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One Small Rover, One Giant Vision
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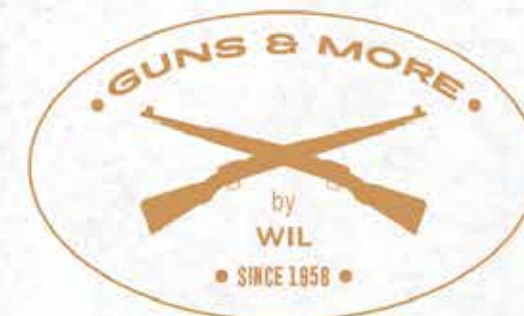
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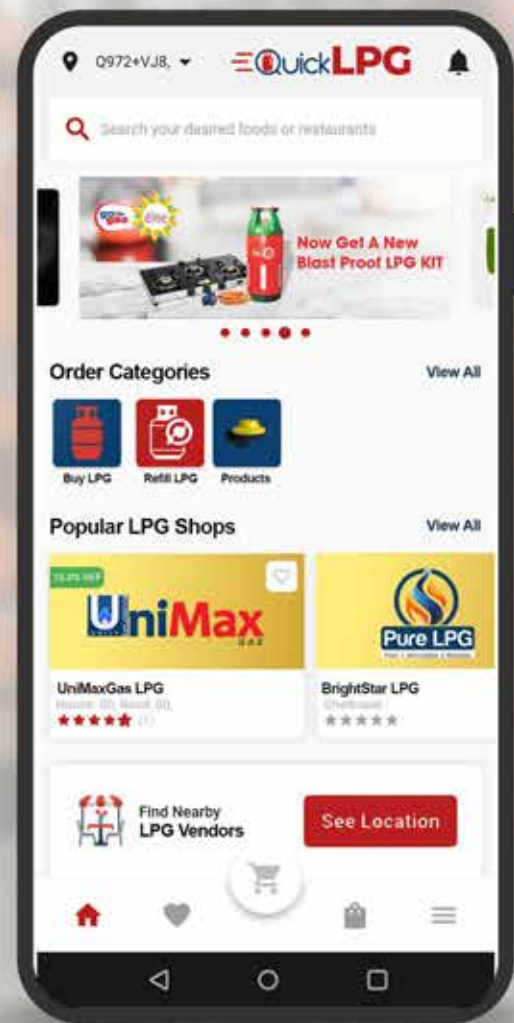
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EDITORIAL



Pakistan's Digital Moment: Google's Arrival and the Road Ahead

Pakistan is entering a defining phase in its digital journey. The growing presence of Google in the country is more than a corporate development; it is a signal that Pakistan's technology landscape is gaining international attention. For a country with a young population, a rapidly expanding digital economy and a growing pool of technology talent, Google's arrival could open a new chapter of opportunity.

The real importance of this development lies not simply in Google's commercial interests, but in what a stronger relationship with one of the world's most influential technology companies could mean for Pakistan's future. From artificial intelligence and cloud computing to digital skills, entrepreneurship and online business, the potential areas of cooperation are enormous.

Pakistan already has many of the ingredients required for a successful digital economy. Millions of young Pakistanis are using smartphones and digital platforms every day. The country has produced software developers, freelancers, entrepreneurs and technology professionals serving clients and companies across the world. Yet much of this talent remains disconnected from the larger structures of global technology and investment.

This is where the Google opportunity becomes particularly significant. Greater engagement could help connect Pakistani developers, startups, students and businesses with international standards, training and markets. Skills development could become one of the most valuable outcomes. In an economy where traditional employment cannot absorb a rapidly growing workforce, digital skills can create opportunities that extend far beyond Pakistan's borders.

Artificial intelligence presents an even larger opportunity. The global technology race is moving rapidly toward AI, and Pakistan cannot afford to remain a passive consumer of technologies developed elsewhere. With the right investment in education, research and digital infrastructure, Pakistani professionals could develop AI solutions tailored to local and regional challenges in agriculture, healthcare, education, finance, manufacturing and public services.

