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Retirement Income Security in India: A Comparative Assessment of the Employees' Pension Scheme, 1995 and the National Pension System

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ABSTRACT

With the ageing population, declining support from the joint family and the informality of the Indian labour market, financial security in old age has become a major public policy issue. There are currently two types of pension schemes in the organised sector. The Employees' Pension Scheme, 1995 is a partially funded defined-benefit scheme run by the Employees' Provident Fund Organisation. On the other hand, the National Pension System is a fully funded market-linked defined-contribution scheme regulated by the Pension Fund Regulatory and Development Authority. This study uses only official secondary data. This includes regulatory handbooks, parliamentary replies, statutory notifications and judicial decisions. A structured comparative study of the two schemes has been conducted on the basis of the following nine analytical dimensions: design philosophy and risk allocation, coverage, contribution architecture, benefit determination and adequacy, investment returns, portability and flexibility, taxation, survivor protection and fiscal sustainability. The analysis shows that Employees' Pension Scheme, 1995 offers certainty of pension and a minimum amount guaranteed throughout life. However, its benefit adequacy is very low. About three in five pensioners receive a pension of less than Rs 1,500 per month. Along with this, there is also an increase in actuarial stress on the scheme. National Pension System improves the possibility of increasing funds due to portability, transparency and market-linked returns. However, it carries investment risk and longevity risk on the individual. Also, mandatory annuitisation and limited participation in the informal-sector also pose some challenges to this scheme. Unified Pension Scheme was launched in 2025 under the National Pension System. Being an assured-benefit option, it is seen as an attempt to achieve some degree of synergy between these two different pension systems. Illustrative calculations reported in the paper indicate that, at the statutory wage ceiling and full contribution density, EPS 1995 replaces about 50 per cent of ceiling wages after 35 years of service but only about 25 per cent of an actual wage of Rs 30,000, and that the Rs 1,000 statutory minimum pension has lost roughly two-fifths of its real value since 2014. The study concludes that neither scheme alone ensures adequate and long-term sustainable retirement income. Therefore, parametric and structural reforms such as indexed floors, rationalised wage ceiling, default life-cycle investing and wider coverage are needed to further strengthen India's multi-pillar pension system. Because the assessment draws entirely on official secondary data and an interpretive comparative method, and because several official statistics report the National Pension System jointly with the Atal Pension Yojana, the findings are institutional and directional rather than empirical estimates of realised retirement outcomes.

Keywords: retirement income security, Employees' Pension Scheme 1995, National Pension System, defined benefit, pension reform

INTRODUCTION

India is currently undergoing a demographic transition. The impact of these changes on financial security in old age is now becoming increasingly clear. The proportion of the population aged 60 years and above is likely to increase significantly in the coming decades. At the same time, the working-age population is shrinking due to the declining fertility rate. In the past, in extended families, the same person provided financial and other support to older relatives. In addition, urbanisation and labour mobility have weakened the informal support system based on the family in old age. As a result, the responsibility for financial security after retirement is increasingly shifting to formal and institutional arrangements. In this context, it has become a policy imperative to design pension systems that are adequate, affordable and fiscally sustainable (World Bank 1994; OECD 2023).

The formal structure of retirement provision in India has evolved from two different paradigms. The first is reflected in the Employees' Pension Scheme, 1995 (hereinafter EPS 1995). It is a defined-benefit (DB) scheme. In this, the pension amount is determined on the basis of a fixed formula related to salary and length of service, and the beneficiary receives a guaranteed monthly pension for life. Administered by the Employees' Provident Fund Organisation (EPFO) under the Ministry of Labour and Employment, EPS 1995 covers salaried workers in the organised sector and is financed by a diversion of employer contributions supplemented by limited budgetary support (EPFO 2025). The second paradigm, the National Pension System (hereafter NPS), reflects the global shift towards defined-contribution (DC) design that gathered momentum after the influential multi-pillar framework advanced by the World Bank (1994) and, domestically, the recommendations of the Project OASIS committee (Project OASIS 2000). Introduced for central-government recruits in 2004 and opened to all citizens in 2009, the NPS is a fully funded, market-linked scheme regulated by the Pension Fund Regulatory and Development Authority (PFRDA) under the PFRDA Act, 2013.

These two schemes rest on opposing philosophies of who bears risk. Under EPS 1995 the sponsor ultimately the State underwrites investment and longevity risk in exchange for a modest, capped benefit. Under the NPS the individual bears market and longevity risk in exchange for the possibility of a larger, portable accumulation. This difference is not just technical. It directly affects the adequacy, predictability and equity of retirement income of crores of families. Unified Pension Scheme (UPS) was implemented from 1 April 2025. It is an assured-benefit option based on the NPS platform and is designed for central-government employees. It is worth being clear at the outset about how the three arrangements relate to one another, because they are frequently conflated. EPS 1995 and the NPS are separate, parallel schemes with different statutory bases, different regulators and different member populations. The UPS is not a third parallel scheme but an option exercised within the NPS architecture, available only to central-government employees, and it therefore leaves the position of EPS 1995 members entirely unchanged. The scheme shows an attempt to achieve synergy between these two pension systems. Therefore, a fresh comparative assessment of these two systems becomes more important (DFS 2025).

Against this backdrop, the present paper has conducted a systematic and evidence-based comparison of EPS 1995 and NPS based on secondary data obtained from authoritative and reliable sources. The contribution of this study lies in three main aspects. First, it has brought together regulatory, parliamentary and statutory information available at various places and has prepared a structured comparative framework based on nine analytical dimensions. Second, the 2025 UPS reform is viewed as an attempt to harmonize DB and DC traditions; this reform is not seen as a complete replacement for either of these systems. Third, it has suggested some parametric and structural reform options to strengthen the adequacy and sustainability of India's multi-pillar pension architecture. Fourth, it supplements the institutional comparison with a set of transparent, assumption-based quantitative adequacy indicators: replacement rates at different service lengths and contribution densities, the inflation-adjusted value of the statutory minimum pension, and a stylised projection of NPS retirement income. These indicators give the adequacy discussion an explicit quantitative anchor; they are illustrative rather than empirical, and the paper marks throughout the boundary between what the official record establishes and what follows only under stated assumptions. The further structure of this paper is as follows. The following section reviews the relevant literature. Then objectives and research questions are presented and methodology is explained. Next, the institutional architecture of both the schemes is explained and their comparative evaluation is done. Then, the findings and their policy implications are discussed. Finally, the conclusions are presented by mentioning the limitations of the study.

REVIEW OF LITERATURE

The scholarly and policy literature on pension design provides the necessary theoretical basis for this study. The World Bank (1994)'s landmark study viewed financial security in old age as a multi-pillar problem. These included redistributive, publicly financed pillar; mandatory, funded, contributory pillar and voluntary savings pillar. This framework was subsequently further refined. It included non-contributory social pension for the poor and those in the informal sector, as well as family support based on families. This led to the development of the five-pillar formulation that is currently widely used. A review of the comparative literature by OECD (2023) shows that pension systems around the world are gradually shifting from unfunded DB promises to funded DC and hybrid designs. The main reasons behind this are the increasing demographic pressure on pay-as-you-go financing and the need to protect the public budget from the government's uncertain and growing pension liabilities.

