Special Section: Public Pension Expenditures in Pakistan – The Need for Reforms[1]

Public sector pension expenditure in Pakistan has risen rapidly over the past decade. Retrospective increments, alongside generous commutation and restoration facilities, are fueling early retirements of civil servants. This, coupled with the highest replacement rate in South Asia, growing headcount of government employees, and the unfunded nature of pension payments, is making the current structure unsustainable in Pakistan. While limited fiscal space is a major reason why the accelerating pension expenditure is worrisome, improvements in the public pension framework via several parametric and systemic reforms, such as proper indexation of increments, elimination of retrospective increases and rationalization of survivorship benefits, would go a long way towards addressing this concern. Lastly, measures that are introduced must also be periodically reviewed to ensure timely policy interventions and a sustainable functioning of the pension system.

S1.1 Introduction

Pension payments are an important source of old-age income support and serve as a crucial poverty prevention mechanism. However, since the turn of the century, pension reforms have come to take a central stage in the policymaking sphere across the world. While ageing populations, low fertility rates and high dependency ratios are increasing pension expenditure in most advanced economies, structural problems and limited fiscal space is making such spending unsustainable in some developing economies as well.

According to the United Nations World Population Prospects 2019, the share of population older than 65 in advanced economies is estimated to increase from 19.3 percent in 2020 to around 26.9 percent by 2050. At the same time, the proportion of working age population (20-64) is projected to decline from 58.9 percent to 53 percent. This means that even funded pension schemes of advanced economies will come under pressure. According to Amaglobeli et al. (2019), this is mainly because of two factors.[2] First, increases in life expectancy extend the duration of pension support. Second, lower than expected investment returns (owing to very low interest rates, for instance) could lead to a funding shortfall. As a result, Lee and Mason (2017) project that tax expenditures would have to increase around 26 percent, 11 percent, and 14-28 percent between 2010 and 2050 in the US, Japan, and European countries, respectively, just to offset the increased cost of ageing population.[3] It is pertinent to note that this would be on top of the already growing pension liabilities. In the US, for example, the retirement of the baby boomer generation workers and suppressed investment returns in the aftermath of the Global Financial Crisis

[1] This chapter draws heavily from our discussions with the officials from the Ministry of Finance, Office of the Accountant General of Pakistan. Punjab Pension Fund, and provincial Accountant General Offices of Punjab, Sindh, and KPK.

[2] Amaglobeli, D., Chai, H., and Dabla-Norris, E. (2019). *The Future of Saving: The Role of Pension System Design in an Aging World*. IMF Staff Discussion Note SDN/19/01. Washington, DC: International Monetary Fund.

[3] Lee, R., and Mason, A. (2017). "Cost of Aging". *Finance & Development*, 54(1), 7.

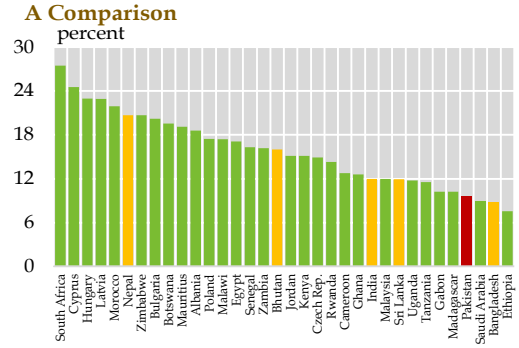
have already put sustainability of pension payments into question and necessitated the need to focus on reforms (Munnel et al. 2010).[4] By one estimate, the obligations of public pension funds exceed their assets by around US$ 4 trillion in the country (Rauh, 2017).[5]

Public pension expenditures are also increasingly becoming a fiscal burden in developing economies (Palacious and Whitehouse, 2006).[6] Pension payments as a percent of tax revenue average around 15.4 percent in emerging and developing economies for which comparable data is available.[7] Relatively limited fiscal space means that even pension payments of smaller magnitudes become difficult to sustain in such economies.

In Pakistan, too, the absolute level of old-age income support coverage is on the lower side. For instance, the pensions to GDP ratio stands at just 2.2 percent,[8] while the proportion of the population participating in programs that provide old-age contributory pensions, health and/or social security insurance is only 5.9 percent – much lower than the developing economies average of 20.3 percent.[9] The old age dependency ratio – the number of people aged 65 and above compared to the number of working age people – is 8.5 percent, and is expected to rise only marginally to 11.2 percent by 2040. But even with such a low pension coverage in the country, reforms to public pensions have become unavoidable in Pakistan in the face of the worrying acceleration in the associated public sector spending witnessed over the last decade. This is principally because public pensions are of an unfunded nature and thus are burdening the already tight fiscal revenue situation (**Figure S1.1a**). Specifically, the pension expenditure at the federal level has risen by a CAGR of 18 percent in Pakistan during FY11-21. Provincial pension expenditure has also witnessed a similar surge (**Figure S1.1b**). Within consolidated pension expenditures, civil pensions (including federal and provincial) constituted 63.2 percent, whereas military pensions made up around 36.8 percent on average during the last 5 years (**Figure S1.2**).[10] The overall pension spending as a share of tax revenue has reached 18.7 percent as of FY20, almost double the level a decade earlier (**Figure S1.3a**). If this proportion continues to grow, it could result in the crowding out of other valuable spending avenues: pension

[4] Munnell, A. H., Aubry, J., and Quinby, L. (2011). "Public Pension Funding in Practice". *Journal of Pension Economics & Finance*, 10(2), 247-268.
[5] Rauh, J. D. (2017). *Hidden Debt, Hidden Deficits: 2017 Edition*. Hoover Institution Essay 32. Stanford: Hoover Institution, Stanford University.
[6] Palacios, R., and Whitehouse, E. (2006). *Civil-Service Pension Schemes Around the World*. Social Protection Discussion Paper No. 0602. Washington, DC: World Bank.
[7] Pension-to-GDP numbers taken from the World Bank Pensions Database GP Social Protection. Figures ranged from 2011 to 2018 (latest available). Converted to proportion of tax revenues by using the 2011-18 tax-to-GDP ratio sourced from the World Bank Open Data.
[8] This is compared to the average pension-to-GDP ratio of 2.5 percent for the 40 EMDEs covered in the World Bank Pensions Database GP Social Protection (Figures range from 2011 to 2018).
[9] Source: The Atlas of Social Protection: Indicators of Resilience and Equity (ASPIRE), World Bank. Data from 2015 or latest for fifty developing economies.
[10] The structure and regulations pertaining to civil and military pensions are mostly identical. However, the size of the respective pension expenditures varies due to the difference in terms of service.

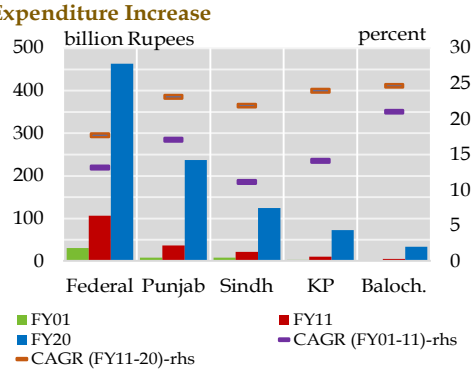
Tax-to-GDP Ratio - A Comparison **Figure S1.1a**



South Asian countries in gold; Pakistan in maroon

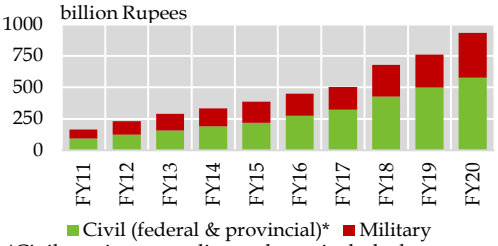
Source: World Bank

Magnitude of Pension Expenditure Increase **Figure S1.1b**



Source: Revised federal & provincial budget estimates

Composition of Public Pension Expenditures in Pakistan **Figure S1.2**



*Civil pension expenditures do not include those pertaining to Pakistan Railways & SOEs/autonomous bodies (PIA, PSM, WAPDA, etc.)