The private sector also has much to gain. Small and medium-sized businesses can use cloud computing, digital marketing, e-commerce and AI-powered tools to increase productivity and reach international customers. Digital platforms are reducing the importance of geography, allowing even relatively small Pakistani enterprises to participate in global markets.

But technology alone will not transform the economy. Pakistan needs a policy environment that encourages innovation and investment. Reliable internet connectivity, affordable digital infrastructure, cybersecurity, data protection, modern education and predictable regulations are essential foundations of a competitive digital economy.

There is also a broader responsibility for policymakers. Pakistan must ensure that its engagement with global technology companies creates lasting local capacity. The objective should not merely be to expand the consumption of foreign digital products. It should be to develop Pakistani developers, entrepreneurs, researchers and technology companies capable of competing internationally.

Universities will have a particularly important role. Academic institutions must move beyond traditional curricula and build stronger links with the technology industry. Students need practical exposure to artificial intelligence, software development, cloud computing, cybersecurity and emerging technologies.

Industry partnerships can help bridge the gap between education and employment. For Pakistan, Google's arrival therefore represents both an opportunity and a test.

The opportunity is to accelerate digital development and create new pathways for economic growth. The test is whether the country can build the institutions, skills and policies needed to convert that opportunity into sustainable national value.

Pakistan has the talent, the market and the ambition. What it needs now is execution. If government, industry, universities and global technology companies work together with a clear long-term vision, the country can move from being a growing digital market to becoming a serious contributor to the global technology economy.

Google's arrival may be the beginning of a new chapter. But the bigger story is not Google. The bigger story is Pakistan and what it chooses to build in this digital moment.

Shahid A. Khan
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PUBLIC AWARENESS MESSAGE

PAKISTAN'S LPG CHALLENGE:

SECURING ENERGY, PROTECTING LIVES AND BUILDING A SAFER LPG FUTURE



AZHAR RAFIQUE
Member, Advisory Board
TechnoBiz

For millions of Pakistanis, LPG is no longer simply an alternative fuel. It is an essential part of daily life. From household kitchens and restaurants to commercial establishments and industries, LPG provides energy where reliable pipeline gas is unavailable or insufficient. Yet behind this growing dependence lies a major national challenge. Pakistan must ensure that LPG remains affordable and available while making its entire supply chain safer, more transparent and better regulated.

Pakistan's LPG sector has expanded because of the country's changing energy requirements and the limitations of the natural gas distribution network. LPG has the unique advantage of being transportable to areas where pipeline infrastructure does not exist. It can reach remote communities, small towns and commercial users without requiring massive investment in gas pipelines. This makes LPG an important component of Pakistan's energy security.

However, ensuring a stable LPG supply remains a challenge. Domestic production does not always meet national demand, making imports an important part of the supply chain. International LPG prices, exchange rate fluctuations, transportation costs and global geopolitical developments can therefore influence the price paid by Pakistani consumers. A stronger domestic production base, efficient storage infrastructure and diversified import sources are essential for reducing supply risks.

Affordability is another major concern. LPG prices can change as market conditions change, placing pressure on household budgets and businesses. For low and middle income families, increases in cooking fuel costs can have a direct impact on household expenditure. The challenge



for policymakers is to maintain a pricing system that reflects genuine market costs while preventing exploitation, artificial shortages and excessive price differences between regulated and informal markets. But the most urgent issue is safety.

Illegal LPG decanting is one of the most dangerous practices in the fuel sector. Cylinder to cylinder transfer carried out at unauthorized locations can expose workers, customers and surrounding communities to fire and explosion. The risks become even greater when decanting takes place in residential areas, poorly ventilated shops or facilities without appropriate fire protection and technical equipment.

The problem is not limited to illegal decanting. Substandard cylinders, damaged valves, leaking hoses, unsuitable regulators and improper storage can also create serious hazards. Consumers frequently have limited knowledge about how to identify safe LPG equipment. Public awareness must therefore become a central part of the national LPG strategy.