The process of pension reform in India was greatly influenced by the recommendations of the Project OASIS committee. The committee's report suggested an individual-account, DC pension scheme for unorganised workers. It also recommended a centralised recordkeeping architecture to manage it (Project OASIS 2000). These recommendations were largely incorporated into the NPS. A key issue frequently discussed in the Indian literature is the tension between the benefits of pension adequacy in DB schemes and the financial sustainability and portability of DC schemes (Asher 2009). Scholars have observed that EPS 1995, although nominally a defined-benefit scheme, is only partially funded. Also, some features of its design reduce its effectiveness. These include, in particular, the low statutory wage ceiling and the long-standing minimum pension. Due to these reasons, replacement rates decrease over time.

The second research stream is related to the study of NPS. Studies on coverage show that voluntary, contributory DC schemes are difficult to reach informal-sector workers who have no fixed income and limited access to money (Sane and Thomas 2014). Analysis of investment performance shows that market-linked returns can be higher than the rates set by the administrative system in the long run. However, this introduces sequence-of-returns risk and annuitisation risk that arises when using the accumulated funds after retirement. A part of the accumulated corpus has to be compulsorily converted into annuity. Annuity rates are often not attractive at that time. This is recognized as a significant and permanent limitation of the Indian DC model.

Despite this available literature, three important research gaps remain. First, the bulk of the available comparative discussion predates the significant regulatory changes in 2024–25. These include Supreme Court’s higher-pension judgment, NPS withdrawal and investment choice relaxations, and UPS introduction. Therefore, these recent changes are not adequately covered in comparative studies. Second, many studies have considered EPS 1995 and NPS separately. However, studies that side-by-side compare the two schemes based on the same criteria are relatively few. Third, fiscal sustainability and adequacy are rarely considered together in a single framework. The present paper focuses on all three gaps. For this, a comparative analysis based on more up-to-date, structured, and fixed criteria is conducted and for this, official secondary data is used.

Objectives And Research Questions

The four main objectives of this study are: 1. To describe and compare the institutional architecture, financing and governance of EPS 1995 and NPS. 2. To evaluate both the schemes on the basis of the same nine analytical dimensions related to post-retirement financial security. 3. To examine the adequacy, equity and fiscal sustainability of the benefits provided by both the schemes, based on the most recent official data available. 4. To identify parametric and structural reform options and to clarify the place of 2025 Unified Pension Scheme in the DB–DC debate.

Three research questions have been identified for this study. First, what are the differences in design philosophy, financing and investment and longevity risk allocation between EPS 1995 and NPS? Second, which scheme provides more adequate, predictable and equitable retirement incomes and what is the fiscal cost to the government for this? Third, what improvements can be made to further strengthen the adequacy and sustainability of India's pension system by incorporating hybrid designs like UPS?

METHODOLOGY

Research design

This study adopts a descriptive–analytical comparative design. When the subject of study is not the behavior of individuals but the structure, rules, and outcomes of different policy regimes that exist simultaneously, then comparative institutional analysis is appropriate. In this study, both schemes are examined on the basis of the same analytical grid. Therefore, their similarities, differences, and trade-offs can be systematically identified. In this study, qualitative interpretation is adopted while analyzing and quantitative approach is adopted when using official statistics. However, primary data collection or econometric estimation is not done in this study.

Data sources

In line with the Comparative-institutional design, this study has used only secondary data obtained from official and verifiable sources. These include PFRDA's statistical handbook and regulatory circulars, EPFO and Ministry of Labour and Employment (MoLE) publications and replies tabled before Parliament. Also, statutory notifications and frequently asked questions issued by Department of Financial Services (DFS), Ministry of Finance in the context of UPS have been used. In addition, relevant decisions of Supreme Court of India as well as basic policy and multilateral reports have also been referred to. Reliance on official secondary data strengthens the authenticity and replicability of this analysis. However, this approach also introduces some limitations. These are discussed in limitations and future research section.

Two comparability constraints follow directly from this reliance on published official sources, and they are flagged again at each point in the analysis where the affected figures are used. First, the PFRDA reports subscriber numbers and assets under management for the NPS and the Atal Pension Yojana (APY) on a combined basis, and a consistent scheme-level series separating the two is not available in the published sources used here. The aggregate is therefore reproduced as published, because disaggregating it would require estimates that the official record does not support. It is not, however, treated as a like-for-like comparator for EPS 1995, whose figures relate to a single scheme covering a single population. Wherever a combined figure appears, this paper states that it is combined and refrains from drawing scheme-level inferences from it. This matters because the two schemes bundled in the aggregate serve very different populations: the APY is a subsidised micro-pension aimed at low-income and largely informal workers and accounts for the great majority of the combined subscriber headcount, whereas NPS proper is concentrated among government and organised corporate employees (PFRDA 2025b). Second, official EPFO and PFRDA statistics report stocks – membership, corpus, assets under management – rather than the flow variables that adequacy analysis requires, such as contribution densities, career wage histories and realised replacement rates. Where such indicators are needed, this paper derives them from statutory parameters under stated assumptions and labels them as illustrative calculations rather than as observed outcomes.

Table 1 provides information on each analytical dimension and the major data sources used for it.

Table 1: Analytical Dimensions and Principal Secondary Data Sources

Analytical dimension	Indicators used	Principal source(s)
Design and risk allocation	DB/DC classification, guarantee, risk-bearer	Statutes; PFRDA; DFS (2025)
Coverage and eligibility	Members, entry rules, vesting	EPFO (2025); PFRDA (2025b)
Contribution architecture	Statutory rates, wage ceiling, State support	EPFO (2025); DFS (2025)
Benefit and adequacy	Formula, floor/ceiling, pension distribution	MoLE (2025)
Investment and returns	Asset classes, CAGR, administered rate	PFRDA (2025b); EPFO (2025)
Portability and flexibility	Job/geographic portability, withdrawal	PFRDA (2025b)
Taxation	Deductions, exit treatment	PFRDA (2025b); DFS (2025)
Survivor protection	Widow, child, orphan, family payout	EPFO (2025); DFS (2025)
Fiscal sustainability and scale	Corpus/AUM, disbursement, deficit	MoLE (2025); PFRDA (2025b)

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Source: Compiled by the authors. The header row is shaded for readability. DFS denotes the Department of Financial Services, Ministry of Finance; MoLE denotes the Ministry of Labour and Employment; PFRDA denotes the Pension Fund Regulatory and Development Authority; AUM denotes assets under management.

Analytical framework and scope

The comparison is made on the basis of nine dimensions given in Table 1. For each dimension, information about both the schemes is given, compared and, wherever available, evaluated using quantitative indicators based on recent official data. For this, mainly available information up to 31 March 2025 or calendar year 2025 has been used. All monetary amounts are given in Indian rupees (Rs) as per lakh–crore convention (1 lakh = 105; 1 crore = 107). The scope of this study is mainly limited to EPS 1995 and NPS. UPS has been considered as a hybrid variant wherever necessary. Old Pension Scheme and Atal Pension Yojana are mentioned only for context and background.

