the following two scenarios:

(1) Primary vesting occurs when the ESOP is acquiring external stock from the seller, treasury shares or newly issued shares. Vesting to ICAs happens when the acquisition debt is being paid off and internal shares are transferred from the suspense account to the ICAs of active beneficiaries.

(2) Secondary vesting occurs with internal shares that have previously been assigned to ICAs but are re-allocated due to two possible reasons. Firstly, this happens when an employee leaves the company due to retirement, change in employment or any other reason. Secondly, vesting happens when a worker reaches the age of 55 and decides to diversify the investment, with the ESOP buying back a portion of the ICA shares and re-allocating them to active accounts.

Workers employed by ESOP companies outside of vesting events do not receive ownership rights until one of the two vesting scenarios is triggered. This creates "two classes of employees": the first are "owners through prior ESOP stock allocations" and the second not, since "no additional shares are [at the time] available for allocation" (Brown and Van Horn, 2021, p. 2). Exclusion from financial rights for one group of workers may be in effect for years, depending on exits and the age structure of the employees; however, the divide may even persist for extended periods. If an ESOP trust does not have the liquidity to cover the repurchase liability or if the ESOP trustee decides that funding the RO is imprudent for the current ESOP beneficiaries, new workers may not receive any legal rights even after the departure of existing beneficiaries from the ESOP [10].

Recent research shows that most companies (80%) recycle departing shares regularly or occasionally, while 20% of ESOP firms never recycle shares (Wiefek and Loren, 2023). For the 20% of ESOP firms, therefore, new workers may not be accessing ownership rights. We conclude that discontinuity in vesting—an artefact of the ESOP ICA structure—creates a succession problem, leading to a temporary degeneration problem (Brown and Van Horn, 2021; Ellerman *et al.*, 2022; Gonza, 2024) [11]. While the exclusion of workers from

ownership does not help to directly explain ESOP terminations, it may help us to understand the degeneration tendencies that are related to the structural features of the ESOP model.

4. Proposal of structural solutions

Terminations of ESOP plans are related to the rules of capital structure in the ESOP model; however, this does not mean that the challenges are inherent to employee ownership. The structural architecture in the case of ESOPs is an institutional artefact of ERISA, which implies that we can think of structural solutions that can help to address the identified challenges.

4.1 Rollover mechanism

One feature of the capital structure that should help with these problems is the rollover mechanism. Rollover creates a dynamic where the available cash flows are used to repurchase the oldest shares and re-allocate them to all the active accounts. While there are mentions of rollover in the literature, the feature has only more recently been discussed as a possible solution to long-standing problems faced by EOFs (Ellerman *et al*., 2022; Gonza, 2024).

How does it work? Vesting of shares on ICAs is a dynamic process, meaning that each set of shares is designated with an exact date of allocation. This creates the repurchase schedule – the oldest internal shares are the shares that will be purchased first. Now, the rollover implies that each year the distributed profits (ESOP cash contributions) are used to repurchase the oldest shares in ICAs [12]. When shares are repurchased based on their dates, they are re-dated and re-allocated to all the active accounts. In this way, the solution creates a framework of continuous vesting of internal shares based on available cash flows, rather than discontinuous vesting and an externally imposed RO. There are at least three sets of issues addressed by the rollover:

(1) The externally imposed repurchase obligation in the ESOP model leads to (potentially) unanticipated liquidity demands on the ESOP firm; however, with the rollover, the RO depends on cash flow availabilities rather than on employee departures. In this way, RO can be adjusted based on conditions that affect the liquidity of the operating business, for example investment cycles or external economic conditions. The rollover redefines the RO equation so that the repurchase period becomes dependent on the repurchase value and repurchase obligation (annual contribution by the firm): RP = RV/RO.

(2) In the ESOP model, the repurchase obligation is triggered by anticipated and unanticipated events, which can lead to difficulties in managing the liquidity of ESOP firms. The rollover regulates the buyouts, payouts and allocation of shares to ICAs. It creates a structure where employee exits do not trigger the RO, as argued above: the RO is determined based on a decision of the board and shareholder assembly. This would prevent a bank run and similar risks related to unanticipated massive departures that could pose liquidity problems for the operating firm. In this way, rollover is expected to stabilize the firm's financial condition [13].

(3) Since the rollover systematized repurchase and re-allocation of internal shares, it also addressed the issue of discontinuous vesting of shares to ICAs, preventing the temporary degeneration problem in the ESOP model. Vesting becomes continuous; by redistributing the oldest shares in individual accounts, the rollover system allows new workers to effectively "buy into" the existing capital structure by contributing their portion of the distributed profits to buying out the older shares from the accounts of other workers. New workers begin to accumulate value in their accounts when there is available cash flow, integrating them gradually and equitably into the ownership. In this way, the roll-over prevents significant value distribution disparities between long-standing members and new workers, thereby increasing organizational cohesion and stability.