Consumers should purchase LPG only from authorized suppliers and use approved cylinders, regulators and hoses. Cylinders should be stored upright in properly ventilated locations and kept away from sources of heat and ignition. Any suspected leakage should be treated as an emergency. Most importantly, consumers should never attempt to transfer LPG be-

tween cylinders themselves.

The responsibility, however, does not rest with consumers alone. Regulators, provincial governments, local administrations and LPG companies must work together to enforce safety standards. Regular inspections, cylinder testing, licensing of distributors, proper filling facilities and strict action against illegal decanting can significantly reduce the risk of accidents.

The legitimate LPG industry also has an important role to play. Companies investing in modern bottling plants, certified equipment, trained personnel and proper distribution networks should be supported because a professional LPG sector benefits both consumers and the national economy. Strong enforcement should distinguish responsible businesses from operators who ignore safety requirements.

LPG can play a vital role in Pakistan's energy transition and energy security. But achieving that potential requires a national commitment to safety, quality, affordability and responsible regulation. Pakistan does not merely need more LPG. It needs a modern LPG ecosystem in which every cylinder is safe, every filling facility is properly regulated and every consumer understands how to use this valuable fuel responsibly.

Safe LPG is not only an industry responsibility. It is a national responsibility.



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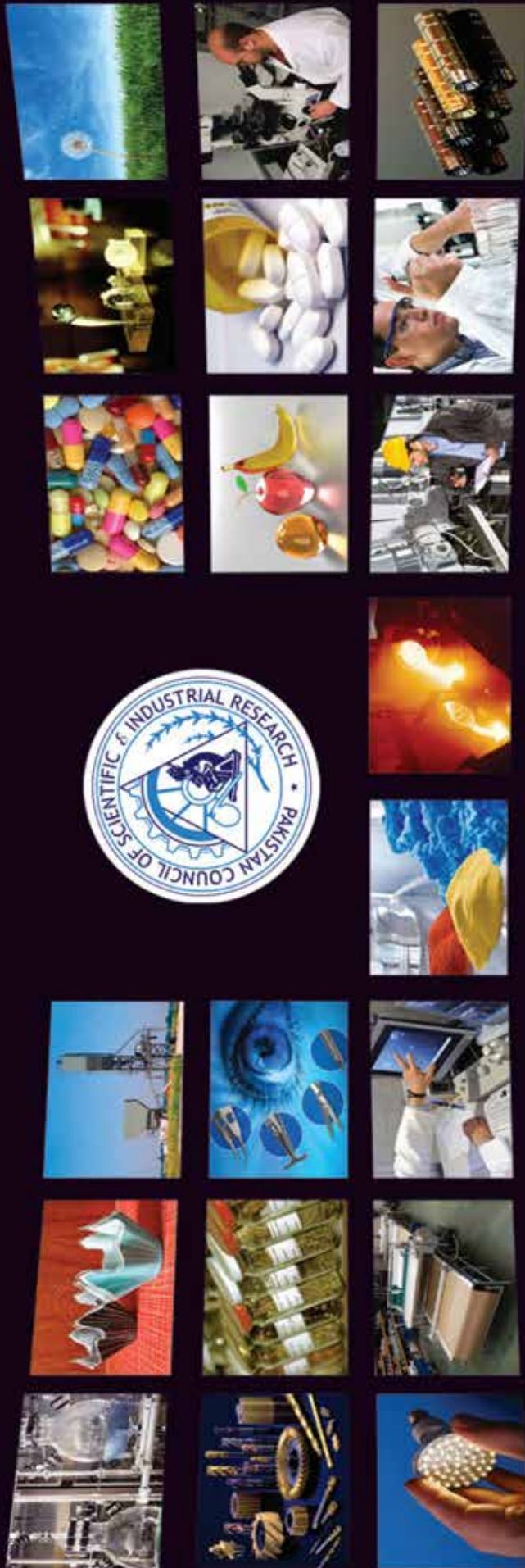


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55 DEGREE CONSTANT SMART WARM CUP