Source: Revised estimates from Budget in Brief, MoF (Federal) and respective provincial Annual Budget Statements

spending as percent of total budgeted expenditures for FY20 exceeded health and education spending on both federal and provincial fronts and is almost half the level of consolidated development expenditures (**Figure S1.3b**). In this regard, International Financial Institutions (IFIs), such as the World Bank and the International Monetary Fund (IMF) have also started flagging the rising pension expenditure as a pressing concern for Pakistan's debt sustainability.[11]

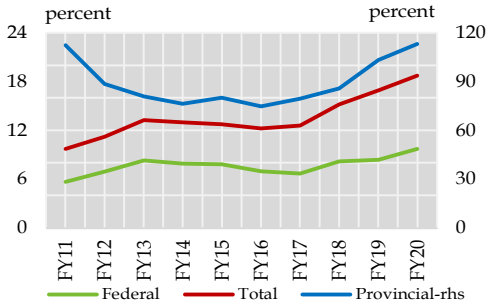
What is even more concerning is the fact that pension expenditure is expected to rise further going forward, given the increase in both retiree headcount and the lifespan of future retirees. If fiscal revenues continue on their existing trajectory, the rising pace of pension-related spending would become worrying from the sustainability point of view. According to the World Bank's projections, civil service pension payments would overtake wage expenditures by 2023 and 2028 in Punjab and Sindh, respectively, and come near to their level in the federal government by around 2050 (**Figure S1.4**).[12]

Within this context, this special section intends to: (i) describe the existing public sector pensions and benefits system in Pakistan; (ii) highlight major factors that are making pension expenditures unsustainable; and (iii) provide a set of policy

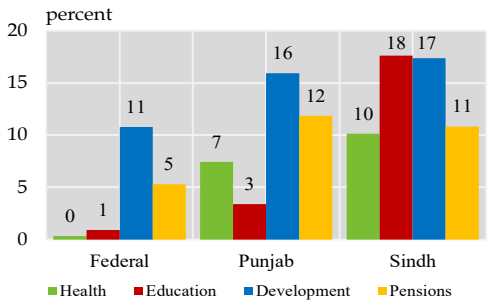
[11] For example, see World Bank (2020). Pakistan Assessment of Civil Service Pensions. Report AUS0001350. Islamabad: World Bank; and Amaglobeli et al. (2019).

[12] The exercise was done for Punjab and Sindh only, hence projections pertaining to KP and Balochistan are not available. For more details, see World Bank (2020).

Pension Expenditures as percent of Tax Revenue **Figure S1.3a**

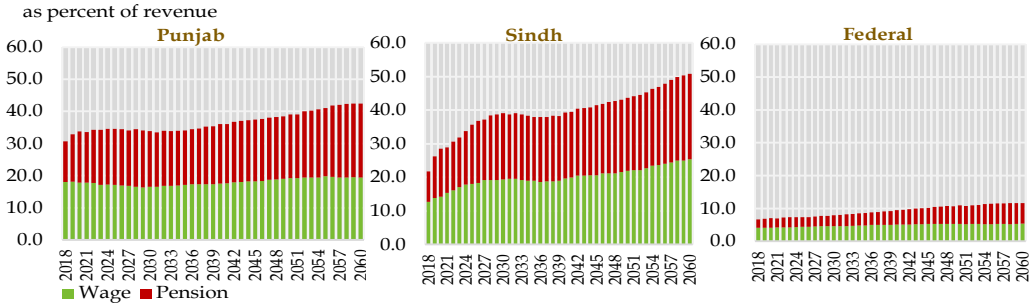


Spending as a Proportion of Total Expenditures **Figure S1.3b**



Source: Revised estimates from Budget in Brief, MoF (Federal) and respective provincial Annual Budget Statements

Comparison of Civil Servant Wage and Pension Expenditure Projections for Pakistan **Figure S1.4**



Source: Projections from World Bank (2020). *Pakistan Assessment of Civil Service Pensions*. Report AUS0001350. Islamabad: World Bank.

recommendations to make the growing post-retirement expenditures sustainable going forward. Here, it is important to mention that structural factors, such as the size of the civil government and the military, the unfunded nature of pensions, and disproportionally high share of non-gazetted employees (95.3 percent of total federal government employees), are all important factors governing the overall level of pension expenditures in the country. However, these factors are beyond the scope of this section; here, we intend to highlight system-bound aspects that explain the steady rise in these expenditures over the last decade.

S1.2 Public Sector Pension Framework in Pakistan

Pakistan had adopted the underlying principles of the civil-service pension from the British Pension's Act 1871.[13] This Act clearly stipulated the right to pensions and

[13] According to the Civil Service Act 1973, "civil servant" means a person who is a member of an All-Pakistan Service or of a civil service of the Federation, or who holds a civil post in connection with the affairs of the Federation including any such post connected with defence. By public sector employees, this special section is considering federal and provincial government employees (civil servants) on a salary scale 1 to 22.

gratuity; restricted the role of civil courts to entertain any suit relating to grant of pension; and defined the mode of pension payment and other related rules. Similar practices were also followed in other previously colonized countries in the region, for example India, Bangladesh and Sri Lanka. However, India had introduced the civil service pension reforms in 2004 and adopted the defined contribution schemes for new recruits. The country later increased the coverage of this framework and included private sector workers under a voluntary scheme. In 2009, Maldives also introduced the pension reform process and converted the defined-benefit scheme for civil servants and private sector workers to a contributory defined-benefit scheme (see **Annexure I** for the glossary of technical terms).

In case of Pakistan, these principles were subject to frequent changes, but the underlying model of pensions continued to remain non-contributory with a defined-benefit mechanism. In its current form, the pension structure can be classified as pay-as-you-go (PAYG) under which the government guarantees pensions and other retirement benefits to employees who do not make personal contributions from their salaries.

Currently, the regulatory pension framework is being governed by different acts and regulations including the Pension-cum-gratuity Scheme (1954), the Provisions of Civil Servant Act, 1973, and the Liberalized Pension Rule and Ancillary Instructions, 1977. Moreover, the government issued several notifications and amendments from time to time to revise the pension structure, admissibility of the family members, and rate of commutation and pension scale. The following points sum up the key features:

- The retiring civil servant is entitled to receive periodical pension payments after completing permanent qualifying service (25 to 30 years) in any government department (**Table S1.1**). In some cases, the required service duration and age conditions are relaxed. For instance, when the government discharges an employee due to the abolition of a permanent post, the concerned employee may take 'compensation pension'. Similarly, in case of permanent incapacitation due to physical or mental illness, the civil servant is entitled to receive 'invalid pension'.

- In case of death of an in-service or a retired worker, the eligible family members are authorized to draw pension and allied benefits at the rate of 75 percent of the net pension until marriage or death (more on this later).

- The amount of pension is usually determined by the length of completed years of qualifying service of the concerned employee. Once the employee has completed 25 years of service and/or becomes 60 years of age, he/she can receive a pension amount equivalent to 70 percent of the last pay/emoluments drawn, including special pay and other allowances. The incidence of completing 25 years of service before turning 60 is particularly prominent with regards to BPS 1-16 officers as well as employees in the police departments and the armed forces. In case the qualifying service is greater than 10 years but less than 30 years, the pension is calculated at a prescribed rate according to the length of service.