4.2 Value-based individual capital accounts

ICAs as a general feature of capital structure have helped to improve the sustainability of employee ownership in the EOF models that use the structure (Gonza, 2024; Ellerman, 2020) however, share-based ICAs have introduced certain specific challenges that have potentially manifested in ESOP terminations. A different type of ICAs, called value-based ICAs, may help to address some of the problems introduced by the capital structure of the ESOP model.

Value-based ICAs can be found in Mondragon cooperatives in the Basque country and are currently being institutionalized through the Slovenian ESOP legislation (Gonza, 2024). In the US ESOP model, the internal shares are valued according to the balance sheet of the ESOP trust, where the total value of ICAs equals the total value of assets (generally this is company stock) minus the total value of liability (generally this is acquisition debt). In the case of value-based ICAs, the capital value of the balance sheet (assets – liabilities) is directly assigned to ICAs (rather than through internal shares as intermediaries) [14]. Value-based ICAs may help to address some of the sustainability issues identified with the ESOP model:

(1) Value-based ICAs address the problem of discontinuous vesting of shares and capital value among workers. Value-based ICAs automatically allocate capital gains to all active accounts each year, which ensures that new workers participate in capital value growth regardless of the amount of value already allocated to their ICAs. The main difference therefore is in how capital gain is distributed. In the case of share-based ICAs, the capital gain derived from increasing the price of ESOP stock is distributed to workers through appreciation of allocated internal shares, while in the case of value-based ICAs, the capital gain is distributed to all workers according to distribution criteria. This ensures a more equitable distribution of growth to all the workers that contribute to the business success in a given year and prevents the creation of two classes of workers within the ESOP.

4.3 Collective capital account

One of the challenges with the ESOP-type capital structure is the high ICA values claimed by ESOP workers, which is based on appraisal of ESOP stock. The concept of a collective account, when integrated as a complementary feature of capital structure, could help to lower ICA values and reduce the challenges related to buyback obligations in the ESOP model.

It is possible to lower ICA values from two sides. Firstly, one could use a different appraisal method for ESOP stock (i.e. the company value). For example, in Mondragon cooperatives, the ICAs reflect the capital value on the balance sheet. Valuing workers' wealth based on the net asset value is better aligned with democratic principles [15], but more relevantly, it also decreases the liquidity demands on the operating company [16]. Secondly, the capital structure can collectivize part of the total company value (shifting part of the total stock/capital value to a collective account), lowering individual claims on ICAs and hence reducing the total repurchase obligation (Tortia, 2018, 2021; Gonza, 2024). Mondragon cooperatives are collectivizing around 30% of the total capital value. The other recent model that introduced a 100% collective account are the UK's Employee Ownership Trusts (Ellerman and Gonza, 2024). The collective account acts as a form of self-insurance for the company by reducing the liquidity requirements for the repurchase obligation, which may strengthen the sustainability of EOFs:

(1) Partial collectivization helps to reduce the liquidity burden of repurchase obligations by reducing the amount of capital value that legal members can claim individually. By allocating a percentage of net asset value to a collective account, the cash payout requirements for withdrawing members are reduced. For example, instead of allocating the total capital value to ICAs, a portion (e.g. 20% or 30%) is "captured" by the collective account, reducing individual claims proportionately. This mechanism ensures that the company locks a share of the capital value, which improves stability

with the fluctuation of workers in EOFs [17]. A discussion of the choice of the 30% allocation to the collective capital account is warranted to better contextualize this threshold. Research indicates that 30% collectivization, as introduced by the Mondragon Group, strikes a balance between ensuring efficient incentive structure and decreasing the repurchase obligation (Arando *et al.*, 2011; Stikkers, 2020). At the same time, it is important to note that the balance between collectivization and individualization has not yet been sufficiently explored, particularly in terms of how it aligns with financial sustainability objectives and organizational resilience. Is the ratio fixed? What are the boundaries of the ratio to keep a good balance? Can the ratio be flexible, where exceptionally high profits would be collectivized in a higher percentage, thereby enhancing the organization's ability to withstand economic shocks or meet unexpected liquidity needs?

(2) The collectivization decreases the ICA values in the function of long-term financial sustainability, which may, however, have adverse effects in some situations. For example, the collectivization of the capital value would introduce additional problems in the ESOP model, where an external offer exceeding the expected financial return to the workers in ESOP firms (indicated by the value of ICAs) creates pressure to sell the ESOP stock [18].