Institutional Architecture Of The Two Schemes

The Employees' Pension Scheme, 1995

EPS 1995 was notified on 19 November 1995 under the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, and is administered by the EPFO. Membership is effectively automatic for employees enrolled in the Employees' Provident Fund whose wages fall within the statutory framework. The scheme is financed not by an additional levy on the worker but by a diversion of the employer's existing contribution: of the employer's 12% of wages, 8.33% is channelled to the pension fund, with the balance of 3.67% retained in the provident fund. In addition, the central government contributes 1.16% of wages, subject to a wage ceiling of Rs 15,000 per month (EPFO 2025; MoLE 2025).

The EPFO has described EPS 1995 as a "defined contribution–defined benefit" scheme, reflecting the fact that although benefits are determined by a formula, all present and future obligations must be met from accumulated contributions and the returns thereon (MoLE 2025). A member becomes eligible for a superannuation pension on completing at least 10 years of pensionable service and attaining the age of 58; early pension at a reduced rate is available from age 50. The monthly pension is calculated as the product of pensionable salary and pensionable service divided by 70, where pensionable salary is the average of the last 60 months' wages an averaging period the Supreme Court affirmed in 2022 (Supreme Court of India 2022). A statutory minimum pension of Rs 1,000 per month, financed through budgetary support, has applied since 2014.

The National Pension System

The NPS is a fully funded, individual-account, defined-contribution scheme regulated by the PFRDA. It was made mandatory for central-government employees recruited on or after 1 January 2004, extended to most state governments thereafter, and opened to all citizens between the ages of 18 and 70 on a voluntary basis in 2009. Each subscriber holds a Permanent Retirement Account Number linked to two account types: a Tier-I retirement account with restricted withdrawals and a voluntary Tier-II savings account. Contributions are allocated, according to subscriber choice, across equity, corporate debt, government securities and alternative assets, and are managed by competing PFRDA-registered pension funds under an "active" or life-cycle "auto" choice (PFRDA 2025b).

For central-government subscribers the contribution comprises 10% of salary from the employee and 14% from the employer; corporate and all-citizen subscribers contribute on flexible terms. At exit on superannuation, the subscriber may withdraw a lump sum and must annuitise the remainder to secure a lifelong income, although the 2025 amendment to the exit and withdrawal regulations reduced the mandatory annuitisation threshold for non-government subscribers, materially increasing liquidity at retirement (PFRDA 2025b). The NPS is distinguished by portability across employers and locations, low administrative cost, online transparency and market-linked returns; it does not, however, guarantee any particular benefit level.

The emergence of the Unified Pension Scheme (2025)

The Unified Pension Scheme was implemented from 1 April 2025. It was launched as an option for central-government employees under the NPS framework and is considered to be the most significant pension reform during the study period (DFS 2025). UPS guarantees an inflation-indexed payout of 50% of the average basic pay of the previous 12 months to employees with at least 25 years of qualifying service. Employees with less service period get a standardized benefit accordingly. Also, a minimum pension of Rs 10,000 per month is guaranteed after completing 10 years of service. The financing of this scheme includes 10% employee contribution, 10% government contribution equivalent to it and an estimated additional 8.5% government contribution for guarantee pool. Thus, by adding an assured, DB-style benefit to the fund-based and individual-account NPS platform, UPS has deliberately hybridised the two pension systems studied in this paper. According to official figures, 1,22,123 central-government employees had opted for UPS as on 30 November 2025 (Ministry of Finance 2025).

Because the scheme has been in operation only since April 2025, a clear distinction must be drawn between what is currently documented and what remains an expectation. What is documented is the design: the gazette notification and the associated rules establish the benefit formula, the minimum guarantee, the contribution rates and the guarantee-pool arrangement, and the opt-in figure reported above is an officially recorded administrative statistic (DFS 2025; Ministry of Finance 2025). What is not yet documented is performance. No cohort has retired under the scheme, no realised replacement rate can be observed, the adequacy of the guarantee pool has not been tested across an actuarial cycle, and the steady-state take-up rate among eligible employees is unknown; the opt-in figure represents a small fraction of the eligible central-government workforce and may not prove representative. Statements in this paper about how the UPS is likely to perform are therefore expectations derived from its stated design rather than findings, and are marked as such wherever they appear. It should also be noted that the UPS does not extend to EPS 1995 members or to state-government and private-sector employees, so its introduction alters the balance between defined-benefit and defined-contribution provision only within the central-government segment.

This makes the UPS a hybrid variant within the architecture studied here rather than a replacement for either scheme compared in this paper.

Comparative Assessment

Design philosophy and the allocation of risk

The most fundamental difference between the two schemes is who bears the risk. EPS 1995 is a benefit-led design. In this, the pension benefit is pre-determined based on a formula. Therefore, if the expected return on investment is not achieved or if people's life expectancy increases, the financial impact mainly falls on the sponsor of the scheme. In contrast, NPS is a contribution-led design. In this, the contribution amount is fixed; however, the risk arising from market fluctuations and annuity pricing at the time of retirement mainly falls on the subscriber. Figure 1 shows the major pension schemes in India in a ranking from pure defined benefit to pure defined contribution. In pure defined benefit systems, the state or employer bears the risk, while in pure defined contribution systems, this risk falls on the individual. In this ranking, EPS 1995 is in the intermediate, contributory-DB position. UPS is closer to the DB end due to its guaranteed payout and State-financed guarantee pool. NPS is at the DC end.

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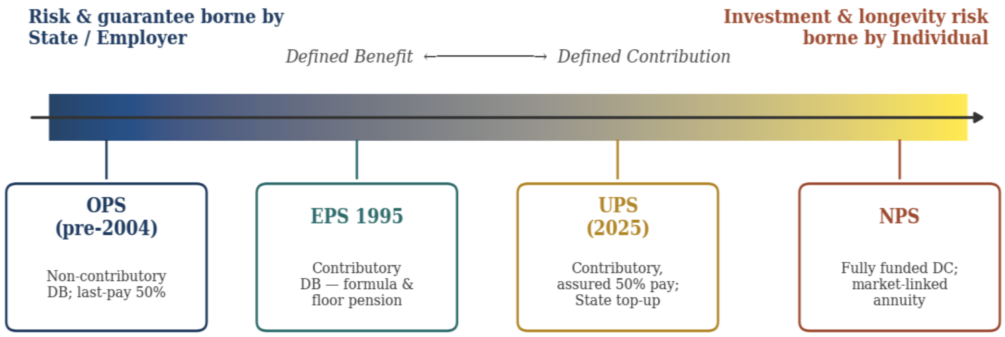
Figure 1: Risk-bearing Typology of Indian Formal-sector Pension Arrangements along the Defined-benefit–Defined-contribution Continuum



Source: Prepared by the authors from the statutory provisions of the Employees' Pension Scheme, 1995, the Pension Fund Regulatory and Development Authority Act, 2013, and DFS (2025). The figure is a conceptual schematic and is not drawn to scale.