- The pensioner can also avail commutation option, according to which he/she can avail in advance a maximum of 35 percent

Key Parameters of Civil Service Pension **Table S1.1**

Beginning of Service	The service of an officer begins to qualify for pension from the date s/he takes charge of the office to which s/he is first appointed.
Conditions of Qualification	*First*: The service must be under government *Second*: The employment must be substantive and permanent. *Third*: The service must be paid by Government
Conditions of Grant of Pension	*Compensation pensions*: If a Government servant is selected for discharge owing to the abolition of a permanent post he has the option: i) of taking any compensation pension or gratuity to which he may be entitled for the service he has already rendered, or ii) of accepting another appointment or transfer to another establishment even on a lower pay, if offered, and continuing to count his previous service for pension. A Government servant not employed in a substantive permanent capacity is granted Compensation Gratuity / Pension if he is discharged after completing qualifying service of his post or is replaced by a "qualified" candidate. *Invalid Pension*: Invalid pension is awarded to a Government Servant on his retirement from the public service, who by bodily or mental infirmity is permanently incapacitated for the public service. *Retiring Pension*: A retiring pension is granted to a Government servant who is permitted to retire after completing qualifying service of 25 years. *Superannuating Pension*: A superannuating pension is granted to a Government servant who is entitled or compelled, by rule, to retire at a particular age i.e. 60 years.
Amount of Pensions	The amount of pension that may be granted is determined by length of service
Admissibility of Pension	*Exchange rate*: pension is fixed in Rupees *Gratuity*: After a service of five years or more but less than ten years, a gratuity not exceeding one month's emoluments for each completed year of service. *Pension calculation*: After a service of ten years or more, pension shall be calculated at the rate of 70 percent of average emoluments on completion of thirty years qualifying service in accordance with the prescribed scale. If qualifying service is less than thirty years but not less than ten years, proportionate reduction in percentage shall be made. *Commutation*: Commutation shall be paid according to date of birth. A pensioner shall be allowed to commute up to 35 per cent of the gross pension. *Family pension*: In the case of death of a civil servant while in service, gratuity in lieu of one-fourth of the gross pension shall be allowed at the existing rates. In addition, family pension shall be admissible for life or until remarriage of the widow, at 50 per cent of the gross pension. In the case of death of a pensioner, family pension shall be admissible for life or until remarriage of the widow, at 50 per cent of the pension.
Allowances Reckoned for Pension	The term "**emoluments**" means the emoluments which the officer was receiving immediately before his retirement and shall include pay; Senior Post Allowance; Special Pay of all types and nature; Personal Pay; Technical Pay; Indexed Pay; Increments accrued during leave preparatory to retirement; Any other emoluments. With effect from 01-07-1986, the pension of a civil servant who shall retire on or after this date shall be calculated at the existing rate on last pay/emoluments drawn provided the post has been held by him on a regular basis.
Commutation of Pension	A government servant shall be entitled to commute for a lump sum payment any portion, not exceeding one-half, which has been or may be granted to him under civil rules. In 2015, government had reduced this payment to 35 percent of last drawn salary.

Source: Excerpt from Compendium of Pension Rules and Orders 2018, Finance Division, Government of Pakistan

of gross pension for a number of years according to the commutation table set by the government.[14]

It is important to note that the current framework lacks any form of a sizable fund that could finance the orderly payment of pension expenditures. In countries like Canada, Japan, Korea, and the USA, the government maintains two main categories of public pension reserve funds: (i) the social security reserves mainly financed with employee and/or employer contributions; and (ii) the sovereign pension reserve funds which are financed through government fiscal transfers.

However, in Pakistan, federal and provincial governments instead utilize fiscal revenues to discharge the retirement benefits and pension obligations. The continuity of this practice stands to yield incessant growth in pension expenditure and puts unsustainable pressure on the fiscal accounts, thereby crowding out other development priorities such as education, health, and infrastructure spending.

S1.3 Why is Pension Expenditure Rising in Pakistan in recent years?

There are five major reasons why the pension-related spending in the country is increasing at a worrying pace (as evidenced in (**Figure S1.1c**). These include: (a) ad-hoc and retrospective increments in pensions announced by the government; (b) commutation and restoration facilities offered to pensioners; (c) early retirements; (d) generous survivorship benefits; and (e) resultantly, a high replacement rate. These reasons are presented in detail below:

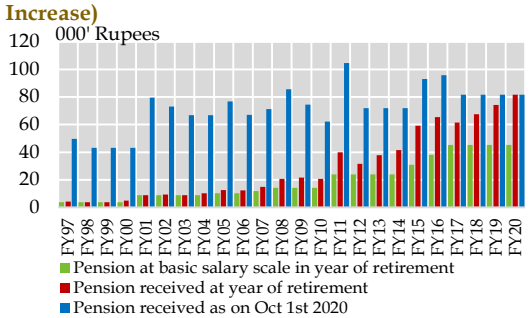
a) Pension benefits are inflated by factoring in ad-hoc and retrospective increments

In most countries, the pension benefits are indexed with consumer prices, workers' wages, or a combination of both. For instance, the UK, Canada, and the EU countries like France and Italy are indexing pension benefits with the CPI, whereas other countries such as Australia, Brazil and Turkey use wages to adjust the pension amounts. The indexation protects the pensioners against loss of purchasing power and gives some degree of predictability to policymakers.

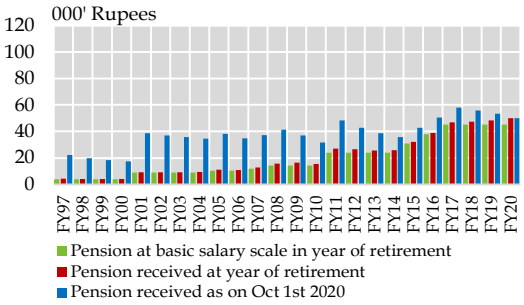
In Pakistan, however, the government uses an unstructured approach to adjust the yearly pension increments and increases the assigned benefits in an ad-hoc manner. Unlike general practice, the guidelines are limited to define the pension structure, commutation, list of eligible beneficiaries and pension procedures. However, these guidelines have largely remained silent on factors such as the indexation procedure, maximum pension limits and potential eligibility of employees (past or future) to receive these benefits. Currently, the rate of pension increment seems independent of any indexation and appears to be overcompensating the pensioners in real terms. For instance, in FY17 and FY18, the pension increment announced by the government was 10 percent in each year, whereas inflation for the same years was only 4.1 and 4.7 percent, respectively. This implies that the pension bill could have been

[14] A lump sum amount to replace certain proportion of future pension. This payment is generally calculated using actuarial methods.

Pension Increment of a Representative of Grade 16 Cohort (Computed with Annual Pension Increase) **Figure S1.5a**



Pension Increment of a Representative of Grade 16 Cohort (if indexed with CPI of respective year) **FigureS1.5b**



Source: Authors' computation based on data of pension increments available on website of Ministry of Finance. For complete calculation see Annexure Tables A1, A2 and A3.

relatively contained had the increments been based on CPI indexation (**Figure S1.5)**; for more detail, see **Table A2 and A3** in **Annexure II.**

Another element that seems unique in the public sector pension structure of Pakistan is that alongside the existing pensioners, future retirees (current employees) are also entitled to enjoy the benefits of contemporaneous pension increments announced by the government. In other words, once an employee retires from civil/public service, she/he will be able to receive all pension benefits, accumulated (due to retrospective increases announced in previous years) on the latest drawn salary. For instance, if an employee retired in FY19, he/she will also receive the increment of 15 percent announced by the government in the year FY12, 7.5 percent in FY16, 10 percent in FY17, 10 percent in FY18 and 10 percent in FY19. Moreover, it is also important to note that even this retrospective increase in future pension is at the discretion of the government; for instance, in some years like FY08 and FY09, the pension increase was only offered to current pensioners without any adjustments for future retirees, whereas in years FY12, FY16, FY17, FY18 and FY19, the equal increment was offered to current and future pensioners. Similarly, the government can also discontinue these rates at any time for future retirees (see **Table A1** in **Annexure II** for details). These ad-hoc adjustments in pension increment provide minimum certainty to future retirees.

b) Commutation and Restoration Facilities Further Distort the Structure

Federal and provincial government employees have the option of availing up to 35 percent of their pensionable amount lump-sum in advance (commutation) either when they retire or sometime later.
The following example will help illustrate the problem. Consider a BPS-16 or a BPS-17 representative retiree with a minimum wage deciding to avail maximum permissible commutation (i.e. 35 percent of gross pension) at the time of retirement at 60 years of age in FY20 (**Table S1.2**). It is pertinent to note that even after availing maximum allowed commutation, the representative pensioner is receiving net monthly pension (item 'J' in **Table S1.2**) higher than the last-drawn salary. This replacement rate

Example of Commutation Availed by Representative BPS-16 and BPS-17 Retirees at age 60 (FY20) **Table S1.2**