5. Conclusion

Overall, the US ESOP model maintains a type of a capital structure that has been effective in ensuring the sustainability of employee ownership, especially relative to some other EOF models that have faced or face much greater sustainability challenges (Gonza, 2024). An important role in that regard is played by the ICA feature, which ensures both the economic and the organizational function for ESOP firms: it creates efficient investment incentives while collectivizing the repurchase obligation, allowing for systematic consolidation of employee ownership in the face of employee fluctuation. On the other hand, the specific features of the ESOP structure may lead to some challenges. An inherent feature of the ICA-based capital structure is that the capital value of departing workers must eventually be repurchased the operating company. Our analysis does provide conclusive answers about the relationship between structure and sustainability, but it does indicate that some of ESOP terminations may be explained by how ESOP are set up:

(1) The size of the annual repurchase obligation is determined without any regard to the available cash flows. We reported on studies suggesting that 32% of ESOP firms are "somewhat concerned" about their ability to finance the repurchase obligation and 16% say that they are "likely" to have difficulties in covering the repurchase obligation.

(2) The stochastic element to the repurchase obligation may lead to liquidity challenges. 24% of ESOP firms cover the voluntary departures in a lump sum, compared to 30% in the case of retirement, indicating challenges in financing the repurchase obligation. In stochastic exits, 34% of ESOP firms use the maximum legal limit on the repurchase period to pay out the value of departing shares.

(3) Workers usually do not receive shares outside of vesting events, which can lead to exclusion of new workers from cash distributions and from capital value growth. Research shows that 20% of ESOP companies are not repurchasing departing shares at all, meaning that in many cases, the problem is not only temporary.

The rules of the capital structure, which include the structuring of the repurchase obligation, are not a necessary feature of an ICA-based capital structure. In section 4, we conceptualized and described a type of capital structure that can help to improve the functionalities provided

by ICAs, while at the same time improving the sustainability element, which has been undermined by the externally imposed obligation, stochastic nature of the obligation, related fiduciary terminations and discontinuous inclusion of new workers into ownership:

(1) The rollover mechanism uses available cash flow to purchase the oldest internal shares or pay for the oldest debt vested in ICAs. The repurchase obligation is situational, as the annual ESOP contribution becomes part of the shareholder assembly, deciding on cash flows based on the ongoing financial condition of the EOF. In this way, rollover prevents the stochastic element of the repurchase obligation.

(2) Value-based individual capital accounts measure the value claim by individual workers by assigning value to ICAs rather than allocating internal shares. In this way, value-based ICAs share capital gain among all the current workers rather than just the workers with already vested internal shares.

(3) A collective account decreases the repurchase obligation by collectivizing part of the capital value. A collective capital account complements the ICAs by locking a share of the capital value and preventing individual claim over that value. The size of the collectivized value may vary, but in Mondragon cooperatives, the collective account of 30% of total capital value seems to work well in ensuring a proper profit reinvestment incentive and improving the ability of EOFs to be able to cover the repurchase obligation in the long term [19].

The analysis in this paper contributes to an enduring conversation about the viability of EOFs in the context of a market economy (Furubotn and Pejovich 1970; Williamson, 1985; Hansmann, 1996; Ellerman, 1982, 2013, 2020; Tortia, 2018, 2021, 202; Mygind, 2023; Bretos *et al*., 2020; Gonza, 2024). Our analysis of the ESOP model suggests that the structural architecture of EOFs affects their sustainability in the market economy, which provides an important insight into the question of why EOFs have historically faced challenges with robustness, both in an economic and an organizational sense. In the light of the increasing global interest in employee ownership (Nuttal, 2022), our research underscores the need for institutional learning to adapt EOFs to contemporary economic environments. Addressing structural weaknesses, such as better management of the repurchase obligation, lowering the stochastic element of the liquidity demands and systematizing inclusion of new workers into ownership, offers a pathway to strengthening EOFs as socially responsible and economically competitive alternatives to conventional firms.

Notes

1. In July 2024, the Slovenian government passed a resolution that anticipates Slovenian ESOP legislation under the name “Employee Cooperative Ownership Act”. Information accessed on 21 September 2024 at the website https://www.gov.si/novice/2024-07-10-vlada-potrdila-izhodisca-zakona-o-lastniski-zadrugi-delavcev/.
2. Accessed on 26 January on the website https://www.esop.org/articles/esop-sustainability.php/https://www.nceo.org/Sustainable-ESOPs/pub.php/id/744. A few years ago, Corey Rosen published a book on the issue titled Sustainable ESOPs: Plan Design, Governance, Culture, and Finance (2015), which discussed how different features of the ESOP model can undermine or help to contribute to the sustainability of ESOP firms.
3. ESOP plans are established both in private and public corporations; however, in our analysis, we focus on privately held ESOPs.
4. There is no exact number on privately held ESOP firms in 2022. We calculated this number by using the 2022 Form 5,500 filings, showing that the total number of ESOP firms in 2022 was 6,331. Based on the average ratio between privately held and public ESOP corporations over the last 10 years, we calculated the number of privately held ESOPs in 2022.

