

CURBING BRIBERY

Bribery remains one of the most pressing challenges undermining good governance, economic development, and public trust in India. Despite multiple laws and institutional frameworks in place, the problem continues to persist across sectors—from public offices and law enforcement agencies to the education and healthcare systems. Tackling bribery is not just about punishing the corrupt but also about reforming systems to ensure transparency, accountability, and efficiency in public service delivery.

The Prevention of Corruption Act, 1988, amended in 2018, serves as the principal legislation to combat corruption in India. It criminalizes not just the act of giving and taking bribes but also the conduct of public servants who misuse their position for personal gain. While the legal framework is robust on paper, implementation remains a major concern. Bribery cases often drag on for years, and conviction rates are relatively low. According to reports by anti-corruption bodies, many cases are delayed due to procedural loopholes, political interference, or lack of sufficient evidence and witness protection.

High-profile cases, such as those involving bureaucrats, police officers, and public representatives, periodically surface, making headlines and highlighting the scale of the problem. A recent example includes the conviction of a government clerk in Jammu and Kashmir, caught accepting a bribe for processing a file. Although justice was eventually served in that case, it took over a decade to secure the conviction, reflecting the sluggish pace of the legal process. Such delays can erode public faith in the judiciary and embolden corrupt officials.

Technology can play a transformative role in reducing the scope of bribery. The digitization of public services, implementation of e-governance platforms, and use of biometric identification systems like Aadhaar have already reduced face-to-face interactions, limiting opportunities for extortion. However, technology alone is not enough. There must be institutional will and political commitment to root out corruption from within.

Furthermore, public awareness and citizen participation are critical in this fight. Tools such as the Right to Information (RTI) Act have empowered citizens to seek transparency in government functioning. Whistleblower protection, though legislated, remains weak in practice. Many fear retaliation for reporting corruption, which discourages civic engagement.

It is also vital to strengthen institutions like the Central Vigilance Commission (CVC), Lokayuktas, and Anti-Corruption Bureaus at the state level. These bodies should be made autonomous, well-funded, and free from political pressure to investigate and prosecute bribery cases effectively. Judicial reforms to fast-track corruption cases, particularly involving public servants, are equally essential.

Bone Health Assessment in Radiology-Dual-Energy X-ray Absorptiometry (DEXA) Scan

■ DR GITA DEVI & DR ANKIT PRABHAKAR

A DEXA scanner is an X-ray source machine with lower radiation exposure (0.001 to 0.005 mSv) comparable to the amount of natural background radiation a person is exposed to in everyday life. It is a gold standard tool for bone mineral density (BMD) calculation for the diagnosis of osteoporosis and fracture risk assessment. It is a cost-effective and relatively easily available imaging investigation.BMD is calculated as score. Classification of BMD according to T-score value: Normal: greater than -1.0, Osteopenia: -1.0 to -2.5, Osteoporosis: less than -2.5, Severe or established osteoporosis: less than -2.5 plus history of fragility fractures.

WHO SHOULD UNDERGO A DEXA SCAN, AND WHEN?

To diagnose osteoporosisin:

Females 65 years or older and males 70 years or older-for asymptomatic osteoporosis

For females younger than 65 years if they are at risk for osteoporosis,e.g patients on oestrogen therapy, or with history of maternal hip fracture beyond 60 years, or those with low body mass (BMI <18.5 kg/m2) or with history of amenorrhea for 1 year or more before 42 years of age.

Male or female younger than 65 years/70 years, respectively, with the risk factors like current cigarette smoker or loss of height or thoracic kyphosis

Other group of the population for screening for osteoporosis at any age with osteopenia or fragility fracture on imaging studies, 50 years or older individuals developing fracture (of hip, spine, wrist or proximal humerus) with trivial trauma/no trauma, individuals expected to receive or are receiving glucocorticoid therapy equivalent to 5mg or more of prednisolone daily for 3 or more consecutive months, candidates planning to begin medication for osteoporosis, adult males (18 years or above) with hypogonadism or those who have been castrated due to surgery or chemotherapy, candidates receiving radiation or chemotherapy for malignancies, patients with bone dysplasias such as osteogenesis imperfecta, osteopetrosis.