Rupees

	BPS-16	BPS-17
A. Last drawn salary	18,910	30,370
B. Current year increment	1,520	2,300
C. Total emoluments (A + B)	20,430	32,670
D. Gross pension (70 percent of C)	14,301	22,869
E. Commuted portion (35 percent of D)	5,005	8,004
F. Net pension (D – E)	9,296	14,865
G. Commutation factor	≈ 12.4	≈ 12.4
H. Total lump-sum payment (G * E * 12)	743,108	1,188,296
I. Retrospective increases applicable in 2020	10,245	16,382
J. Net pension payable (F + I)	19,540	31,247
K. Year of restoration	2,032	2,032

A: Salary drawn during the last month of service.
B: Increment awarded in the last year of service.
C: Total emoluments amount to the last drawn salary plus the current year increment.
D: Retirees are awarded 70 percent of total monthly emoluments as pension.
E: A retiree can avail up to 35 percent of the lifetime pension payment. The representative retiree in this example avails maximum commutation.
F. Net pension is the monthly pension payable after deducting the commutated portion
G. As commutation is based on estimated lifetime pension, a commutation table is used to reach the total amount payable to the retiree. For a retiree at 60 years, commutation period is around 12 years in Pakistan.
H. Total lump-sum commutation paid to a retiree is equal to the monthly commuted value multiplied by the total months applicable (according to the commutation table).
I. All the retrospective increments and medical allowance increase is applied on the net pension after deducting the commuted value.
J. Net pension payable is the monthly value paid to the retiree by the government after the availment of commutation facility and the application of retrospective increments and medical allowance increases.

Source: Authors' calculations using Compendium of Pension Rules and Orders 2018, Ministry of Finance

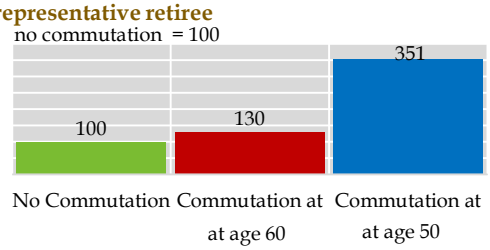
(pension payments as a proportion of last salary) of nearly 100 percent is uniquely generous (more on this later) and thus incentivizes retirees to almost always opt for commutation.

Making commutation further attractive to retirees, these payments are also restored (added back in the monthly pensions) after the time equal to the commutation factor (12 years, in our example) passes. This restoration is inclusive of increments.[15]

As a result, the benefits enjoyed by two fellow retirees can be significantly different if one opts for commutation and the other does not. Likewise, government expenditures, both present and going forward, increase by a much larger portion in case the commutation facility is availed. As illustrated in **Figure S1.6**, the commutation structure and the associated benefits are such that if a government employee takes retirement at the age of 50 and lives till the age of 80, the total compensation will be

[15] While the commutation rate used to be as high as 60 percent at one time in Pakistan, it was eventually reduced and the restoration facility was also removed. As a result, a petition was filed in the Supreme Court on behalf of pensioners. As per the 2015 Supreme Court ruling, the restoration facility was reinstated.

Total Pension Expenditures till age 80 for a 2020 BPS-16 representative retiree **Figure S1.6**



For simplicity, calculations assume a 10 percent annual increase in pension rate throughout the period, the rate equal to the increments available to retirees of last four years.
Source: authors' calculations using KPK government pension calculator and Compendium of Pension Rules and Orders 2018, Ministry of Finance.

more than three-times the compensation of a retiree who does not avail commutation at all. Compared to a government employee who retires at the age of 60 and avails commutation, the overall compensation will be around 2.7 times. This makes a strong case for government employees to opt for an early retirement, avail commutation and maximize their overall compensation. More details are presented in the following point.

c) *Early retirements are increasingly being preferred*

Over the past few years, government employees have been retiring early in large numbers. For the latter two, the terms of service is different For example, as of January 2019, the month for which the latest data is available, more than 60 percent of all new retirees in Punjab were below the age of sixty, and the ratio was 67 percent for employees retiring from grade 16 and lower.

Early retirements are rising due to three major reasons:

(i) The retrospective increase in pensions of future retirees and their abrupt withdrawal make the future income stream uncertain for in-service employees. For instance, a representative Grade-16 employee who retires at superannuation in 2020 is entitled to receive 158 percent of their last gross pay. However, if the same employee retires at age 55 or 50 (in 2010 or 2015), the pension would have been more than 200 percent of the last drawn salary as on 2020 (**Table S1.3**). Compatible results are found in the case of a representative Grade-17 employee.

(ii) Given that the pension payments are inequitable for superannuation retirees, and that the structure allows retirees to draw pensions higher than their salaries, the current employees favor early retirement to maximize their future pension benefits. This is because they are likely to receive pension benefits for a longer period compared to the early retirees. As shown in the **Figure S1.7**, the replacement rate (pension payments as a percent of last drawn salary) started consistently crossing the 100 percent level after around FY12, which coincides with the rapid rise in the annual proportion of early retirees *after* that period.

(iii) The existing pension scheme equally treats the retirees attaining the age of 60 or completing 30 years of services, assuming the employee joins the public service at 30 years of age.[16] The rules penalize early withdrawal i.e., before serving 30 years by reducing a share of post-retirement benefits. However, they remain silent in the case of an employee joining the service at 20 years and planning retirement at age 60. In such cases, the 10

[16] Source: OECD (2011), "Pensions at a Glance 2011, Retirement-Income Systems in OECD and G20 Countries", OECD.

Pension Computation for Representative Pensioners Retired in Grade 16 and Grade 17 at Different Retirement Ages (without commutation) **Table S1.3**

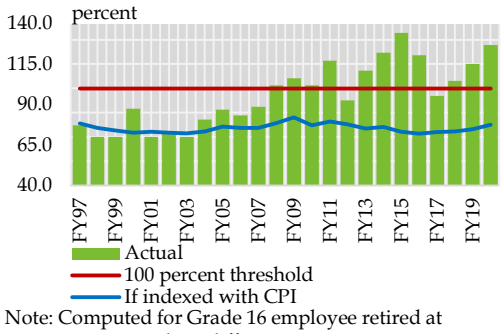
Rupees

	Grade 16 employee			Grade 17 employee		
Date of Retirement	1-Oct-20	1-Oct-15	1-Oct-10	1-Oct-20	1-Oct-15	1-Oct-10
Age at Retirement	60 y	55 y	50 y	60 y	55 y	50 y
Length of Service	35 y	30 y	25 y	35 y	30 y	25 y
A. Basic Pay @ minimum scale	18,910	12,910	6,060	30,370	20,680	9,850
B. Retiring Year Increment	1,520	1,035	0	2,300	1,555	0
C. Total Emoluments (A +B)	20,430	13,945	6,060	32,670	22,235	9,850
D. Gross Pension (as percent of C)	14,301	9,762	3,535	22,869	15,565	5,746
E. Net Pension (=D as no commutation)	14,301	9,762	3,535	22,869	15,565	5,7456
F. Retrospective Increases						
i. 15% increase of 2010	0	1,464	530	0	2,335	862
ii. 15% increase of 2011	2,145	1,684	610	0	2,058	912
iii. 20% increase of 2012	0	0	935	0	2,264	1,003
iv. 10% increase of 2013	0	1,291	561	1,972	1,868	828
v. 10% increase of 2014	0	1,420	617	2,827	2,678	1,186
vi. 7.5% increase of 2015	1,233	1,172	509	3,110	2,945	1,305
vii. 10% increase of 2016	1,768	1,679	730	3,421	3,240	1,435
viii. 10% increase of 2017	1,945	1,847	803	0	2,058	912
ix. 10% increase of 2018	2,139	2,032	883	0	2,264	1,003
x. Minimum Pension Payable Rs.			10000			
xi. 10% increase of 2019	2,353	2,235	1,000	3,762	3,564	1,579
xii. 20% Medical Allowance of 2010	2,860	2,245	813	4,574	3,580	1,322
xiii. 25% increase on Medical Allowance	715	561	203	1,143	894	330
G. Net Pension Payable (Without commutation) (E + F)	**29,460**	**27,392**	**12,016**	**47,110**	**43,676**	**19,018**
H. Pension as % of basic pay (Replacement Rate) (G/A*100)	156	212	198	155	212	193

Note: The representative pensioner was born on 1st Oct 1960, and the appointment date was 1st Oct 1985.