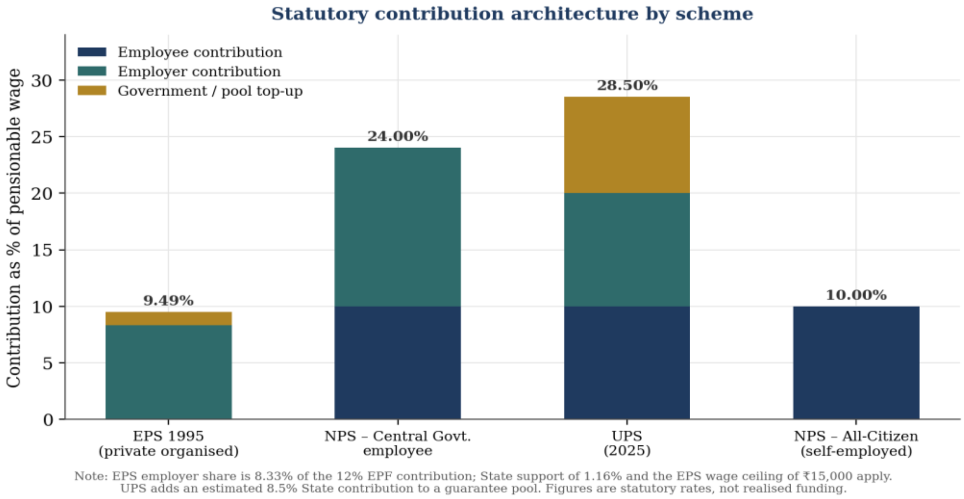
Coverage and eligibility

Coverage differs markedly in both scale and reach. EPS 1995 is confined to the organised sector: it is tied to formal employment covered by the Employees' Provident Fund and excludes the self-employed and most informal workers. As on 31 March 2025 the scheme reported 5,38,63,699 contributory members and disbursed pensions to roughly 0.8 crore beneficiaries (MoLE 2025). The NPS, by contrast, is open to any citizen and to overseas citizens of India, and is portable across employment types. Official statistics report the NPS jointly with the Atal Pension Yojana, and on that combined basis over nine crore subscribers were recorded in 2025 (PFRDA 2025b). This figure is reproduced here as published, because the sources used do not provide a consistent disaggregated series, but it is not a scheme-level counterpart to the EPS 1995 membership figure and is not offered as a direct comparison with it. The Atal Pension Yojana is a separate, subsidised micro-pension paying a guaranteed Rs 1,000 to Rs 5,000 a month to low-income and largely informal workers, and it accounts for the great majority of the combined headcount; NPS proper, whose membership is concentrated in the government and organised corporate sectors, is substantially smaller (PFRDA 2025b). The defensible inference from the two sets of figures concerns the relative reach of the wider PFRDA-regulated architecture, not the relative size of the two schemes compared in this paper. However, the voluntary nature of NPS means that coverage among informal workers is still low compared to the larger working class. The literature has attributed this to income volatility and liquidity constraints (Sane and Thomas 2014). There is also a difference in vesting between the two schemes. EPS 1995 requires a minimum of 10 years of service to qualify for a pension. In contrast, in NPS, the member is entitled to a corpus accumulated from the very first contribution.

Contribution architecture

The financing methods of both the schemes explain their different structures. EPS 1995 does not require separate contributions from the employee towards pension. The scheme is funded by 8.33% employer share and 1.16% State contribution. Both these contributions are subject to Rs 15,000 wage ceiling. In contrast, NPS has 10% of its salary contributed by government subscribers and 14% contributed by the employer. There is no mandatory lower wage ceiling for this amount to be deposited. UPS also has an additional State contribution for guarantee pool. Figure 2 shows the statutory contribution rates of both the schemes. This leads to two important conclusions. First, EPS 1995 is limited in rupee terms by the wage ceiling. This puts a structural limit on the growth of the corpus accumulated for high-income employees. Secondly, since the relatively high contribution rates in NPS and UPS are not subject to a lower wage ceiling, other things being equal, these schemes are more likely to generate large accumulation.

Figure 2: Statutory Contribution Architecture across the Employees' Pension Scheme, 1995, the National Pension System and the Unified Pension Scheme, as a Percentage of Pensionable Wage

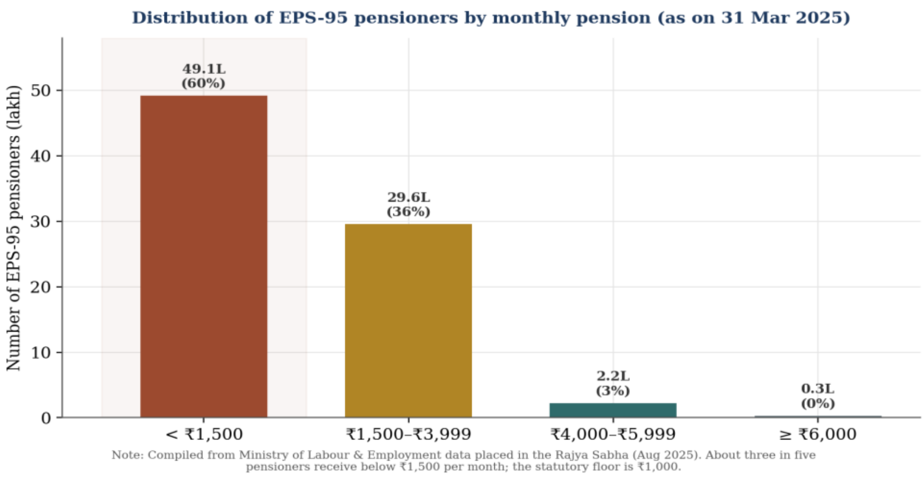


Source: Prepared by the authors from EPFO (2025), MoLE (2025), PFRDA (2025b) and DFS (2025). The EPS employer share is 8.33% of the employer's 12% Employees' Provident Fund contribution; State support of 1.16% and the Rs 15,000 wage ceiling apply. The UPS adds an estimated 8.5% State contribution to the guarantee pool. Figures are statutory rates, not realised funding.

Benefit determination and adequacy

Benefit adequacy is the biggest weakness of EPS 1995. For members who have not opted for the higher-pension option, the pensionable salary is limited to the wage ceiling. Also, the statutory minimum has remained at Rs 1,000 since 2014. Therefore, the actual value of pension has been steadily decreasing as inflation increases. The data related to the distribution of benefits also clearly shows this problem. As per the official data as on 31 March 2025, about 49.15 lakh pensioners were getting pension of less than Rs 1,500 per month and about 80.9 lakh pensioners were getting pension of less than Rs 6,000 (MoLE 2025). Figure 3 shows this distribution. Measured against the Rs 15,000 wage ceiling that defines the scheme's own contribution base, or against prevailing statutory minimum wages, the pensions actually received by the majority of beneficiaries fall well short of any subsistence replacement benchmark; the illustrative indicators presented at the end of this section quantify the size of that shortfall. Supreme Court's 2022 judgment gave the option to eligible members to calculate pension on the basis of actual salary. This has given relief to some members. However, about 17.49 lakh applications have been filed for this option, which has not changed the situation of a large number of other pensioners (Supreme Court of India 2022; MoLE 2025).