Systemic conditions like chronic renal failure, arthritis, eating disorders, organ transplantation, prolonged immobilization, gastric bypass surgery for obesity, malnutrition, inflammatory bowel disease, malnutrition, chronic alcoholism, osteopenia, Vit D deficiency, multiple myeloma, cirrhosis, and chronic illnesses.Patients on some drugs.e.g., anticonvulsants, chronic heparin.Patients with some diseases -e.g., Hypo and hyperparathyroidism, Cushing syndrome

To monitor changes in bone mineral density after treatment or exercise.

To estimate fracture risk-e.g.In postmenopausal women or chronic conditions like arthritis or post treatment assessment, hypogonadism, menopause before 45 years, significant weight



loss or low BMI. FRAXis a fracture risk assessment tool that guidesto start the treatment if the 10-year fracture risk is > 20% for major osteoporotic fractures and > 3% for hip fractures, based on the FRAX calculation.

Monitoring bone health over time. e.g., in patients already diagnosed with osteoporosis or osteopenia-Usually repeated every 1-2 years.People on osteoporosis treatment or discontinued treatment.

SITUATIONS WHERE A DEXA SCAN SHOULD BE AVOIDED

Recently administered oral contrast agents for imaging or radionuclides (DEXA should be done after 2 weeks of intake of oral contrast agents), pregnancy, scoliosis, severe degenerative disease, implants, hardware, devices, and foreign materials in the areas of scan, extremes of high or low body mass index(BMI).

DO'S IN DEXA SCANNING

Patient history & examination is important prior to DEXA scan. E.g., history of previous surgery, implants, systemic diseases, etc.Patient has to remove all metal items, such as jewellery, watches, and belts, as these can interfere with the scan. The patient should wear loose-fitting clothing without metal zippers or buttons, or they may be asked to change into a hospital gown.For whole body DEXA/Body composition studies patient is scanned in the morning after a 12-hour overnight fasting.

DON'TS IN DEXA SCANNING

Do not take calcium tablets within 24 hours before examinations.Do not move during the DEXA scan

Don't undergo a DEXA scan soon after a barium study, nuclear medicine scan, or contrast CT within the past 1-2 weeks, as contrast can interfere with the BMD measurements.Avoid DEXA scan during pregnancy.

National Flag Day 2025: The Tricolour as a Pillar of India's Sovereignty and National Identity

■ PROF. DINESH CHANDRA RAI

As July 22, 2025, marks another National Flag Day, it prompts a scholarly introspection into the enduring significance of India's National Flag. This annual observance is not merely a ceremonial acknowledgement but a profound reminder of the historical journey, philosophical underpinnings, and contemporary relevance of a symbol that encapsulates the very essence of a sovereign, socialist, secular, democratic republic. The Tricolour, far from being a static emblem, is a dynamic representation of national identity, sacrifice, and aspiration, constantly interacting with the evolving narrative of the nation.

The genesis of the Indian National Flag is deeply intertwined with the nation's struggle for independence. While July 22, 1947, marks its formal adoption by the Constituent Assembly, its conceptualization traces back to earlier designs that emerged from the fervent nationalist movements. Early iterations, such as the 1906 Calcutta Flag and Madam Bhikaji Cama's flag of 1907, reflected nascent nationalist sentiments. The design presented by Pingali Venkayya to Mahatma Gandhi in 1921, incorporating a spinning wheel, laid the foundational blueprint.

This evolution culminated in the present form, where the spinning wheel was replaced by the Ashoka Chakra, a deliberate choice reflecting ancient Indian wisdom and forward momentum. This historical trajectory underscores the flag's role as a culmination of collective nationalist aspirations, refined through thoughtful deliberation.

Each element of the Tricolour carries profound symbolic weight. The top saffron band represents valour and the spirit of renunciation, a homage to the sacrifices made for the nation's liberty. The white middle band signifies peace, truth, and purity; articulating the nation's commitment to ethical conduct and transparency. The green band at the bottom denotes fertility, growth, and the nation's relationship with its rich natural bounty. Central to the white band is the navy blue Ashoka Chakra, the "wheel of law" (Dharma Chakra) derived from the Lion Capital of Ashoka at Samath. Its 24 spokes epitomize continuous movement and progress, symbolizing life in dynamism and the stagnation associated with inertia. It is a powerful visual metaphor for the nation's commitment to justice, righteousness, and the relentless pursuit of advancement.