Source: Authors' calculations based on pension increase circulars available on the website of Ministry of Finance. The calculation has also been validated using the Pension calculator available on the website of the Government of KP.

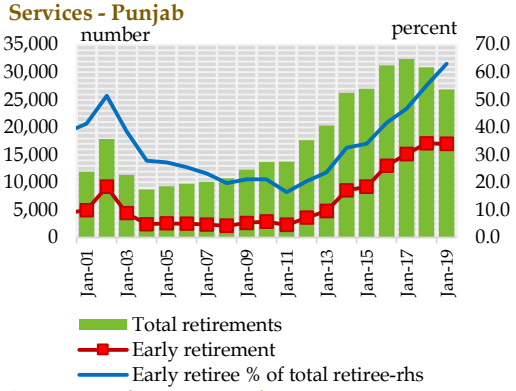
Actual Gross Replacement Rate (with Annual Pension Increase) **Figure S1.7a**



Note: Computed for Grade 16 employee retired at maximum pay scale in different years

Source: Authors' calculations; Ministry of Finance

Retirement Trend in Civil Services - Punjab **Figure S1.7b**



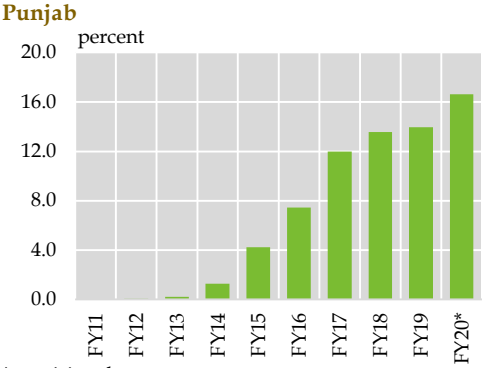
Source: Punjab Pension Fund

additional years of service would not earn extra benefits for the employee. The zero marginal benefits after 30 service years, hence, encourages early retirements in employees joined at relatively younger age and cause an increase in the fiscal cost.

d) Survivorship regulations are also generous

The pension rules allow eligible family members to draw survivorship benefits (70 percent of the existing pension) in case of death of a present employee or a retiree. Fiscal authorities have been facing a growing size of survivorship benefits during the last ten years. For instance, in Punjab, family pension has increased from Rs 3.5 million in FY11 to Rs 28.6 billion in FY19 (**Figure S1.8**). Similarly, in Sindh, the survivor payment had reached Rs. 16.7 billion in FY18. In the absence of a time series data on life expectancy of retirees, plausible factors that explain the higher liabilities in terms of survivorship benefits are: (i) increased rate of family pension benefits from 50 percent of the worker's pension benefit entitlement to 75 percent in 2009; and (ii) the extension in family pension tree and lifelong entitlement to elder widow/divorcee daughter. Specifically, eleven family members at present are legally entitled to receive the survivorship benefits including surviving widow/widows, minor son (up to the age of 21), unmarried/ divorcee/widowed daughter (till her marriage), special children (till their death), surviving unmarried sister, eldest widow of deceased son, eldest surviving grandson, eldest surviving granddaughter, mother, father, widowed/divorcee sister and minor brother. The inclusion of multigenerational family

Family Pension Expenditures in Punjab **Figure S1.8**

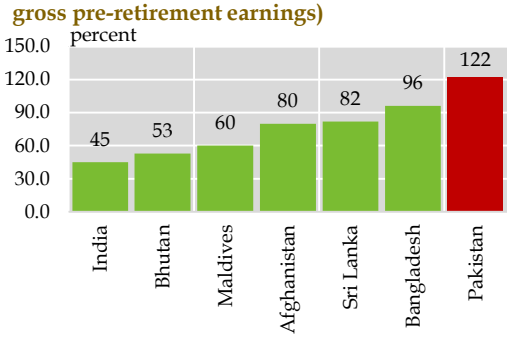


*provisional

Source: Punjab Pension Funds

members multiplies the average duration of pension benefits from 12 years (in case of pension to retiring employee) to 45 years and beyond (depending upon the age structures of survivors).

Gross Pension Replacement Rate for Civil Servants (gross pension entitlement divided by gross pre-retirement earnings) **Figure S1.9**



Source: World Bank(2020), full reference in footnote 11

In contrast, the survivorship benefits in the OECD and other developed countries are generally limited to widows (for a certain number of years) and to minor children, with no entitlement to a pensioner's father, mother, adult daughters, sister, brother or grandson etc.[17]

The current pension tree in Pakistani regulations would be financially unsustainable even in case of a funded structure since the duration of pension withdrawal exceeds service years of a particular employee. Moreover, the entitlement of multigenerational members makes the pension calculation and evaluation a cumbersome task for the authorities.

e) All this makes the replacement rate in the country one of the highest in the world

The retirement/pension benefit acts as a guaranteed income to civil/public servants and offers a provision of income security in their retirement period. The proportion of average/last drawn salary a pensioner receives determines the replacement rate (expenditures on pension as a proportion to the expenditures on the pensioner's last drawn emoluments); a higher replacement rate is beneficial to the retiree but at the same time proves costly to the employer. As per the pension rules, government employees in Pakistan are entitled to receive a replacement rate of 70 percent of their last drawn salary.[18] However, medical and other allowances, coupled with the retrospective increases in pension rates, generous commutation factors, and the possibility of restoration of the commuted amount, all make the replacement rate in the public sector the highest in the South Asian region, averaging 122 percent (**Figure S1.9**). For some pay scales, the rate can go even higher. For example, gross replacement rate for a representative grade 16 employee (retiring at 60 years of age) after completing 35 years of service in year 2020 effectively turns out to be 156 percent. This ratio would further increase in case of early retirements (**Table S1.3).**

In addition to being high, the replacement rate varies largely and retirees in different cadres or even in same service groups are entitled to get different proportion of their

[17] For more details, see OECD (2019). *Pensions at a Glance Asia/Pacific 2018*. Paris: OECD.
[18] This rate applies for those who either complete 25 years of service or retire at the age of sixty. If qualifying service is less than thirty years but not less than ten years, proportionate reduction in percentage shall be made

last drawn salary. This income disparity surfaces due to the existing method of pension calculation which incorporates two factors i.e., employee's last drawn salary, and including service allowances and length of qualifying service. Often, employees having equivalent level of age profile and service history receive diverse replacement rates due to differences in their last drawn salaries, assigned allowances (such as special pay, personal pay, technical pay and senior post allowance etc.) and pension/wage adjustments in certain years. It is also important to mention that as the government has to recruit another officer in place of a retiree, it has to in effect pay more than double the salary of the post to continue the current level of work.

S1.4 Policy Reforms

Traditionally, the government service pension reforms fall in two categories (i) *parametric reforms*, also known as short-term reforms since these include "adjustments of the structural characteristics of the pension system, such as the contribution rate, retirement ages, or pension benefit indexation formulas, possibly combined with building up financial reserves" (Chand and Jaeger, 1997);[19] and (ii) s*ystemic reforms,* or the long-term reforms since these involve "developing a significant, defined-contribution, fully funded pillar inside or outside the existing public pension scheme in the long run". For Pakistan also, both kinds of reforms are needed.