Figure 3: Distribution of Employees' Pension Scheme, 1995 Pensioners by Monthly Pension Slab as on 31 March 2025



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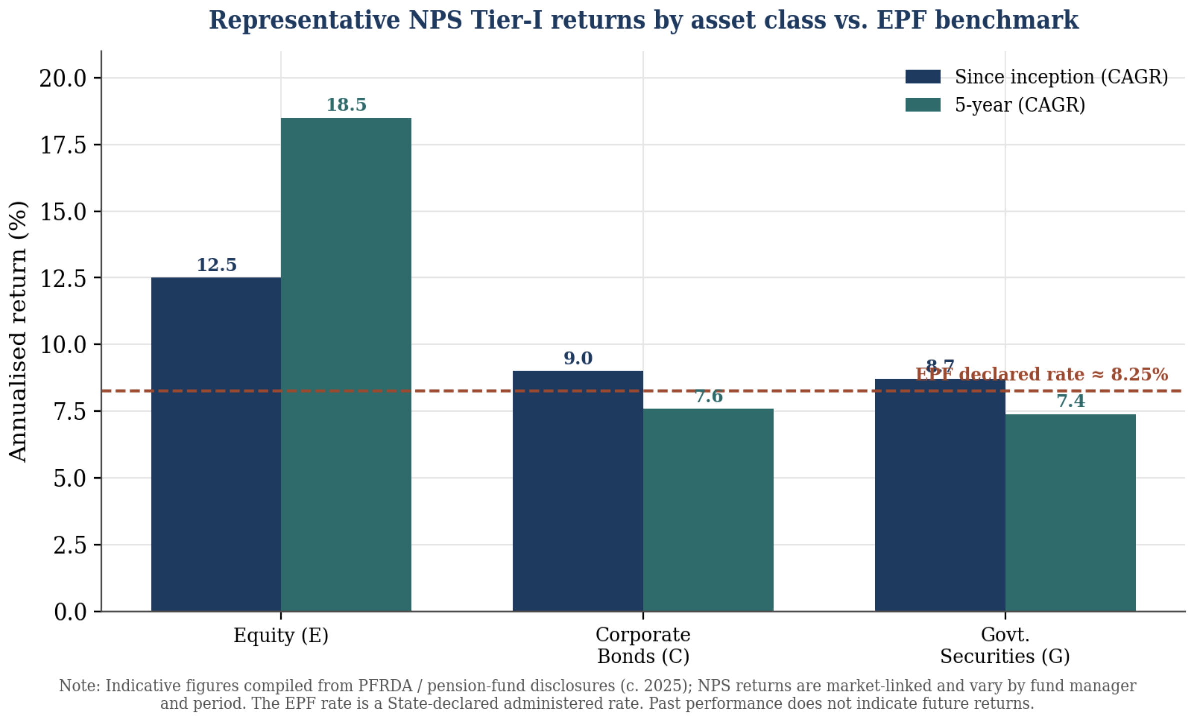
Source: Prepared by the authors from MoLE (2025), being data placed before the Rajya Sabha in August 2025. Shares are of all EPS 1995 pensioners as on 31 March 2025; the statutory floor is Rs 1,000 per month.

The NPS makes no adequacy promise: the eventual pension depends on the accumulated corpus, the asset allocation, the sequence of returns and the annuity rate at retirement. This confers upside potential but also downside risk, and it renders the replacement rate uncertain until the point of exit. The UPS is designed precisely to remove this uncertainty for government employees by assuring 50% of final average pay, and thereby restores the predictability that the NPS sacrifices at the cost of a renewed, if funded, State guarantee (DFS 2025).

Investment returns and risk

Because EPS 1995 is a formula-based DB scheme, its members do not receive an investment return in the usual sense; the fund's earnings accrue to the pool rather than to individual accounts. The provident-fund benchmark most familiar to organised-sector workers is the administered Employees' Provident Fund rate, which has been declared in the vicinity of 8.25% in recent years. NPS returns, by contrast, are market-linked and vary by asset class and fund manager. Long-run disclosures indicate that NPS equity schemes have delivered double-digit annualised returns since inception, while government-securities and corporate-debt schemes have delivered returns broadly comparable to, and at times above, the administered rate (PFRDA 2025b). Figure 4 presents representative figures. The comparison illustrates the central DC trade-off: higher expected accumulation in exchange for volatility and the risk of unfavourable timing near retirement.

Figure 4: Representative National Pension System Tier-I Returns by Asset Class Relative to the Administered Employees' Provident Fund Benchmark



Source: Prepared by the authors from PFRDA (2025b) and EPFO (2025). Figures are indicative: NPS returns are market-linked and vary by fund manager and period, while the Employees' Provident Fund rate is a State-declared administered rate. Past performance does not indicate future returns.

Portability, flexibility and withdrawal

The NPS was designed for a mobile labour market. A single account follows the subscriber across employers and locations, and the 2025 liberalisation of exit rules reducing mandatory annuitisation for non-government subscribers and permitting systematic withdrawals has increased flexibility at decumulation (PFRDA 2025b). The Multiple Scheme Framework introduced in October 2025 further widened choice by allowing subscribers

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to hold several schemes under one identity (PFRDA 2025a). EPS 1995 is comparatively rigid: benefits are payable only on satisfying the 10-year vesting and age conditions; members with shorter service receive a withdrawal benefit rather than a pension; and there is no individual account to port. This rigidity protects against premature depletion of retirement savings but reduces adaptability for workers with fragmented careers.

Taxation

Both the schemes get tax concessions, but their taxation regime is different. Contributions to NPS are eligible for tax deduction under Sections 80CCD(1), 80CCD(1B) and 80CCD(2) of the Income-tax Act. A large portion of the corpus accumulated at the time of retirement can be withdrawn tax-free, while the income from the annuitised portion is taxed as income on receipt (PFRDA 2025b). The additional Rs 50,000 tax concession available under Section 80CCD(1B) is a special incentive for voluntary NPS saving. Benefits under EPS 1995 are taxed under the broader Employees' Provident Fund tax framework. However, the pension amount is taxable as income in the hands of the beneficiary. The government has clarified that the tax treatment applicable to NPS is also applicable to UPS, with necessary modifications (DFS 2025).

Survivor and family protection

EPS 1995 provides relatively comprehensive survivor benefits to the family after the death of the member. These include widow or widower pension, children's pension and orphan pension subject to the terms and conditions of the scheme (EPFO 2025). This built-in protection for the family is an important feature of DB design. In contrast, NPS survivor protection depends on the accumulated corpus and the type of annuity chosen by the member at the time of retirement. Joint-life annuities can be used to provide benefits to the surviving spouse. However, the exercise of such an option and the cost thereof is the responsibility of the member. UPS, however, provides for a fixed family payout of 60% of the member's pension to the surviving spouse. This is in line with its DB orientation (DFS 2025).