The 55 Degree Constant Warm Cup is a smart and practical gadget designed for coffee and tea lovers who enjoy their favourite drinks at a consistent temperature. Unlike repeatedly reheating a beverage, which can affect its taste, this innovative cup and coaster system helps maintain warmth for a more enjoyable drinking experience. Its intelligent gravity induction switch automatically activates heating when the cup is placed on the coaster and cuts off power when the cup is removed, helping prevent dry burning and unnecessary energy use. The versatile warming coaster is compatible with a range of containers, including ceramic cups, milk bottles, stainless-steel cups, glass cups, and other suitable beverage containers. Featuring a durable tempered-glass panel, the coaster is wear-resistant, waterproof, safe, and pleasant to the touch. The ceramic cup offers a generous 420ml capacity, while the compact design makes it suitable for desks, offices, homes, and workspaces. Combining convenience, intelligent functionality, and a sleek modern design, this gadget is an excellent companion for everyday hot drinks. It also makes a thoughtful gift for professionals, students, and anyone who spends long hours working or reading.



Portable Water Dispenser

The Portable Electric Water Dispenser Pump is a modern and convenient solution for effortless water dispensing from large bottles. Designed with a one-touch automatic operation, it eliminates the need for manual pumping or lifting heavy water containers. Simply press the button and enjoy a smooth, continuous flow of water within seconds. This device features a rechargeable battery with USB charging, ensuring long-lasting performance and energy efficiency. Made from BPA-free, food-grade materials, it guarantees safe and hygienic drinking water for everyday use. Compact, lightweight, and easy to install, it fits most standard water bottles. It offers a practical, mess-free, and user-friendly hydration experience. Its quiet motor ensures minimal noise during operation, while the durable build enhances reliability. Perfect for daily use, it simplifies access to clean drinking water anytime, anywhere.



Remote ID Drone Detector

The Remote ID Drone Detector is a cutting-edge device designed to identify and monitor nearby unmanned aerial vehicles (UAVs) in real time. As drones become increasingly common for recreational, commercial, and industrial use, ensuring secure and compliant airspace is essential. This detector captures Remote ID signals broadcast by compliant drones, providing information such as the drone's unique ID, location, altitude, speed, and operator coordinates. Ideal for airports, government facilities, critical infrastructure, and large public events, the Remote ID Drone Detector enhances situational awareness and helps authorities quickly distinguish between authorized and potentially harmful drones. Easy to deploy and compatible with mobile and desktop interfaces, it strengthens safety protocols, supports regulatory compliance, and enables proactive responses to unauthorized or rogue aircraft.



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GOOGLE ARRIVES IN PAKISTAN: THE DIGITAL MOMENT HAS BEGUN



Pakistan's digital transformation gains momentum with Google's first office, signaling international confidence in its technology potential. The move could accelerate growth in AI, cloud computing, cybersecurity and digital services while creating skilled jobs and export opportunities. With stronger infrastructure, education, investment and supportive policies, Pakistan can evolve from technology consumer to global producer and exporter.

Pakistan is entering a defining chapter in its digital transformation as Google opens its first office in the country. The development represents far more than the establishment of a corporate presence. It signals growing international confidence in Pakistan's technology potential, its young and increasingly connected population, and the expanding capabilities of its digital workforce. At a time when artificial intelligence, cloud computing, cybersecurity and digital commerce are reshaping economies around the world, Google's arrival could become an important catalyst for Pakistan's ambitions to build a stronger technology driven economy.

Pakistan has spent more than a decade building its digital ecosystem through software companies, freelancers, technology entrepreneurs and startups. Pakistani developers and IT professionals have established a growing reputation in international markets, providing software development, digital marketing, design, artificial intelligence and other technology services to clients around the world. The country's large young population provides an enormous pool of potential talent, while the increasing availability of smartphones, internet services and digital platforms is creating new opportunities for businesses and consumers.

The opening of Google's office comes at a time when Pakistan's technology

sector is becoming increasingly important to the national economy. Information technology and digital services have the potential to generate valuable foreign exchange while creating highly skilled employment. Unlike traditional exports, digital services can be delivered internationally without the movement of physical goods. A programmer working in Islamabad, Lahore, Karachi, Peshawar or another Pakistani city can serve customers in London, Dubai, New York or Singapore from a computer.

