

OPEN BANKING AND DIGITAL PAYMENTS

Open banking is a financial technology (fintech) innovation that allows third-party financial service providers to access financial information and offer services through secure Application Programming Interfaces (APIs). The key concept behind open banking is to promote transparency, enhance customer choice, and foster competition within the financial sector by enabling the sharing of financial data with customer consent. It shifts traditional banking from a closed, proprietary system to a more interoperable, customer-centric ecosystem. At its core, open banking empowers consumers by providing them with the ability to seamlessly share their financial data across multiple platforms. This can include information like transaction history, bank account details, and spending habits, all shared in a secure and controlled manner. The use of open banking APIs facilitates the integration of services such as budgeting tools, payment solutions, loan comparison platforms, and personal finance management applications. Open banking is poised to revolutionize how banks, fintechs, and other service providers interact, resulting in improved financial services, lower costs, and a more personalized customer experience. Open banking and digital payments go hand-in-hand in reshaping how financial transactions are carried out. Digital payments refer to the transfer of money through electronic means, including credit card transactions, online banking, mobile wallets, and payment gateways. As consumers increasingly adopt digital channels for everyday transactions, the need for fast, secure, and convenient payment methods has grown. Open banking facilitates this shift by enabling faster, more transparent, and cost-effective payment solutions. Open banking APIs are built with robust security protocols, ensuring that consumer data remains protected when sharing financial information between different platforms. Unlike traditional payment methods, which might rely on centralized systems, open banking introduces an added layer of security by leveraging secure authentication mechanisms such as two-factor authentication (2FA) and biometric verification. This significantly reduces the risks associated with fraud and unauthorized transactions.

One of the standout advantages of open banking is its ability to enable real-time payments. Traditional payment systems often have delays due to the involvement of intermediaries like clearing-houses and banks. Open banking enables direct transfers between bank accounts, reducing processing times and the need for third-party intermediaries. This shift is particularly beneficial for businesses and consumers who require instant settlements, such as in e-commerce or peer-to-peer (P2P) transactions. By bypassing traditional payment networks and intermediaries, open banking facilitates cheaper transaction fees. Financial institutions and payment providers can offer more competitive pricing models, benefiting both consumers and merchants. In markets like the European Union, where open banking regulations are being implemented through the Revised Payment Services Directive (PSD2), the reduction of transaction fees has been a major driver of adoption.

Open banking allows fintech companies to build customized financial products, such as budgeting tools, digital wallets, and savings accounts, by leveraging transactional data.

Agro-ecotourism in J&K: An Approach for Sustainable Development

■ DR. BANARSI LAL

Tourism is one of the major sectors of the Union Territory of J&K for the economic growth and development. Agro-ecotourism (AET) is the latest concept in the Indian tourism industry. It normally occurs on farms and is associated with the agriculture. J&K has an immense potential in agro-ecotourism for the economic growth and environmental protection. It is the symbiotic association of farming sector, tourism industry and farm business. It can create the job opportunities for the rural people. The concept of agro-ecotourism entails visiting a working farm or any agriculture, horticulture or agribusiness operation, for the purpose of leisure, refreshment, recreation, education and active involvement in the activities of the agriculture including agricultural operations, fishing, dining and celebrating local festivals with the farming communities. The development of agro-ecotourism is primarily aimed to give awareness and knowledge on conservation of environment and natural resources in a participatory mode with farmers and to improve their socio-economic status. Agro-eco-tourism (AET) as an enterprise possesses immense potential to boost the economic growth especially in the rural areas. Environmental consciousness, increasing interest in culture and heritage, improving villages' accessibility etc. are the factors responsible which are shifting the trend towards agro-ecotourism. Under this scheme key geographic regions are identified for the development of agro-ecotourism. Jammu and Kashmir has tremendous potential for agro-ecotourism due to its unique heritage, culture and natural attractions. Agro-ecotourism is possible in J&K where about 80 per cent people reside in the villages. It can create new jobs in rural areas, attract many youths for rural employment and can slow down the migration of rural people towards the urban areas. Indeed, the economic activity occurs when people link travel with agricultural products, services or experiences to cater the needs of mutual demands. Agro-ecotourism (AET) provides an opportunity to experience the real enchanting and authentic contact with the rural life, taste the traditional food and get experienced with the various farming tasks. This tourism enterprise keeps the tourists relaxed and helps to revitalize in the pure natural environment, surrounded by magnificent agricultural setting. It would also provide tourists with an opportunity to be close to where about 70% of Indians live.