Fiscal sustainability and scale

Both the schemes pose different fiscal questions to the government. EPS 1995 has a clear and ongoing fiscal responsibility due to 1.16% State contribution and minimum-pension support. Official replies placed before Parliament record that the scheme's actuarial valuation shows a deficit, that is, that the present value of accrued pension liabilities exceeds the value of the fund, and successive replies have cited this position when explaining why the statutory minimum pension has not been revised (MoLE 2025). The claim made here is accordingly the limited one that the official record itself reports an actuarial deficit and treats it as a constraint on benefit enhancement; this paper does not independently estimate the magnitude of that deficit, which would require the underlying actuarial valuation. As on 31 March 2025 the EPS corpus stood at around Rs 9.93 lakh crore against annual pension disbursement of around Rs 23,027 crore (MoLE 2025). In contrast, NPS is a fully funded and individual-account scheme, so the government does not have unlimited financial responsibility for future pensions. The employer contribution paid in respect of government employees is its principal recurring fiscal commitment. NPS and the Atal Pension Yojana together held assets under management of around Rs 16 lakh crore in 2025 (PFRDA 2025b). As with the subscriber figures, this is a combined total that the published sources do not disaggregate; because it includes the assets of a separate micro-pension scheme, and because it accumulates in individual accounts rather than in a single pooled fund, it is not a like-for-like comparator for the EPS corpus. Figure 5 accordingly places the two sets of figures side by side as indicators of relative scale within the pension architecture rather than as a direct scheme-to-scheme comparison. UPS again creates a contingent State liability on the government through guarantee pool. However, its funded structure is designed to manage this financial liability more effectively than the completely unfunded DB promise.

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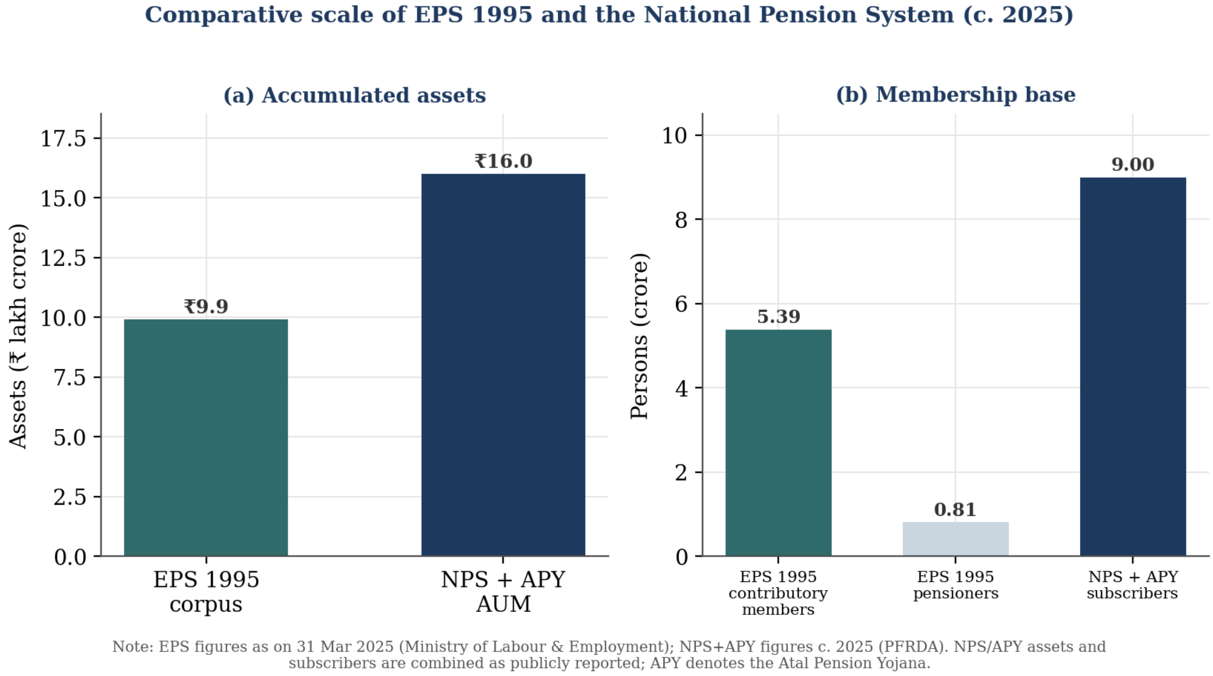
Figure 5: Comparative Scale of the Employees' Pension Scheme, 1995 and the National Pension System by Accumulated Assets and Membership, 2025



Source: Prepared by the authors from MoLE (2025) and PFRDA (2025b). EPS 1995 figures are as on 31 March 2025 and relate to that scheme alone; NPS and APY assets and subscribers are combined as publicly reported and cannot be disaggregated from these sources. The panels are therefore not directly comparable and should be read as indicators of relative scale rather than as a like-for-like comparison. APY denotes the Atal Pension Yojana.

Table 2: Structured Comparison of the Employees' Pension Scheme, 1995 and the National Pension System

Dimension	**EPS 1995**	**National Pension System**
Design type	Contributory defined benefit (partially funded)	Fully funded defined contribution
Regulator / administrator	EPFO, Ministry of Labour and Employment	PFRDA, under the PFRDA Act, 2013
Risk-bearer	Sponsor / State	Individual subscriber
Coverage	Organised-sector Employees' Provident Fund members	All citizens (18–70); portable
Employee contribution	Nil (separate)	10% (government); voluntary otherwise
Employer / State input	8.33% employer + 1.16% State	14% employer (government)
Wage ceiling	Rs 15,000 per month	No binding ceiling on accumulation
Benefit basis	(Pensionable salary × service) / 70	Corpus + annuity (market-determined)
Minimum benefit	Rs 1,000 per month (since 2014)	None guaranteed
Vesting	10 years of service	From first contribution

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Returns	Formula-based; no individual return	Market-linked; asset-class dependent
Withdrawal / exit	Pension at 58; limited flexibility	Lump sum + annuity; liberalised (2025)
Survivor benefits	Widow, child, orphan pension	Depends on annuity choice
Fiscal exposure	Recurring support; actuarial deficit	Funded; limited exchequer liability

Source: Compiled by the authors from EPFO (2025), MoLE (2025), PFRDA (2025b) and DFS (2025). "Government" denotes central-government subscribers.

Table 3: Selected Quantitative Indicators, 2025

Indicator	**Value**	**Source**
EPS 1995 contributory members (31 March 2025)	≈ 5.39 crore	MoLE (2025)
EPS 1995 pension corpus (31 March 2025)	≈ Rs 9.93 lakh crore	MoLE (2025)
EPS 1995 annual pension disbursement (2023–24)	≈ Rs 23,027 crore	MoLE (2025)
EPS 1995 pensioners receiving less than Rs 1,500 per month	≈ 49.15 lakh	MoLE (2025)
EPS 1995 statutory minimum pension	Rs 1,000 per month	MoLE (2025)
NPS and APY assets under management (2025)	≈ Rs 16 lakh crore	PFRDA (2025b)
NPS and APY subscribers (2025)	> 9 crore	PFRDA (2025b)
UPS assured payout (≥ 25 years' service)	50% of final average pay	DFS (2025)
UPS opt-ins (30 November 2025)	1,22,123	Ministry of Finance (2025)

Note: APY denotes the Atal Pension Yojana. NPS and APY assets and subscribers are reported jointly in official sources and are shown here as published; they are not scheme-level counterparts to the EPS 1995 figures in the same table, which relate to that scheme alone.