This global nature of technology makes the sector particularly attractive for Pakistan. The country needs to expand exports, increase foreign exchange earnings and create productive employment for its growing workforce. A stronger technology sector can contribute to all three objectives. Google's presence can potentially help Pakistani businesses, developers and entrepreneurs gain greater exposure to international technology platforms, expertise and markets.

Artificial intelligence is likely to be one of the most important areas of opportunity. AI is rapidly transforming industries across the world, changing how companies develop software, analyse information, serve customers, manage supply chains and make business decisions. Pakistan cannot afford to remain only a consumer of these technologies. It needs to develop the skills, companies and research capabilities required to participate in the global AI economy.

Pakistan has an important advantage in this competition. Its young population is increasingly familiar with digital technologies, while many students and professionals are already learning programming, data science and AI through online platforms. What is needed now is a larger and more



coordinated national effort to transform this interest into professional expertise.

Google can potentially contribute to this transformation through developer programmes, digital skills initiatives, partnerships with universities and opportunities for technology entrepreneurs. Such initiatives could help create a generation of professionals capable of working with advanced technologies and competing in international markets.

The opportunity extends beyond artificial intelligence. Cloud computing is becoming the foundation of modern business, allowing companies to access powerful computing infrastructure without building expensive data centres themselves. Pakistani businesses are increasingly adopting digital systems, creating demand for cloud professionals, software engineers and cybersecurity specialists.

Cybersecurity will become equally important. As banks, manufacturers, hospitals, retailers and government organisations become more dependent on digital systems, protecting information and infrastructure will become a national economic priority. Pakistan will need a larger pool of cybersecurity professionals capable of protecting businesses from increasingly sophisticated digital threats.

The development of a successful technology economy, however, requires more than the presence of international companies. Pakistan must create the conditions in which local technology companies can grow. Entrepreneurs need access to capital, mentorship, reliable infrastructure and international markets. Universities need stronger connections with industry, while educational programmes must be updated to reflect the skills demanded by the modern technology sector.

The startup ecosystem also requires attention. Pakistan has produced innovative technology companies, but many young businesses struggle to move beyond their initial stages. Access to venture capital remains important, particularly for companies developing products that require several years of investment before reaching international scale.

International technology companies can help strengthen this ecosystem by creating connections between Pakistani entrepreneurs and global markets. Exposure to international standards, technology platforms and experienced professionals can help local startups become more competitive.

Pakistan's digital future must also extend beyond its largest cities. Islamabad,

Lahore and Karachi have become important technology centres, but the country possesses enormous untapped talent in smaller cities and communities. Young people in Peshawar, Mardan, Multan, Swat and other regions should have access to the same digital education and opportunities available in major urban centres.

Reliable internet connectivity is therefore not simply a communications requirement. It is an economic necessity. A fast internet connection can give a student access to world class education, enable a freelancer to serve an overseas customer and allow an entrepreneur to establish a business that reaches international markets.

The government has an important role in creating this environment. Policies covering digital payments, data protection, cybersecurity, artificial intelligence and technology investment need to encourage innovation while protecting consumers and businesses. Regulatory certainty is particularly important for international investors and local entrepreneurs making long term decisions.

Digital government should also become a central part of the transformation. Government departments handle enormous amounts of information and interact with

millions of citizens and businesses. Greater digitisation can improve efficiency, reduce paperwork, increase transparency and make public services easier to access.

The arrival of Google can also contribute to changing perceptions about Pakistan's technology capabilities. For years, Pakistan has often been viewed internationally through the lens of traditional industries and geopolitical challenges. Its technology sector tells a different story. It is a story of young professionals, entrepreneurs, engineers and digital creators connecting with the global economy.

Google's decision to establish a physical presence in Pakistan provides an opportunity to strengthen that narrative. It demonstrates that the country can be part of the global technology conversation and that its market and talent deserve international attention.

For Pakistan, the ultimate objective should not simply be to attract foreign technology companies. The greater ambition should be to use their presence as a catalyst for building internationally competitive Pakistani technology companies.