Union territory of Jammu and Kashmir has a brand image of being green and it is blessed with an immense natural beauty. Developing agro-ecotourism in this Union Territory is much easier than many other states/UTs. But this has not been happened in this beautiful UT. Farmers can be trained at the Krishi Vigyan Kendras (KVKs) of the UT for agro-ecotourism before they on for this venture. J&K government can support the farmers for the trainings and provide assistance them for agro-ecotourism. J&K is one of the most beautiful tourists' destinations in the world. This beautiful Union Territory (UT) is characterized by scenic beauty, folded mountains, gushing fountains, cool pollution free breeze, deep gorges, rich wild life, natural waterfalls, alpine pastures, lush green forests, snow clad fields, carpet green turfs, lofty skying grounds, charming gardens, shimmering lakes, apple orchards, benevolent people etc. The industrial sector in J&K is not well developed and Agro-eco-tourism (AET) can play a significant role for the upliftment of the rural economy of the UT. It can improve the quality of life of the rural people of J&K. Agro-ecotourism (AET) entrepreneurship has gained importance as it is seen as a major driving force behind Agro-eco-tourism (AET). J&K has lot to offer to the tourists across the globe because of its scenic beauty, a kaleidoscope of traditions, a variety of cultures and an array of opportunities to explore the outdoors activities through sporting and adventure activities. J&K possess rich diversity of flora and fauna and there are large numbers of international and domestic tourists' destinations throughout the Union Territory. J&K is one of the most important places in terms of tourism in India. Religious places like Raghunath Temple, Amarnath, Mata Vaishno Devi shrine, Shiv Khori Shrine, Baba Aghar Jitto Ji, Siarh Baba, Nao Devian, Deva Mai, Dhansar Baba etc. are in J&K and pilgrims from across the globe used to visit these spots throughout the year and pay homage. Considering this scope for combining the natural resource available in J&K synergistically with agriculture and tourism activities, it is essential to promote the concept of Agro-ecotourism (AET) in the Union Territory.

Many farmers of J&K are losing interest in agriculture because of increasing cost of cultivation and poor returns. Interest among the farmers can be revived by the promotion of agro-ecotourism as it can help them to generate more income. The farmers of J&K can be encouraged for the tourism oriented business in their farms.

Giving incentives to entrepreneurial farmers to set up agro-ecotourism business can help the farmers to set up agro-ecotourism business in their farms. Organic farming can attract the tourists and J&K farmers can fetch more money by growing the organic crops. Farmers of some states have set up organic farms and they are able to attract the tourists. The successful Agro-eco-tourism models can act as a sustainable source of income for rural youths and farm women of the UT. Diversity of flora and fauna can be sustainably utilized through AET. Apart from the core agricultural activities, the animals and fish components can easily be linked with agro-eco-tourism to effectively blend the natural resources within the system in an integrated manner. However, there are no systematic guidelines for the functioning of AET models. There is need to investigate and document the status of AET models in J&K, to study the sustainability of agro-ecotourism model and to promote the agri-tourism entrepreneurship in J&K. Plash (Butea Monosperma) and Kachnar (Boultonia Bahalai) can be useful to make eco-friendly cup and plates and by establishing such types of units employment can be created in the rural areas of J&K. Cottages for lodging and dining of the visitors can be constructed. Horticultural crops nursery activities can be promoted to educate the visitors or tourists about plant propagation techniques. As J&K is rich in biodiversity so biodiversity parks can be established.