A. Parametric Reforms

In the present PAYG system of Pakistan, the pension obligations are made when they come due.[20] With limited fiscal space, Pakistan may not afford the immediate switching from PAYG to a funded system, since the latter will require the government to make exclusive contributions along with the existing pension payments. Instead, parametric reforms may be introduced initially to rationalize the cost and incentive structure of pension system and improve the fiscal sustainability of future expenses. Later, the government could consider adopting the comprehensive framework of funded pension system. The following are some parametric reforms that helped in addressing pension related challenges in a number of countries including India, Chile, and the UK, and may also prove helpful in the case of Pakistan.

a. Ceiling and price indexation measures would help reduce the excessively high replacement rate

The current pension structure defines the minimum pension limit, which has been revised quite frequently in the last ten years. However, the system does not enforce any ceilings for maximum pension benefits and thus the gross replacement rate has exceeded the 100 percent level in the country.[21] To

[19] Chand, S. K. and A. Jaeger, 1997. *Ageing Populations and Public Pension Schemes*. IMF Occasional Papers No. 147. Washington, DC: International Monetary Fund.
[20] On the contrary, a funded system relies on invested assets and accumulated reserves where the returns can sufficiently meet the current and future pension obligations.
[21] In India, for example, the maximum pension limit is INR 125,000 per month, which is half of the highest salary in government of India (Source: Pension Portal Government of India).

rationalize the replacement rate, the government can reinforce ceilings on pensionable earnings as imposed in many countries including the US, Canada, India, Hong Kong, Japan, Germany, and Italy etc.[22] This would also have the effect of making the pension benefits equitable among the different retirees.

Likewise, the government could start the practice of indexation of pension benefits to the general price level (such as that indicated by the consumer price index, for example). This would offer two major advantages: i) it would protect the beneficiaries against loss of purchasing power; and ii) it would considerably reduce the fiscal cost of increasing pension payments on ad-hoc basis. The price indexation also improves the predictability of future burden of public pension expenditures.

Moreover, the benchmark earning used to measure the pension benefits can be altered from last-drawn salary to the average of lifetime earnings (total accumulated earnings since joining divided by total months of service). Countries such as China, Indonesia and Viet Nam, for example, use lifetime earnings to calculate pension benefits, whereas the Philippines uses the average of final five-year earnings.

b. Elimination of retrospective increases is a must to avoid exponential rise in future obligation

The retrospective increases in pension of future retirees seem to be a unique feature of the government service pension scheme in Pakistan.[23] The eligibility of future retirees for current pension rise not only creates distortions in the existing framework but also makes retiring benefits inequitable among different cohorts. Since these retrospective increments are computed on final salary, the financial impact compounds in favor of future retiree. However, for fiscal authorities, this generates a huge liability. The impact is so significant that only the elimination of these back dated pension increases would go a long way in bringing the gross replacement rate from current rate of 156 percent to a much more manageable 88 percent.[24]

c. The government may also consider increasing the retiring age and/or contributory years

As stated earlier, the pension system follows two eligibility criteria for retirement: the qualifying service of 25 years and the threshold of 60 years of age. Interestingly, most of the employees in federal, provincial and defense service join their departments in early- to mid-twenties, and complete 25 years of services during their early- to mid-50s and therefore become eligible for early retirement. It is pertinent to mention here

[22] For more details, see OECD (2019).
[23] Various annual publications of the OECD (*Pension at Glance*), the World Bank, official government documents, official pension websites and calculators of different countries, and theoretical and empirical papers were reviewed; however, we did not find evidence of the presence of a structure similar to Pakistan (with regards to retrospective increases) in other countries.
[24] This has been calculated for Grade 16 employee, assuming retired at 60 years of age in 2020, and receiving a minimum monthly pay of Rs 18,910, and availing zero commutation.

that the retirement age of 60 years is already markedly lower than many other countries, and so the early withdrawal after completion of qualifying service puts further strain on fiscal sustainability of pension expenses. In this regard, the increase in level of standard pension age may reduce the average coverage period of retirement benefits. In addition, the delayed retirement age will support in increasing the contribution period once the government opts for a funded system in the subsequent round of reforms. The government can use one or multiple approaches to reduce the early retirement incentives. For instance, measures such as restricting early retirement eligibility, reducing the marginal benefits below a threshold retirement age, and marginalizing the disincentive to work can all help achieve this objective.[25]

d. The survivorship benefits need to be considerably rationalized

In contrast, rise in family pension due to increased applicable benefits and inclusion of large set of family members has become a major cause of concern in Pakistan (For the calculation of family pension please see **Table A4** in **Annexure II**). To address this, the first and foremost reform should be to exclude all family members other than minor children and widows from the list of eligible survivorship beneficiaries. Any delay in such reform will cause family pension to grow manifold in the coming years due to the probable increase in time span of pension benefits in each individual case.

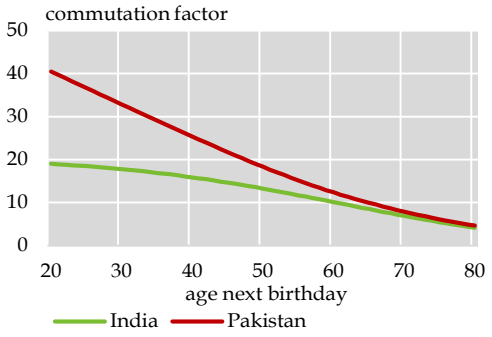
In the case of widows, the survivorship benefits can be rationalized in accordance with the increasing labor force participation rates of women. In the last few years, many countries have downsized the survivorship benefits by limiting the adjustment period or by eliminating the mandatory benefits for survivors. For instance, in Japan, widows (with no children) under the age of 30 were entitled to receive permanent earnings-related survivor pension, which were reduced to five years after comprehensive pension reforms in 2007. Similarly, in Sweden, widows were entitled to receive the flat survivorship benefit, which after reforms was switched by the minimum income guarantee, eligible for a shorter period than the earlier facility.[26]

e. Commutation and restoration benefits must be streamlined

The computation of commuted benefits involves a particular factor assigned to each year after retirement which determines the advance payment amount for each retiree. The commutation table laid out by the Ministry of Finance incentivizes early retirement with excessively high commutation factor applied to the younger cohort. This is in stark contrast to the traditional pattern followed in most other countries. For example, in the UK, the commutation facility is only offered to retirees after attaining a certain age for different employee groups (48 years in the police department, for example). Whereas, the Indian pension structure offers minimal variance in commutation factor to different age groups (**Figure S1.10**). The growing fiscal burden due to high commutation expenses calls for a restructuring of the commutation mechanism, with rationally

[25] Jackson, R. (2002). *The Global Retirement Crisis: The Threat to World Stability and what to Do about It*. Washington, DC: Center for Strategic and International Studies.
[26] OECD (2018). "Are Survivor Pensions Still Needed?". In *Pensions Outlook 2018*. Paris: OECD.

Commutation Factor at Different Retirement Age **Figure S1.10**



Source: Finance Division Pakistan and Indian Pensioners' Portal

designed factors and revision in eligible age profile to make the overall pension structure actuarially fair: the lifetime benefits enjoyed by those who retire early or choose to avail commutation and those who opt out of such facilities.

B. Systemic Reforms

Once the features of current pension structure are successfully streamlined through sufficient parametric restructuring, the next step would be the adoption of a comprehensive systemic reform to ensure fiscal sustainability of pension liabilities in the long-run. In this process, the current non-contributed, defined-benefit and pay-as-you-go pension scheme would need to be gradually phased out and replaced with a contributory and funded structure in which the benefits are closely linked with the value of pre-retirement contributions. In recent decades, many countries in the EU, Latin America and Asia have adopted various systemic reforms focused on reducing the public pension expenditure by switching to pre-funded-defined contribution schemes.[27] Due to the systemic reforms a number of EU countries including Bulgaria, Estonia, Lithuania, Latvia, and Sweden etc. experienced a downward projection in future pension expenditures, with survivorship benefits also projected to decline.[28]

S1.5 Concluding Remarks

This special section has made the case that public pension expenditure in Pakistan is on the path to becoming unsustainable. While limited fiscal space is a major reason why increasing pension spending is worrisome, improvements in the pension framework can substantially help make future payments manageable. Eliminating the generous retrospective increments and reducing the list of dependents eligible for pension payments appear as quick and easy-to-implement measures. However, the policy recommendations mentioned in the special section are intended to suggest a general direction. The concerned authorities must carry out specialized evaluation exercises at their own end and implement the required legislative reforms accordingly. Finally, it is important to undertake periodic review of implemented reforms in order to ensure long-term sustainability of the pension structure.