The legal framework governing the flag's display

reinforces its sacred status. The Flag Code of India, 2002, alongside the Prevention of Insults to National Honour Act, 1971, provides detailed guidelines for its hoisting, usage, and respectful handling. These provisions are not arbitrary restrictions but a structured approach to maintain the dignity and sanctity of a national symbol. They prescribe that the flag must always be positioned at a place of honour; never allowed to touch the ground, and never used as drapery or costume. Such regulations ensure that the flag remains an object of reverence, distinct from ordinary objects, and that its display universally conveys respect for the nation.

Beyond its symbolic and legal dimensions, the National Flag possesses a profound significance in binding together a diverse populace. It serves as a visual representation of national unity, transcending linguistic, regional, religious, and socio-economic differences. In a country as heterogeneous as India, the Tricolour stands as a common denominator; reminding citizens of their shared heritage and collective future. This unifying power is evident in moments of national celebration, such as Independence Day and Republic Day, where its presence evokes a shared sense of belonging and collective pride. It is a constant reminder of the ideals of democracy, justice, liberty, equality, and fraternity enshrined in the Constitution.

Historically, the flag has been a potent rallying point. During the pre-independence era, movements like the Flag Satyagraha in Nagpur in 1923 highlighted the people's assertion of their right to display the flag, thereby challenging colonial authority. In the post-independence period, while ceremonial unfurling by the Prime Minister at the Red Fort and Chief Ministers in state capitals has become an established tradition, the flag has consistently appeared during moments of both jubilation and sorrow. It is draped over the coffins of martyrs, acknowledging their supreme sacrifice, and waves prominently during national sporting events, connecting individual achievements to national pride.

In contemporary India, the flag continues to hold immense relevance. Its presence in public spaces, government institutions, educational establishments, and even private homes contributes to a subtle but pervasive sense of nationhood. This phenomenon, often termed "banal nationalism," integrates the national symbol into the fabric of daily life, embedding the idea of the nation without overt

proclamation. Educational institutions, in particular, play a crucial role in imparting civic responsibility through regular flag-hoisting ceremonies and the singing of the national anthem. The Tricolour thus encourages citizens to reflect on their duties and rights, promoting active participation in the democratic process and adherence to constitutional principles. National Flag Day in 2025 thus offers an opportunity for reflection, not just on the flag's visual appeal, but on its profound historical weight, its ethical symbolism, and its continuing role as a central pillar of India's national identity. It is a symbol that commands respect, not through coercion, but through the inherent values it represents and the collective memory it embodies

About the author.
Prof. Dinesh Chandra Rai, Vice Chancellor of BRA Bihar University, is a distinguished academician who holds a profound respect for the Indian Knowledge System. He possesses a deep understanding of Indian ethos and values, reflecting his comprehensive grasp of India's cultural and moral principles.

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General Zorawar Singh Kahluria (Bode, 1784): A Sikh General with an Indian Military Origin

■ DR RAKESH VERMA

General Zorawar Singh Kahluria (1784-1841) was a military general of the Sikh Empire of India. He served under Maharaja Ranjit Singh and was instrumental in expanding the empire's boundaries.

Early Life and Origins

Zorawar Singh was born in September 1784 in the village of Kahlur in the present-day state of Himachal Pradesh, India. His family were Dogra Rajputs. At a young age, Zorawar Singh left his home and sought employment under Raja Jaswant Singh of Guler; a small kingdom in the Kangra hills. After Jaswant Singh's death, Zorawar Singh left Guler and joined the service of Maharaja Ranjit Singh in Lahore.

Military Career

Zorawar Singh's military career began in the Sikh army as a common soldier. However, his courage, discipline, and military acumen soon caught the attention of his superiors. He quickly rose through the ranks and was appointed as the governor of Kishtwar in 1820.

Conquest of Ladakh

As governor of Kishtwar, Zorawar Singh was tasked with expanding the Sikh Empire's influence in the Himalayan region. He launched a series of military campaigns to conquer the neighboring territories of Ladakh and Baltistan.