Bamboo/wooden handicrafts units can also be established in J&K. Ponds can be developed for initiating the fish angling/boating activities in the UT for the tourists. Primary processing units, value addition kiosks and packaging units for fruits, oil extraction units, vegetables and spices can be established. Rural museums containing the villages' ancestral items can also attract the tourists in J&K. Tourists now-a-days prefer environment friendly tourism and they are ready to pay more for it. Agro-ecotourism will provide not only the employment to the locals but also prevent the migration in the urban areas. It can help to reduce the poverty in the hilly areas of J&K. It will also help to promote the biodiversity and boost the dignity of the farmers. Agro-eco-tourism is different from other sectors of industry. The agro-ecotourism industry can earn a huge amount of money and thus can enhance the income and employment in the rural areas of J&K. It can thus be a source of aid from within the Union Territory, country and out of country. Agro eco-tourism is

directly helpful in correcting UT's economic position and thus can divert the rural people towards progress. Through Agro eco-tourism, government can gain more economic profits from taxes on things tourists use and buy. Agro-eco-tourism can become a major sector influencing all aspects of the rural people. Government should take proper measures for creating framework for the promotion of agro-ecotourism in J&K. The technical expertise is also required for successful promotion of agro eco-tourism and for that purpose Krishi Vigyan Kendras (KVKs) of SKUAST-J and SKAUST-J can play the pivotal role. There is need of proper planning and effective legislation for resource conservation and balanced developmental activities for the promotion of Agro-ecotourism in J&K.

J&K Union Territory can act on the promotion of agro-ecotourism. Agro-eco-tourism units in J&K can help to demonstrate and promote the concept of the agro-eco-tourism to farmers, entrepreneurs, researchers, students and related stakeholders in a scientific manner. The components from agriculture, livestock and fisheries can be included in these units. Indigenous and new varieties of field and horticultural crops can be maintained in the units to serve as information to the visitors and to create awareness about bio diversity in the area. Biodiversity parks comprising of different species (herbs, shrubs, climbers, trees etc.) can be demonstrated in the units. A fish pedicure unit and a public aquarium complex can be maintained. Major fisheries resources of this area can also be displayed in the AET unit.

Other important components are apiculture, recycling of biodegradable waste through composting and vermi-composting, organic inputs preparations, nursery and plant propagation activities etc. Rabbit units and ornamental poultry units can also be established in J&K. Systematic research on development of ecofriendly and sustainable Agro-eco-tourism models to improve the farm income and improve the socio-economic status of the farmers of hilly areas is also needed. There is need to promote the sustainable and ecofriendly Agro-eco-tourism models. There is also need to impart knowledge on sustainable Agro-eco-tourism practices through awareness, trainings and demonstrations. Agro-ecotourism can bring back the farmers specially the rural youths of J&K towards farms.

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Increasing soil pollution, Decreasing Production

■ VIJAY GARG

The friable and pliable substance above the soil ensures life on our earth by germinating seeds and bearing roots. In today's era, it is a strong enabler of ensuring food availability for eight billion people, balancing the deteriorating ecosystem and mitigating the climate crisis to a great extent. But today the existence of nutritious soil for animals itself is in serious danger. Large-scale soil erosion is not only affecting agricultural yields and food security. Rather, it is making the problem of climate change more widespread and complex. With soil degradation, the loss of productivity is gradually increasing; apart from pollution, its scope is also expanding silently due to modern agricultural methods. Degradation of soil quality, accumulation of salt and contamination with toxic chemicals, and decline in crop production come under the ambit of soil erosion. Soil erosion is usually caused by indiscriminate use of existing chemicals (including fertilizers and toxic pesticides), widespread change in traditional land use, deforestation, floods, etc., from drought, waterlogging and climate change. It arises due to reasons like temperature etc. India is an agricultural country, where farming is still the source of livelihood for most of the people. Soil is the backbone of the world's second largest agricultural system spread over an area of 10 lakh 78 thousand square kilometers. The deepening crisis of soil erosion is not only affecting the production, but in the era of climate change, it is causing many problems, which mainly