[27] Source: Anderson, K.M. (2019). Financialization Meets Collectivisation: Occupational Pensions in Denmark, the Netherlands and Sweden. *Journal of European Public Policy* 26:4, 617-636.
[28] Source: Banca d'Italia (2009). *Pension Reform, Fiscal Policy and Economic Performance*. Banca d'Italia workshop paper.

Annexure I: Glossary of Technical Terms

This glossary provides definitions of the key technical terms used in the Special Section. The objective is to make the findings of the section more accessible to the general reader.

Actuarial Fairness: If a pensions structure is actuarially fair, then the lifetime benefits availed by two fellow retirees would be equal regardless of the time and amount of commutation or restoration facility Actuarial Fairness availed (or not availed) by each.

Beneficiary: Any individual who is entitled to a facility (including the dependents).

Commutation: Facility of receiving a certain portion of future payments lump-sum in advance. In Pakistan, pensioners can commute up to 35 percent of their gross pension.

Commutation Factor: The factor calculated to determine the amount of pension that needs to forgone in order to receive the lump-sum advance commutation. For example, a commutation factor of around 12 is applied for a person commuting at age 60 in Pakistan.

Contributory Pension Plan: A pension plan where the employer (or the government), the employee, or both have to contribute during the service period in order to receive pension payments.

Defined Benefit Scheme: A pension scheme in which the employer guarantees future pensions based on a prescribed formula.

Emoluments: The total of gross salary plus current year's increment and job-related special allowances.

Gross Pension: Amount equal to a certain percentage of last-drawn or average wages. In Pakistan, gross pension in the public sector amounts to 70 percent of the last-drawn emoluments. This rate applies for those who either complete 25 years of service or retire at the age of sixty. If qualifying service is less than thirty years but not less than ten years, proportionate reduction in percentage shall be made.

Indexation: When pension payments are subject to incremental changes based on an index (for example, the country's consumer price index).

Net Pension: Gross pension after deducting the commutable portion (up to 35 percent) of the pension.

Non-Contributory Scheme: A pension scheme in which employees do not have to contribute during their service period in order to receive pension benefits when they retire.

Replacement Rate: Pension payments as a proportion of the last-drawn (or average) emoluments.

Restoration: After a certain period, the commuted amount is restored (added back) in the monthly pension payments of a retiree. For example, the restoration period in

Pakistan for an individual who retires at age 60 is around 12 years.

Survivorship Benefit: Pension payments provided to select surviving dependents of a deceased pensioner.

Voluntary Contributions (Scheme): A scheme in which an extra contribution is made in addition to the compulsory contribution in order to increase the future pension benefits.

Annexure II: Actual and Representative Increases in Public Sector Pensions in Pakistan

Table A1 shows the actual annual rate of increase in public sector pensions in Pakistan, with last two columns indicating the cumulative rise for representative retirees from Grade 1 to 16 and for those from Grade 17 and above.

Table A2, meanwhile, shows the monthly pension payment of a representative Grade 16 retiree after applying the compound increases shown in **Table A1**, assuming that the representative person retired with maximum PayScale salary. The table clearly shows the significant impact of retrospective additions to the pensions. For a representative person retiring in FY11, for example, the initial pension was around 38,000, which then reached to around Rs 105,000 by FY20. By contrast, the representative worker's last drawn salary was around Rs 28,000.

Last, **Table A3** illustrates a representative scenario in which, instead of the actual pension increases, the pensions rose by the rate of the change in the country's consumer price index. The difference comes out significant: for a representative employee retiring in FY11, for instance, the gross pension would have risen from around Rs 27,000 to around Rs 45,000, much lower than both the starting and the ending points in **Table A2**.

The blue shaded cells indicate the year of retirement, the green shaded cells indicate the annual increases in pension after the retirement year, and gold shaded cells indicate past pension increases that are retrospectively fed into the final gross payments at the end of the year the representative person is retiring. The red D indicates the end of availability of a specific past pension increase for future retirees. All the increases are compounded when calculating the gross pension expenditure.

Table A4 provides computation of family pension for representative BPS-16 and BPS-17 employees retiring at different age.

Matrix Showing Rate of Increase in Public Pension (Federal) from FY1997 to FY2020

Table A1

Cumulative increase

Year of retirement	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	(Grade 1 to 16)	(Grade 17 above)
FY97	10	0	0	25 & 20*	0	5	0	15	8	10	15	20	20	20	20	20	20	10	10	7.5	10	10	10	10	**275.5**	**260.5**
FY98	0	0	0	25 & 20*	0	5	0	15	8	10	15	15	20	20	20	20	20	10	10	7.5	10	10	10	10	**260.5**	**255.5**
FY99	0	0	0	25 & 20*	0	5	0	15	8	10	15	15	20	20	20	20	20	10	10	7.5	10	10	10	10	**260.5**	**255.5**
FY00	0	0	0	25 & 20*	0	5	0	15	8	10	15	15	20	20	20	20	20	10	10	7.5	10	10	10	10	**260.5**	**255.5**
FY01	0	0	0	0	0	5	0	15	8	10	15	15	20	20	20	20	20	10	10	7.5	10	10	10	10	**235.5**	**235.5**
FY02	0	0	0	0	0	5	0	15	8	10	15	15	20	15	15	20	20	10	10	7.5	10	10	10	10	**225.5**	**225.5**
FY03	0	0	0	0	0	0	0	15	8	10	15	15	20	15	15	15	20	10	10	7.5	10	10	10	10	**215.5**	**215.5**
FY04	0	0	0	0	0	0	0	15	8	10	15	15	20	15	15	15	20	10	10	7.5	10	10	10	10	**215.5**	**215.5**
FY05	0	0	0	0	0	0	0	15	8	10	15	15	20	15	15	15	20	10	10	7.5	10	10	10	10	**215.5**	**215.5**
FY06	0	0	0	0	0	0	0	D	8	10	15	15	20	15	15	15	20	10	10	7.5	10	10	10	10	**200.5**	**200.5**
FY07	0	0	0	0	0	0	0	0	D	10	15	15	20	15	15	15	20	10	10	7.5	10	10	10	10	**192.5**	**192.5**
FY08	0	0	0	0	0	0	0	0	0	10	15	15	20	15	15	15	20	10	10	7.5	10	10	10	10	**192.5**	**192.5**
FY09	0	0	0	0	0	0	0	0	0	10	15	0	20	15	15	15	20	10	10	7.5	10	10	10	10	**177.5**	**177.5**
FY10	0	0	0	0	0	0	0	0	0	10	15	0	0	15	15	15	20	10	10	7.5	10	10	10	10	**157.5**	**157.5**
FY11	0	0	0	0	0	0	0	0	0	10	15	0	0	15	15	15	20	10	10	7.5	10	10	10	10	**157.5**	**157.5**
FY12	0	0	0	0	0	0	0	0	0	D	D	D	D	D	15	15	20	10	10	7.5	10	10	10	10	**117.5**	**117.5**
FY13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	20	10	10	7.5	10	10	10	10	**117.5**	**117.5**
FY14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	20	10	10	7.5	10	10	10	10	**117.5**	**117.5**
FY15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	20	10	10	7.5	10	10	10	10	**117.5**	**117.5**
FY16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	D	10	10	7.5	10	10	10	10	**97.5**	**97.5**
FY17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	D	15	0	D	D	7.5	10	10	10	10	**62.5**	**62.5**
FY18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	7.5	10	10	10	10	**62.5**	**62.5**
FY19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	7.5	10	10	10	10	**62.5**	**62.5**
FY20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	7.5	10	10	10	10	**62.5**	**62.5**

*25 percent rise for Grades 1-16; 20 percent for Grades 17 and above; D means discontinued (through notification)