The country should aim to create businesses that develop software, artificial intelligence solutions, cybersecurity prod-

ucts, financial technology platforms and other digital services for customers around the world. If successful, technology could become one of Pakistan's most important export sectors.

The economic implications could be substantial. A successful digital economy can generate foreign exchange, create high value employment, encourage entrepreneurship and reduce the dependence on traditional forms of economic activity. It can also provide opportunities for talented young Pakistanis who might otherwise seek careers abroad.

This is why Google's arrival should be viewed as part of a much larger story. The office itself is important, but the real impact will be determined by what Pakistan builds around it.

The country now has an opportunity to connect its young population, growing technology sector, entrepreneurial talent and international partnerships into a coherent digital economic strategy. If the right policies and investments are made, Pakistan can move from being primarily a consumer of global technology to becoming a producer and exporter of technology.

The global technology race is moving rapidly. Artificial intelligence is changing industries, cloud computing is transforming businesses, robotics is advancing manufacturing and digital platforms are connecting markets across borders. Countries that invest today in skills, infrastructure and innovation will be better positioned to benefit from the next decade of economic growth.

Pakistan has the talent and the market size to become a significant participant in this transformation. What it needs now is consistency, investment and a clear national vision.

Google has opened its doors in Pakistan. The bigger opportunity is for Pakistan to open the doors of its digital future.

The next generation of Pakistani innovators could build companies that serve millions of customers worldwide. The next generation of engineers could develop technologies that transform industries. The next generation of entrepreneurs could demonstrate that Pakistan is not only a large technology market but also a source of global innovation.

This is Pakistan's digital moment. The challenge now is to turn that moment into a lasting transformation.





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PAKISTAN'S ENERGY SECURITY AT A CRITICAL CROSSROADS

Pakistan's LPG sector is vital for households, businesses and industries, but faces supply, affordability and safety challenges. Strengthening domestic production, regulation, storage, consumer awareness and enforcement against illegal decanting is essential to building a safer, more reliable and sustainable LPG ecosystem.

Pakistan's energy security is facing a renewed challenge as geopolitical tensions in the Middle East push international oil prices higher and threaten the stability of global energy supply chains. On September 1, Brent crude was trading above \$91 per barrel as renewed fighting involving the United States and Iran revived concerns about disruptions to oil supplies. At the same time, traffic through the strategically vital Strait of Hormuz remains sharply below normal levels.

For Pakistan, the issue goes far beyond the price of petrol and diesel. Energy is the foundation of transportation, agriculture,

manufacturing, electricity generation and virtually every major economic activity. Pakistan remains highly dependent on imported energy, making international oil and gas prices a major factor in the country's foreign exchange requirements, inflation and economic stability.

The latest figures demonstrate the scale of the challenge. Pakistan's petroleum import bill rose to approximately \$7.7 to \$7.9 billion during the five months from March to July 2026, compared with around \$6.6 billion during the same period of the previous year. The increase was driven by higher crude and petroleum prices as well as rising LNG, freight, insurance and security costs.

The Strait of Hormuz has become a critical point of vulnerability. A significant share of Pakistan's energy supplies originates from the Gulf region and depends

on secure maritime transportation. Recent shipping data showed only five commodity vessels transiting the Strait on Monday, compared with a recent ten day average of about 14 vessels. No liquid tankers were among those five crossings, highlighting the continuing disruption to energy transportation.

A prolonged disruption would have consequences across Pakistan's economy. Higher international oil prices increase the cost of imported fuel, which in turn raises transportation and logistics expenses. Higher freight costs can increase the price of food and consumer goods, while energy intensive industries face additional pressure on production costs. Airlines, transport companies, agriculture and manufacturing are particularly exposed to increases in fuel prices.

For the government, the challenge is

equally serious. A larger energy import bill means greater demand for foreign currency and can put pressure on the current account and external financing position. Pakistan therefore needs to treat energy security not simply as a petroleum sector issue but as an essential component of national economic planning.

One important response is the development of adequate strategic fuel reserves. Emergency stocks can provide a buffer when international supplies are disrupted and give the government and industry additional time to adjust. Pakistan has also been examining plans to increase oil storage capacity, an important step toward reducing vulnerability to sudden international supply shocks.