include ecological imbalance. National Bureau of Soil Survey According to this, about one-third of the soil in India, i.e. about 12 crore hectares, is subject to soil erosion, a significant part of which is affected by ocean salinization. Despite large-scale soil degradation, technology-based intensive agriculture led to increased yields and India is now the second largest producer of agricultural produce. It is self-sufficient in food production. But due to large-scale soil erosion during floods and construction work, accumulation of salinity due to extensive use of chemical fertilizers, increasing acidity and waterlogging etc. A large part of the cultivable land is becoming barren. If soil erosion continues, we may have to import food in the coming years, whereas India, with only 2.4 percent of the world's land area, is capable of feeding 18 percent of the world's population. Apart from uncontrolled farming, widespread change in land use due to large-scale urbanization and industrialization is also responsible for soil erosion. Along with this, India is also the largest country in terms of number of cattle. During their grazing the upper part of the ground Due to removal of vegetation, the upper layer of soil becomes weak and it becomes victim of erosion due to rain and wind. India is the world's largest country in terms of population and agriculture is under constant pressure to produce the food grains required to feed one and a half billion people. Also a large part of the production is wasted due to maintenance and inefficient management. All this ultimately affects the soil. After independ-

ence, keeping in mind the increasing need of food grains and dependence on foreign countries for food grains, the project of Green Revolution was implemented. It was based mainly on artificial irrigation, chemical fertilizers, pesticides and hybrid seeds, the main goal of which was to produce more and more grains. In this effort, soil fertility took a back seat. More and more grains started being produced by continuously growing the same type of crop, due to which the natural nutrients present in the soil started decreasing. Due to indiscriminate use of chemical fertilizers to maintain its fertility, the microorganisms and organic matter present in the soil got destroyed. Currently up to 94 percent in agricultural work Chemical fertilizers are used. Even excessive use of chemical pesticides and fertilizers made our fields and crops poisonous. During the Green Revolution, our grain production increased from 50 million tonnes to 300 million tonnes, but this achievement appears to have been achieved at the cost of fertile soil. In such a situation, rapid soil erosion can cause a serious food security crisis for India's growing population. Soil erosion not only results in reduction in productivity but also reduces the naturally occurring carbohydrates in it. Due to reduction in the quantity of water, its ability to absorb and retain water also reduces to a great extent. As a result, water recharge from water sources reduces significantly, which is reflected in large-scale depletion of groundwater levels and increasing problem of drought in India. Water levels in Haryana and

Punjab, India's largest grain producers, have fallen dangerously low. The rich and fertile soil keeps agriculture-based India safe from global economic fluctuations. That is why in the last few decades large-scale Even in the global recession, the Indian economy continued to grow rapidly with little impact. In today's era, fertile soil is not only necessary for filling the stomach for a country like India, but is also the pivot of the economy. In such a situation, there is a need to bring back the fertility of the soil in a natural way. This will require us to restore the physical, chemical and biological health of the soil, which is a long and complex, but possible process. There will be a need to restore the organicity of the soil which has become fertile by losing its organic elements i.e. carbon. now Only six percent of the total fertilizers being used are fertilizers from organic sources. Need. The aim is to reduce dependence on chemical fertilizers and encourage farming based on organic fertilizers. However, this involves the possibility of reduction in food grain production. In India There has been a rich nature-centred agricultural tradition, based on the harmony of soil capacity, weather and water availability. It should be revived. The crisis of soil and water has reached our plates through our fields. In such a situation, this terrible There is no other option but to take cognizance of the problem and make efforts at the government, society and individual level.

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Reforming Road Taxation: A Call for Fairness, Transparency, and Efficiency

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The simultaneous imposition of toll taxes and a one-time road tax has sparked widespread criticism for its redundancy and perceived unfairness. The one-time road tax, collected during the registration of new vehicles, is intended as a contribution to the development and upkeep of road infrastructure. On the other hand, toll taxes are levied on specific roads or highways for the same purpose. This dual taxation system effectively requires citizens to pay twice for the same service, creating a financially burdensome and logically inconsistent system.