Quantitative indicators of adequacy: illustrative estimates

The comparison so far has drawn on stocks and administrative counts, which are the indicators the official record reports directly. Adequacy, however, is a flow concept: what matters to a retiring worker is the proportion of pre-retirement income that the pension replaces, and the real value of that pension over the remaining lifetime. Indian official sources do not publish realised replacement rates, contribution densities or inflation-adjusted pension series for either scheme. This subsection therefore derives a small set of indicators from statutory parameters under explicitly stated assumptions. They are illustrative calculations intended to give the adequacy discussion a reproducible quantitative anchor; they are not empirical estimates of realised outcomes and should not be read as such.

For EPS 1995 the statutory formula – pensionable salary multiplied by pensionable service and divided by 70 – permits direct calculation. A member retiring after 35 years of pensionable service at the Rs 15,000 wage ceiling receives Rs 7,500 a month, a gross replacement rate of 50 per cent measured against the ceiling wage. Measured against actual earnings the ceiling binds: the same pension replaces 30 per cent of an actual wage of Rs 25,000 and 25 per cent of Rs 30,000, and the rate continues to fall as wages rise. Shorter careers compress the outcome further, with 25 years of service at the ceiling yielding Rs 5,357 a month and 20 years yielding Rs 4,286.

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Contribution density operates through the same channel: because pensionable service counts only periods of contributory employment, a worker who contributes for 70 per cent of a 35-year working life accumulates about 24.5 years of pensionable service and a replacement rate of roughly 35 per cent of ceiling wages.

The erosion of the statutory floor can be quantified in the same transparent way. The Rs 1,000 minimum pension has been unchanged since 2014. At an assumed average consumer price inflation of 5 per cent a year over the eleven years to 2025, its value in 2014 prices is about Rs 585; at 4 per cent it is about Rs 650 and at 6 per cent about Rs 527. On any of these assumptions the floor has lost between roughly a third and roughly a half of its purchasing power – about two-fifths at the mid-point – without any change in the nominal statutory entitlement. This is the arithmetic underlying the case for automatic indexation made later in the paper.

For the NPS no comparable formula exists, because the benefit depends on accumulation and on annuity pricing at exit. A stylised projection is nonetheless informative. Consider a central-government subscriber contributing the statutory 24 per cent of salary (10 per cent employee and 14 per cent employer) over a 35-year career, with wages growing at 6 per cent a year and the fund earning a nominal 8 per cent. The accumulated corpus at retirement is approximately 11.7 times final annual salary. Annuitised in full at a 6 per cent annuity rate, it would replace about 70 per cent of final salary; if only the mandatory 40 per cent is annuitised and the balance taken as a lump sum, the annuity income replaces about 28 per cent, with the remainder of retirement income depending on how the lump sum is deployed. The projection is sensitive to the return assumption: at 7 per cent the full-annuitisation rate falls to about 59 per cent and at 9 per cent it rises to about 84 per cent. Table 4 collects these indicators.

Table 4: Illustrative Indicators of Pension Adequacy under the Employees' Pension Scheme, 1995 and the National Pension System

Indicator	**Illustrative value**	**Basis and stated assumptions**
EPS 1995 replacement rate, 35 years' service, at the wage ceiling	50% (Rs 7,500 per month)	Statutory formula; measured against the Rs 15,000 ceiling wage
EPS 1995 replacement rate, 35 years' service, actual wage Rs 30,000	25%	Statutory formula; ceiling binding on pensionable salary
EPS 1995 replacement rate, 25 years' service, at the ceiling	35.7% (Rs 5,357 per month)	Statutory formula
EPS 1995 replacement rate at 70% contribution density over a 35-year career	≈ 35% of ceiling wage	24.5 years of pensionable service credited
Real value in 2014 prices of the Rs 1,000 minimum pension, 2025	≈ Rs 585 (range Rs 527–650)	Assumed average CPI inflation of 5% (range 4–6%), 2014–2025
NPS corpus at retirement	≈ 11.7 × final annual salary	24% contribution, 35 years, 8% nominal return, 6% wage growth
NPS replacement rate, full annuitisation of corpus	≈ 70%	As above; annuity rate of 6%
NPS replacement rate, mandatory 40% annuitisation	≈ 28%	As above; balance taken as lump sum, excluded from the rate
NPS replacement rate, full annuitisation, 7% and 9% returns	≈ 59% and ≈ 84%	Sensitivity of the projection to the return assumption

Source: Authors' calculations from the statutory parameters reported in EPFO (2025), MoLE (2025), PFRDA (2025b) and DFS (2025). All figures are illustrative and assumption-based; they are not drawn from official statistics and are not empirical estimates of realised retirement outcomes. Replacement rates are gross of tax and are measured against final monthly wage. The EPS 1995 calculations assume that the member has not exercised the higher-pension option available following Supreme Court of India (2022). The NPS contribution rate of 24 per cent applies to central-government subscribers; voluntary all-citizen subscribers typically contribute less, and their projected replacement rates would be correspondingly lower.

Three points follow, each subject to the caveat that these are assumption-driven figures rather than observations. First, on plausible assumptions the NPS can deliver higher replacement rates than EPS 1995 for the same worker, principally because its contribution base is uncapped while the EPS base is frozen at Rs 15,000. Second, the NPS advantage is contingent in a way the EPS benefit is not: the spread between the 7 per cent and 9 per cent return scenarios exceeds the entire EPS replacement rate at the ceiling, which is the risk transfer identified earlier expressed in quantitative terms. Third, the decumulation choice matters as much as accumulation, since the difference between full and mandatory-minimum annuitisation is roughly 42 percentage points of replacement rate; the design of the annuity market is therefore a first-order adequacy question rather than a technical detail. All these calculations assume uninterrupted contributions, no leakage through premature withdrawal and no change in statutory parameters, so realised outcomes for workers with intermittent formal employment will be materially lower under both schemes.

DISCUSSION

The comparison yields a clear but nuanced picture. The value of EPS 1995 lies in what it guarantees: a predictable, lifelong benefit with built-in survivor protection. Its weakness is the level at which that guarantee is set. Because neither the wage ceiling nor the minimum pension is indexed, the promise erodes in real terms even when it is honoured in full, and the illustrative calculations above place the resulting replacement rates well below any subsistence benchmark for the majority of beneficiaries (MoLE 2025). The scheme's partial funding and the actuarial deficit reported in official replies further constrain the State's capacity to raise benefits without additional budgetary support.

The NPS reverses this profile. An uncapped contribution base, market-linked returns and portability address the structural weaknesses of EPS 1995 and suit a mobile, formalising labour market. The costs are equally clear: no adequacy floor, investment and longevity risk borne by the individual, and, despite the 2025 liberalisation, an annuity market whose pricing subscribers cannot control. The spread between the return scenarios in Table 4 is the measure of that uncertainty. For informal-sector workers, the voluntary DC model has so far failed to achieve broad coverage, echoing long-standing findings in the literature (Sane and Thomas 2014).