In 1834, Zorawar Singh led an army of 5,000 soldiers across the Zoji La pass into Ladakh. He defeated the Ladakhi forces in several battles and captured the capital city of Leh. The conquest of Ladakh added a vast territory to the Sikh Empire and gave it control over the lucrative trade routes between India and Central Asia.

Conquest of Baltistan

After the conquest of Ladakh, Zorawar Singh turned his attention towards Baltistan. In 1840, he led an army into Baltistan and defeated the Balti forces in a series of battles. The conquest of Baltistan further expanded the Sikh Empire's control over the Himalayan region.

Invasion of Tibet

In 1841, Zorawar Singh launched an ambitious invasion of Tibet. He led an army of 6,000 soldiers across the Himalayas and into western Tibet. The Sikh forces initially met with success, capturing several Tibetan forts and monasteries. However, the harsh winter conditions and the strong Tibetan resistance soon began to take their toll.

Death and Legacy

In December 1841, Zorawar Singh was killed in a battle against the Tibetan forces near Lake Mansarovar. His death marked the end of the Sikh Empire's expansionist ambitions in the Himalayas. Zorawar Singh is remembered as one of the most successful mil-

itary generals of the Sikh Empire. He was a skilled strategist, a courageous fighter, and a charismatic leader. His conquests expanded the Sikh Empire's boundaries and gave it control over a vast territory in the Himalayas. He is also remembered for his brutality and his disregard for the local cultures and religions.

Early Life and Ascent

Zorawar Singh Kahluria was born into a Rajput family in the village of Kahlur, located in the Kangra hills of present-day Himachal Pradesh. His early life remains relatively obscure, but historical accounts suggest that he possessed a restless spirit and a natural aptitude for military matters. Driven by ambition and a desire for adventure, he left his home at a young age and sought employment under Raja Jaswant Singh of Guler; a small kingdom in the Kangra hills. After the death of Raja Jaswant Singh, Zorawar Singh's path led him to Lahore, the capital of the Sikh Empire, where he joined the service of Maharaja Ranjit Singh. Recognizing his potential, the Maharaja appointed him as an inspector of provisions for the garrisons stationed in the hilly regions of Jammu. This seemingly minor role provided Zorawar Singh with invaluable knowledge of the terrain, local resources, and the logistical challenges of operating in the rugged Himalayan landscape. His dedication and organizational skills soon caught the attention of higher-ranking officials, leading to his appointment as the governor of Kishtwar in 1820. This marked a turning point in Zorawar Singh's career; as he was now entrusted with significant administrative and military responsibilities. Kishtwar, a strategically important region bordering Ladakh, served as the launchpad for his future conquests and cemented his reputation as a capable and ambitious commander.

Military Prowess and Expansionist Campaigns

Zorawar Singh's military prowess was characterized by his bold strategies, meticulous planning, and unwavering determination. He possessed a keen understanding of mountain warfare, which allowed him to overcome seemingly insurmountable obstacles and outmaneuver his adversaries. His troops, primarily composed of Dogra Rajputs, were fiercely loyal and highly disciplined, reflecting his leadership and training.

Conquest of Ladakh (1834-1840)

Zorawar Singh's most significant military achievement was the conquest of Ladakh, a remote and strategically important region located in the Himalayas. Ladakh, with its rugged terrain, harsh climate, and diverse population, presented a formidable challenge to any invading force. However, Zorawar Singh recognized the region's economic potential, particularly its control over the lucrative trade routes between India and Central Asia, and its strategic importance as a buffer zone against potential threats from the north. In 1834, Zorawar Singh launched his first invasion of

Ladakh with a force of approximately 5,000 soldiers. Crossing the formidable Zoji La pass, which stands at an elevation of over 11,500 feet, his troops faced extreme weather conditions and treacherous terrain. Despite these challenges, they pressed forward, engaging the Ladakhi forces in a series of battles. Zorawar Singh's tactical brilliance and the superior training of his troops led to decisive victories, culminating in the capture of Leh, the capital of Ladakh. Following the initial conquest, Zorawar Singh faced numerous rebellions and uprisings from the Ladakhi population, who resented the imposition of Sikh rule and the heavy taxation. However, he ruthlessly suppressed these revolts, consolidating his control over the region. He also implemented a series of administrative reforms, aimed at improving governance and promoting economic development. By 1840, Zorawar Singh had firmly established Sikh control over Ladakh, adding a vast and strategically important territory to the Sikh Empire. The conquest of Ladakh not only expanded the empire's boundaries but also provided access to valuable resources and trade routes, significantly boosting its economic power.