The fairness of this approach comes into question when road users, having already paid a substantial one-time tax, are further burdened with toll taxes to access infrastructure they have ostensibly funded. This not only increases the financial strain on citizens but also undermines the transparency and accountability of tax utilization. If the one-time road tax is truly meant for road maintenance, the rationale for toll taxes becomes unclear. Conversely, if toll revenues are critical for infrastructure funding, the justification for collecting a one-time road tax weakens considerably. Such overlapping taxation practices erode public trust and highlight the need for a more streamlined, fair, and transparent system.

The issue is particularly frustrating for vehicle owners who have already paid the one-time road tax as part of the registration fee, only to face the additional burden of toll taxes. The government must recognize the need for reform to avoid imposing redundant taxes that only serve to increase the financial burden on citizens while failing to deliver real benefits in terms of infrastructure development. There is a lack of transparency and accountability. Toll taxes are often justified as a means to fund the construction and maintenance of roads, bridges, and highways. However, a closer examination reveals several reasons why toll taxes may be unjustified, especially when viewed from the perspective of fairness, transparency, and the financial burden they impose on ordinary citizens. One

of the most glaring issues is the lack of transparency regarding how toll and road tax funds are spent. Often, poor road conditions and delayed repairs raise doubts about whether the funds are being effectively allocated.

Toll collection often continues long after the construction costs of the road have been fully recovered. This gives rise to a perception of exploitation, as toll plazas remain operational indefinitely, even when the initial project costs, including maintenance, have been recovered. Furthermore, many toll roads are operated by private entities or outsourced contractors, with little oversight regarding the allocation of toll revenues. This raises the question: is the money being spent on actual road maintenance, or is it lining the pockets of private companies? Without a clear system of auditing and accountability, toll taxes can easily become nothing more than a cash grab-leaving the public to wonder whether they are truly getting value for their money. This system of collecting taxes from road users and vehicle owners is a serious problem that amounts to double taxation for the same purpose. A core criticism of toll taxes is the perception of double taxation. Citizens already contribute to public infrastructure projects through general taxes, such as income tax, VAT, and fuel taxes. These taxes are often levied with the promise that they will fund various public goods, including roads and highways. Therefore, when toll taxes are imposed, they represent an additional financial burden, particularly for those who regularly use the same roads.

The economic impact of toll taxes extends beyond the immediate financial burden. Toll booths create bottlenecks and congestion, especially during peak hours. This not only wastes time but also increases fuel consumption and pollution. In this sense, the tolling system exacerbates the very issues it aims to solve by introducing inefficiencies into the road network.

It is time to move toward a more transparent and fair system. Toll taxes, in their current form, are a flawed system that fails to justify the burden they place on the public.

While infrastructure development is undeniably important, it should not come at the cost of equity and transparency. The current tolling system needs to be re-evaluated with a focus on fairer, more sustainable ways of funding road networks. Governments should consider alternative funding mechanisms, such as increased fuel taxes, which are already earmarked for infrastructure development, or public-private partnerships with clearly defined and capped profit margins. By ensuring full transparency in the usage of toll revenue, improving the efficiency of road maintenance, and incorporating proper auditing systems, governments can create a more balanced and just approach to road financing.

The unchecked proliferation of toll taxes, especially after the recovery of construction costs, must be curtailed to prevent them from becoming an unfair financial burden on taxpayers. Governments must prioritize transparency, accountability, and rationalization to restore public trust in the tolling system.

In conclusion, the simultaneous imposition of one-time road tax and toll tax without clear justification or accountability creates a strong perception of exploitation. While tolls might be necessary for high-cost projects, their unchecked proliferation and continuation long after cost recovery make them feel like an unfair financial burden on taxpayers. Governments must act swiftly to ensure that road financing systems are fair, transparent, and efficient. Until such reforms are made, toll taxes will continue to remain a contentious issue, undermining public trust and further exacerbating the economic divide. While tolls may be necessary for high-cost projects, their unchecked continuation after cost recovery makes them feel like an unfair financial burden on taxpayers. Governments must act swiftly to ensure that road financing systems are fair, transparent, and efficient. Until such reforms are made, toll taxes will continue to remain a contentious issue, undermining public trust and further exacerbating the economic divide.