5. During this period, the total number of ESOP beneficiaries increased by 22% between 2014 and 2021 as illustrated by Figure 1. However, the growth of ESOP beneficiaries does not contradict the decline in the number of ESOP firms and can be explained by the growth of individual ESOP firms (through organic growth or acquisitions of non-ESOP firms, which are the main driver of the ESOP employment growth) (Blasi *et al*., 2019).

6. This is not to say that the formation rates of the ESOP model should or cannot be improved. Experts have argued that the state should provide better capital opportunities to ESOP firms. Federal loan and ESOP portfolio guarantees could help with conversions of firms where sellers are unable or unwilling to provide seller's credit, while banks require additional guarantees (May *et al*., 2019). New investment vehicles could provide the capital for selling to an ESOP, there could be additional incentives in the form of exemptions on taxable gains, further tax benefits for ESOPs in special zones, and new regulations covering employee ownership in publicly traded companies (Blasi *et al*., 2019). Other policies have been discussed that would help with improving the ESOP reproduction rate (Case and Quarrey, 2019a; Wiefek *et al*., 2019).

7. Information accessed on 21 December 2023 on the website https://www.pcecompanies.com/resources/the-history-and-composition-of-esops.

8. In Slovenia, two cases of employee shareholding illustrate a similar challenge of stochastic events leading to a high repurchase obligation and heavy liquidity demand on the operating company. The rules of the repurchase obligation in those cases were very similar to the rules of the repurchase obligation when an employee leaves an ESOP firm in the US; the agreement was that if the worker as individual shareholder decided to sell the shares, the operating firm had to buy back the shares in a matter of a few years. During the Great Recession (2009–2013), one Slovenian company faced significant financial stress when employees, anticipating economic difficulties, collectively sold their shares, forcing the main owner to take out a personal loan to meet the buyback obligations. A similar situation arose in another case following the government's announcement of increased taxation on share buybacks in 2022, which led many employee-shareholders to sell their shares *en masse*, creating significant cash pressure as the company repurchased almost 15% of its shares within a year. These examples highlight the vulnerability imposed by the stochastic element of buyback obligations, particularly in times of economic or political uncertainty.

9. Accessed on 24 December 2023 at the website https://esopservices.com/articles-press/articles/esop-a-four-letter-word/

10. The risk of concentration of financial rights in the ESOP is emphasized in S corporations (Shuler, 2023). In mature ESOPs where all of the internal shares have been allocated to ICAs, the cash distributions would primarily benefit long-term participants unless the ESOP plan is set up in such a way that cash distributions are not based on share accounts but rather on external criteria (e.g. in-firm wage ratios).

11. EOF A subclass of constitutional degeneration, see Gonza (2024). Admittedly, due to the temporal nature of the degeneration problem of the ESOP model, the degeneration tendency may not be as destructive to employee ownership as degeneration in the EOF models without the ICA structure (e.g. Plywood cooperatives, see Pendleton *et al.* (2023) or Sociadades Laborales (Lowitzsch *et al*., 2017).

12. In the case of value-based ICAs (see below), the debt value rather than internal shares is designated with dates and scheduled for repurchase.

13. One could imagine a scenario where the board would not allocate any cash flow to finance the rollover, postponing the payoffs of the ICA claims, which could, in theory, maintain debt to workers over an unspecified period.

14. In Mondragon cooperatives, where there is no separate purpose vehicle holding stock, the value assigned to members is the capital value of the cooperatives themselves.

15. In this case, value-based ICAs are more closely aligned with the contemporary interpretation of the labour theory of property, which requires that the added value is appropriated by that the group that produces it, the workers of the firm (Ellerman, 2016; Wasserbauer, 2015).

16. It is also possible to argue that the value-based approach may lead to financing difficulties in times of liquidity crisis, when future-based valuation methods would reflect low cash-flow capacities. We agree with that point, which is, however, largely addressed by the rollover mechanism described in the previous section, where in low cash-flow situations, the repurchase obligation would not be

serviced. An additional point of criticism is the mismatch between ICA values and what workers could receive if they sold ESOP stock on the open market—if that value difference is high due to capital-based valuation, there could be additional pressure from the workers to sell the ESOP stock and terminate employee ownership.

17. The logic is reversed in the cases of losses, where the collective account helps to reduce losses—decline in capital value—endured through ICAs by individual workers.
18. Fiduciary duty where workers are treated as beneficiaries rather than members with governance rights could ameliorate such pressures (such seems to be the expectation of the engineers behind the EOT model in the UK).
19. The EOF model with the described structural features is currently being institutionalized through ESOP legislation in Slovenia.

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