Conquest of Baltistan (1840-1841)

Following the successful conquest of Ladakh, Zorawar Singh turned his attention towards Baltistan, another strategically important region located to the west of Ladakh. Baltistan, like Ladakh, was a mountainous region with a diverse population and a history of independence. Zorawar Singh recognized the region's strategic importance as a gateway to Central Asia and its potential for economic exploitation. In 1840, he launched an invasion of Baltistan with a force of approximately 8,000 soldiers. Crossing the high mountain passes, his troops faced fierce resistance from the Balti forces, who were determined to defend their homeland. However, Zorawar Singh's military expertise and the superior training of his troops once again proved decisive. After a series of hard-fought battles, he captured Skardu, the capital of Baltistan, and effectively brought the region under Sikh control. The conquest of Baltistan further expanded the Sikh Empire's influence in the Himalayas and solidified its control over the trade routes between India and Central Asia. It also provided Zorawar Singh with a base of operations for his ambitious plan to invade Tibet.

Invasion of Tibet (1841)

Zorawar Singh's most audacious and ultimately ill-fated campaign was the invasion of Tibet in 1841. Driven by ambition and a desire to further expand the Sikh Empire's influence, he led a force of approximately 6,000 soldiers across the Himalayas and into western Tibet. The invasion was initially successful, with the Sikh forces capturing several Tibetan forts and monasteries. However, the harsh winter conditions, the high altitude, and the strong

Tibetan resistance soon began to take their toll. The Sikh troops, ill-equipped for the extreme cold and lacking adequate supplies, suffered heavy casualties from exposure and disease. The Tibetan forces, supported by the local population, launched a counter-offensive, harassing the Sikh troops and cutting off their supply lines. Zorawar Singh, realizing the precariousness of his situation, attempted to retreat, but his forces were trapped by the advancing Tibetan army. In December 1841, Zorawar Singh was killed in a fierce battle near Lake Mansarovar. His death marked the end of the Sikh Empire's ambitious attempt to conquer Tibet and signaled a turning point in the region's history.

Valour and Military Strength

Zorawar Singh's military strength lay in his ability to adapt to the challenging terrain and climate of the Himalayas. He understood the importance of logistics and ensured that his troops were well-supplied, even in the most remote areas. He also fostered a strong sense of discipline and camaraderie among his soldiers, which contributed to their effectiveness in battle.

His campaigns were marked by several key characteristics:

Adaptability: Zorawar Singh was able to adapt his tactics and strategies to the specific challenges of mountain warfare. He made use of local guides and resources and was able to overcome seemingly insurmountable obstacles.

Logistical Prowess: He was a master of logistics, ensuring that his troops were adequately supplied even in the most remote and inhospitable regions. **Discipline and Training:** Zorawar Singh instilled a high degree of discipline and training in his troops, making them a formidable fighting force. **Boldness and Determination:** He was known for his boldness and determination, which inspired his troops and allowed him to achieve seemingly impossible feats.

Legacy

Zorawar Singh's legacy is complex and multifaceted. He is remembered as a brilliant military strategist, a courageous leader, and a key figure in the expansion of the Sikh Empire. His conquests brought vast territories under Sikh control and significantly enhanced the empire's economic and strategic power. However, he is also criticized for his ruthlessness and his disregard for the local cultures and religions of the regions he conquered. His campaigns were often marked by violence and destruction, and his administration was characterized by heavy taxation and oppression. Despite these criticisms, Zorawar Singh remains a significant figure in the history of the Himalayas. His military achievements and his impact on the region continue to be studied and debated to this day. He is a symbol of both the ambition and the brutality of empire, and his story serves as a reminder of the complex and often tragic consequences of conquest.