Increasing burden on women: Low participation of men in family planning

■ PRIYANKA SAURABH

India's family planning program was launched in 1952 with the aim of controlling population growth through methods such as sterilization. Over the years, this initiative made progress towards population control and sustainability of health services. However, despite the existence of simpler and safer contraceptive options such as male sterilization, it has still not gained widespread social acceptance. According to a report, male sterilization accounts for only 0.3% of all procedures. Despite policy efforts, there is a significant gender disparity in sterilization rates, with women shouldering a greater responsibility due to cultural and social barriers. Despite pioneering family planning programs since 1952, there is a significant gender disparity in sterilization rates in India. Cultural and social norms are behind the gender disparity in sterilization rates and low male participation in contraception. Traditional gender roles in India often consider family planning to be primarily a woman's responsibility. Surveys have shown that women are primarily responsible for sterilization, while men oppose it due to masculinity and ego concerns, making sterilization less acceptable. Many men are unaware of the available options for vasectomy, such as vasectomy. Surveys show that both men and health workers in rural areas often lack awareness about no-scalpel vasectomy, which is a less invasive and safer option, leading to fewer men opting for the procedure. Fear of wage loss and the impact of sterilization on daily earnings discourage men from opting for the procedure. Cash incentives offered by the government to compensate for wage loss are underutilized due to poor dissemination of information, leaving many men unaware of the financial support available. There is a widespread perception that vasectomy is riskier than it actually is, which makes men reluctant to undergo the procedure. Misinformation about the safety of vasectomy, including fear of side effects and complications, often prevents men from considering the procedure. There is a shortage of trained healthcare providers in many rural areas, which limits access to vasectomy procedures. Challenges in India's sterilization program include lack of informed consent. Many women in rural areas are pressured or forced to undergo sterilization procedures without fully understanding the implications of the procedure. The infamous sterilization scandal in Chhattisgarh in 2014, where 15 women died after a botched sterilization camp, highlighted the disregard for informed consent. Sterilization procedures are often performed in poorly equipped health facilities with inadequate sterilization practices, leading to infections and complications. Government targets for sterilization often put pressure on health workers to meet quotas, compromising quality of care and ethical considerations. Sterilization is disproportionately targeted at women, which perpetuates gender inequality and limits reproductive choices. According to NFHS-4 (2015-16), female sterilization is 37.9%, while male sterilization is only 0.3%, highlighting the skewed distribution of sterilization responsibilities in India. Women who undergo sterilization may face social stigma and discrimination, which affects their self-esteem and well-being. While the National Health Policy 2017 has set ambitious targets for male sterilization, implementation has been slow. Despite policy initiatives, male sterilization rates have stagnated due to inadequate focus on addressing barriers that prevent men's participation in family planning programs. Measures to achieve the National Health Policy 2017 target of 30% male sterilization Increase awareness and education. Focused educational campaigns to raise awareness about the safety and benefits of male sterilization can encourage greater participation. Information campaigns should emphasize the benefits of no-scalpel sterilization, highlighting its safety and minimal recovery time. Offering men more attractive financial incentives to opt for sterilization can increase participation.

Achieving the National Health Policy 2017 target of 30% male sterilization by 2025 is crucial for gender equality in family planning. Addressing cultural, economic, and infrastructural barriers can promote male participation. Best practices from other countries, such as community leader involvement and targeted education, will accelerate progress. Vasectomy is a simpler and safer procedure than female sterilization. Its adoption will not only reduce health problems for women but also promote gender equality in society. India must establish family planning as a shared responsibility through education, awareness, and economic incentives. Family is not just a woman's responsibility.