Matrix Showing Pension Increments for a Representative Grade 16 Employee (Computed with Annual Pension Increase) **Table A2**

thousand Rupees

Year of retirement	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Pension	3.8	3.8	3.8	3.8	8.9	8.9	8.9	8.9	10	10	12	14	14	14	24	24	24	24	31	38	45	45	45	45
FY97	4.2	4.2	4.2	5.3	5.3	5.5	5.5	6.4	6.9	7.6	8.7	11	13	15	18	22	26	29	32	34	37	41	45	50
FY98		3.8	3.8	4.8	4.8	5	5	5.8	6.3	6.9	7.9	9.1	11	13	16	19	23	25	27	30	32	36	36	43
FY99			3.8	4.8	4.8	5	5	5.8	6.3	6.9	7.9	9.1	11	13	16	19	23	25	27	30	32	36	36	43
FY00				4.8	4.8	5	5	5.8	6.3	6.9	7.9	9.1	11	13	16	19	23	25	27	30	32	36	36	43
FY01					8..9	9.3	9.3	11	12	13	15	17	20	24	29	35	42	46	51	54	60	66	72	80
FY02						9.3	9.3	11	12	13	15	17	20	23	27	32	38	42	47	50	55	60	67	73
FY03							8.9	10	11	12	14	16	19	22	25	29	35	39	42	46	50	55	61	67
FY04								10	11	12	14	16	19	22	25	29	35	39	42	46	50	55	61	67
FY05									13	14	16	18	22	25	29	34	40	44	49	53	58	64	70	77
FY06										12	14	16	19	22	25	29	35	39	43	46	50	55	61	67
FY07											15	17	21	24	27	31	37	41	45	49	53	59	65	71
FY08												21	25	28	33	38	45	50	54	59	64	71	78	86
FY09													21	25	28	33	39	43	47	51	56	62	68	75
FY10														21	24	27	33	36	39	42	47	51	56	62
FY11															40	46	55	60	67	72	79	87	95	105
FY12																32	38	42	46	49	54	59	65	72
FY13																	38	42	46	49	54	59	65	72
FY14																		42	46	49	54	59	65	72
FY15																			59	64	70	77	85	93
FY16																				65	72	79	87	96
FY17																					61	68	74	82
FY18																						68	74	82
FY19																							74	82
FY20																								82

Matrix Showing Pension Increments for a Representative Grade 16 Employee (If indexed with respective yearly CPI-Inflation) **Table A3**

thousand Rupees

Year of retirement	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20
Pension	3.8	3.8	3.8	3.8	8.9	8.9	8.9	8.9	10.2	10.2	11.7	14.1	14.1	14.1	23.8	23.8	23.8	23.8	30.8	38	45.2	45.2	45.2	45.2
CPI YoY	11.8	7.8	5.7	3.6	4.4	3.5	3.1	4.6	9.3	7.9	7.8	12	17	10.1	13.7	11	7.4	8.6	4.5	2.9	4.1	4.7	6.8	10.7
FY97	4.3	4.6	4.9	5.1	5.3	5.5	5.7	5.9	6.5	7	7.5	8.4	9.8	10.8	12.3	13.7	14.7	16	16.7	17.2	17.9	18.7	20	22.1
FY98		4.1	4.4	4.5	4.7	4.9	5.1	5.3	5.8	6.2	6.7	7.5	8.8	9.7	11	12.2	13.1	14.3	14.9	15.3	16	16.7	17.9	19.8
FY99			4.1	4.2	4.4	4.6	4.7	4.9	5.4	5.8	6.2	7	8.2	9	10.2	11.4	12.2	13.2	13.8	14.2	14.8	15.5	16.6	18.3
FY00				4	4.2	4.3	4.4	4.6	5.1	5.5	5.9	6.6	7.7	8.5	9.7	10.7	11.5	12.5	13.1	13.5	14	14.7	15.7	17.4
FY01					9.2	9.6	9.9	10.3	11.3	12.2	13.1	14.7	17.2	18.9	21.5	23.9	25.7	27.9	29.1	30	31.2	32.7	34.9	38.6
FY02						9.2	9.5	9.9	10.8	11.7	12.6	14.1	16.5	18.1	20.6	22.9	24.6	26.7	27.9	28.7	29.9	31.3	33.4	37
FY03							9.1	9.6	10.4	11.3	12.1	13.6	15.9	17.5	19.9	22.1	23.7	25.8	26.9	27.7	28.9	30.2	32.3	35.7
FY04								9.3	10.1	10.9	11.8	13.2	15.4	17	19.4	21.4	23	25	26.1	26.9	28	29.3	31.3	34.7
FY05									11.1	12	13	14.5	17	18.7	21.3	23.6	25.3	27.5	28.8	29.6	30.8	32.3	34.5	38.2
FY06										11	11.9	13.3	15.6	17.1	19.5	21.6	23.2	25.5	26.3	27.1	28.2	29.5	31.5	34.9
FY07											12.6	14.2	16.6	18.2	20.7	23	24.7	26.8	28	28.8	30	31.5	33.6	37.2
FY08												15.8	18.5	20.4	23.1	25.7	27.6	30	31.3	32.2	33.6	35.1	37.5	41.5
FY09													16.5	18.2	20.7	22.9	24.6	26.8	28	28.8	30	31.4	33.5	37.1
FY10														15.5	17.7	19.6	21	22.9	23.9	24.6	25.6	26.8	28.6	31.7
FY11															27.1	30	32.2	35	36.6	37.7	39.2	41.1	43.8	48.5
FY12																26.4	28.4	30.8	32.2	33.1	34.5	36.1	38.6	42.7
FY13																	25.6	27.8	29	29.8	31.1	32.5	34.8	38.5
FY14																		25.9	27	27.8	28.9	30.3	32.4	35.8
FY15																			32.2	33.1	34.5	36.1	38.5	42.7
FY16																				39.1	40.7	42.6	45.5	50.4
FY17																					47	49.2	52.6	58.2
FY18																						47.3	50.5	55.9
FY19																							48.2	53.4
FY20																								50

Pension Computation for Family of Representative Pensioners Retired in Grade 16 and Grade 17 **Annexure Table A 4**

		Grade -16 employee			Grade -17 employee		
	Date of retirement	1-Oct-20	1-Oct-15	1-Oct-10	1-Oct-20	1-Oct-15	1-Oct-10
	Age at retirement and death	60 y	55 y	50 y	60 y	55 y	50 y
	Length service	35 y	30 y	25 y	35 y	30	25 y
A.	Basic pay @ minimum scale	18,910	12,910	6,060	30,370	20,680	9,850
B.	Retiring year increment	1,520	1,035	0	2,300	1,555	0
C.	Total emoluments (A+B)	20,430	13,945	6,060	32,670	22,235	9,850
D.	Gross pension (70 percent of C)	14,301	9,762	3,535	22,869	15,564	5,746
E.	Family pension w.e.f date of death (75 percent of D)	10,726	7,321	2,651	17,152	11,673	4,309
F.	Retrospective Increments						
I	15% increase of 2010	0	1,098	398	0	1,751	646
II	15% increase of 2011	1,609	1,263	457	2,573	2,014	743
III	20% increase of 2012	0	0	701	0	0	1,140
IV	10% increase of 2013	0	968	421	0	1,544	684
V	10% increase of 2014	0	1,065	463	0	1,698	752
VI	7.5% increase of 2015	925	879	382	1,479	1,401	620
VII	10% increase of 2016	1,326	1,259	547	2,120	2,008	890
VIII	10% increase of 2017	1,459	1,385	602	2,332	2,209	979
IX	10% increase of 2018	1,604	1,524	662	2,566	2,430	1,076
X	Minimum pension payable Rs.			7,500			
XI	10% increase of 2019	1,765	1,676	750	2,822	2,673	1,184
XII	20% Medical allowance of 2010	2,145	1,684	610	3,430	2,684	991
XIII	25% increase on medical allowance	536	421	152	858	671	248
G.	**Net pension payable (without commutation) (E + F)**	**22,095**	**20,544**	**9,012**	**35,332**	**32,757**	**14,263**
H.	**Pension as % of basic pay (replacement rate) (G/A*100)**	**117**	**159**	**149**	**116**	**158**	**144**

Note: The representative employee was born on 1st Oct 1960 and was appointed on 1st Oct 1985.

Source: Authors' calculations based on pension increase circulars available on the website of Ministry of Finance. The calculation has also been validated using the Pension calculator available on the website of the Government of KPK.