Read together, the two schemes reveal a policy dilemma rather than a clear winner. The virtues of one are the vices of the other: EPS 1995 guarantees but underpays and strains public finances; the NPS empowers accumulation but withholds certainty. The 2025 UPS is best understood as an institutional response to exactly this dilemma, and two claims about it must be kept apart. The first concerns design and is documented: the notified rules assure a defined benefit while retaining a funded, individual-account structure, combining on paper the predictability of DB design with the fiscal discipline of DC funding (DFS 2025). The second concerns performance and is not yet documented: whether that synthesis proves durable depends on the adequacy of the guarantee pool across a full actuarial cycle and on eventual take-up, neither of which can be assessed from the scheme's first months of operation. The 1.22 lakh opt-ins reported by late 2025 are a factual administrative count and are modest relative to the eligible workforce, but they are too early in the scheme's life to be read as evidence of its steady-state acceptance (Ministry of Finance 2025). Claims about UPS outcomes in this paper are accordingly framed as expectations conditional on design, and it should be borne in mind that the scheme applies only to central-government employees and leaves the position of EPS 1995 members unchanged.

These conclusions should be read with the evidentiary basis of the study clearly in view. The comparison rests entirely on official secondary sources and on an interpretive institutional method, and three consequences follow. First, the adequacy findings for EPS 1995 rest on a published distribution of pensioners by pension slab. That is solid evidence about what is currently paid, but it says nothing about the wage histories or contribution densities that produced those pensions, and the replacement rates in Table 4 fill that gap only by assumption. Second, the scale comparison between the two schemes is unavoidably imprecise, because the NPS figures are published jointly with the Atal Pension Yojana and cannot be disaggregated from the sources used here. Third, the fiscal argument reproduces the actuarial position as officially reported rather than testing it, since the underlying valuation is not in the public domain. None of this undermines the institutional comparison, which is what the method is designed to support. It does mean that the claims advanced here about adequacy and sustainability are directional conclusions about scheme design, and that establishing their magnitude would require contribution-level microdata that is not currently published.

Subject to that qualification, the comparison points consistently towards reform of both schemes rather than towards a choice between them, and it is to those reforms that the paper now turns.

POLICY IMPLICATIONS AND RECOMMENDATIONS

The analysis supports a set of parametric and structural reforms aimed at strengthening adequacy without compromising sustainability. These recommendations are directional: they follow from the design features documented above, while the secondary-data basis of this study does not permit calibration of the precise magnitudes involved.

- **Revise and index the EPS floor and ceiling:** The statutory minimum pension and the Rs 15,000 wage ceiling should be raised to reflect wage growth and inflation, and thereafter indexed automatically, so that the real value of the guarantee does not erode between discretionary revisions.

- **Strengthen NPS decumulation:** Building on the 2025 exit reforms, the annuity market should be deepened and diversified, and inflation-protected or consumer-price-indexed payout options developed, to reduce the longevity and pricing risk borne by subscribers at retirement.

- **Default subscribers into age-appropriate life-cycle funds:** Well-designed auto-choice defaults can capture the equity premium for younger subscribers while de-risking portfolios as retirement approaches, improving expected adequacy without demanding financial sophistication.

- **Expand informal-sector coverage:** Matching contributions, auto-enrolment and simplified onboarding extending the logic of the Atal Pension Yojana are needed to draw informal workers into the funded pillar, addressing the coverage gap that the voluntary DC model has left open.

- **Monitor the UPS guarantee pool:** As a contingent State liability, the UPS pool warrants transparent actuarial reporting to ensure that its assured benefit remains sustainably funded rather than becoming an unfunded promise by another name. This is particularly important while the scheme is too new for its funding position to be assessed from experience.

- **Publish disaggregated and adequacy-relevant statistics:** Scheme-level reporting that separates the NPS from the Atal Pension Yojana, together with published series on contribution density, career wage histories and realised replacement rates, would allow the adequacy and sustainability questions raised here to be settled empirically rather than assessed under stated assumptions. The absence of such data is itself a constraint on evidence-based pension policy.

Collectively, these measures move India towards a coherent multi-pillar system in which a strengthened, adequately indexed contributory floor, a well-governed funded DC pillar and a fiscally disciplined assured-benefit option are complementary rather than competing (World Bank 1994; OECD 2023).

Limitations And Future Research

Several limitations qualify these findings, and they bear directly on how strongly the conclusions can be stated. First, the study relies wholly on secondary data. Although the sources are authoritative, some official figures are provisional or unaudited, and official reporting is organised around administrative stocks rather than the flow variables that adequacy analysis requires. Second, the joint reporting of NPS and Atal Pension Yojana aggregates prevents precise scheme-level comparison of membership and assets; the combined figures used in this paper are reproduced as published for that reason, and no disaggregated series could be constructed from the sources available. Third, the quantitative indicators in Table 4 are illustrative calculations derived from statutory parameters under stated assumptions about service length, contribution density, wage growth, investment returns and annuity rates. They are intended to make the adequacy comparison explicit and reproducible; they are not empirical estimates of realised replacement rates, and different assumptions would yield materially different figures, as the sensitivity ranges reported alongside them show. Fourth, the comparative-institutional method is interpretive: it does not model behavioural responses, contribution densities or cohort-specific replacement rates, and it cannot establish causal relationships between scheme design and retirement outcomes. Fifth, the fiscal analysis reproduces the actuarial position as reported in official replies rather than independently verifying it, because the underlying valuations are not published. Sixth, the very recent UPS reform has a short data history, so all statements about its take-up, funding adequacy and eventual performance are preliminary and conditional on its stated design. Future research could estimate lifetime replacement rates from contribution-level microdata under alternative return and contribution scenarios, evaluate the distributional incidence of the higher-pension option following the 2022 judgment, and track UPS enrolment and funding as longer time series become available.

CONCLUSION

This paper has compared India's two dominant formal-sector pension architectures the defined-benefit EPS 1995 and the defined-contribution NPS across nine analytical dimensions using official secondary data. EPS 1995 offers guaranteed, lifelong income and comprehensive survivor protection but is undermined by a low wage ceiling, a stagnant minimum pension and mounting actuarial stress, leaving the majority of its pensioners with inadequate benefits. The NPS improves portability, transparency and accumulation potential but transfers risk to the individual and has struggled to reach the informal workforce. Neither scheme, on its own, secures adequate and sustainable retirement income for the population it serves. The 2025 Unified Pension Scheme signals a deliberate convergence of the two paradigms, seeking the adequacy of defined benefit within the funded discipline of defined contribution; whether it achieves that in practice cannot yet be judged, since the scheme is new, applies only to central-government employees, and has no retired cohort against which its performance can be measured. These conclusions rest on official secondary data and on an interpretive comparative method, supplemented by illustrative calculations whose assumptions are stated in full. They are therefore claims about the design and direction of the two schemes rather than measurements of realised retirement outcomes, and testing them would require contribution-level microdata and disaggregated scheme-level statistics that are not presently published. Realising retirement income security for India's ageing population will require not a choice between these models but their thoughtful integration through indexed floors, strengthened decumulation, sensible defaults and expanded coverage within a genuinely multi-pillar system.

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