However, strategic reserves alone cannot solve the problem. Pakistan needs a diversified energy strategy that reduces excessive dependence on imported oil and gas. Renewable energy can play an increasingly important role in this transition. The rapid growth of solar power demonstrates that Pakistani households and businesses are already looking for alternatives to expensive conventional energy.

Solar, wind and hydropower can reduce the demand for imported fuels, while great-

er energy efficiency can lower consumption without reducing economic output. Domestic gas and emerging technologies such as shale gas could also contribute to long term energy security if developed economically and responsibly. Pakistan is preparing to begin horizontal drilling for shale gas, with significant domestic gas resources identified as a potential future source of supply.

The refining sector represents another important opportunity. Pakistan's five major refineries are expected to move toward agreements for major upgrades, with investment potentially reaching billions of dollars. Modernising domestic refineries can improve efficiency, increase the production of higher value petroleum products and reduce dependence on imported refined fuels.

The business community also has an important role to play. Companies can reduce exposure to international energy volatility through solar installations, energy efficient equipment, alternative fuels, improved logistics and better energy management systems. Industries that invest today in energy efficiency and diversified energy sources will be better positioned to remain competitive when global energy

markets become unstable.

Pakistan should also explore broader diversification of its energy suppliers and transportation routes. Relying heavily on a single geographic region creates strategic vulnerability. Long term energy planning should therefore consider multiple sources, stronger domestic production, improved storage, modern refineries and alternative transportation corridors.

The present oil shock should be viewed as both a warning and an opportunity. Global energy markets are becoming increasingly influenced by geopolitics, climate policies, shipping security and technological change. Pakistan cannot control these external developments, but it can reduce its vulnerability to them.

The future of Pakistan's economic growth will depend not only on how much energy the country consumes, but on how efficiently, affordably and securely that energy can be produced and delivered. Energy security must therefore move from being a crisis response to becoming a central pillar of national economic strategy.

For Pakistan, energy independence may remain a long term goal, but energy resilience is an urgent necessity.



SIALKOT'S BILLION-DOLLAR AMBITION: FORGING A NEW INDUSTRIAL DESTINY

In the heart of Pakistan's export-oriented industrial landscape, where the rhythmic clatter of machinery has long been the soundtrack to ambition, a significant gathering recently underscored a pivotal shift in the nation's economic narrative. The historic city of Sialkot, renowned globally for its sporting goods, surgical instruments, and leather products, played host to the first-ever Business Networking Reception of the German-Pakistan Chamber of Commerce and Industry. This event, held in collaboration with the Pakistan Readymade Garments Manufacturers and Exporters Association, was more than just a ceremonial meeting; it was a clarion call for a fundamental transformation in how Pakistan perceives its industrial potential and engages with the world.

SIALKOT IS EMERGING AS A CATALYST FOR PAKISTAN'S INDUSTRIAL TRANSFORMATION, WITH BUSINESS LEADERS URGING A SHIFT FROM LOW-COST MANUFACTURING TOWARD TECHNOLOGY, SKILLS, BRANDING AND HIGH-VALUE EXPORTS. STRONGER GERMANY TIES, GSP+ ACCESS AND INSTITUTIONAL COOPERATION COULD ACCELERATE PAKISTAN'S GLOBAL COMPETITIVENESS AND ECONOMIC GROWTH.



To truly appreciate the weight of the moment, one must look back at the winding road that has led Pakistan to this juncture. For decades, the country's economic strategy has been heavily reliant on low-cost manufacturing, a path that offered a foothold in international markets but often trapped industries in a cycle of thin margins and intense price competition. This model, while successful in generating initial foreign exchange and providing employment, has struggled to evolve. The ghosts of the past, including periods of nationalization, inconsistent policies, and a slow adoption of technology, have created a legacy of cautious ambition. Yet, the history of Sialkot itself is a testament to resilience and ingenuity. From a small town that produced tents for the British Army to a global hub for football manufacturing, the city's industrialists have always possessed an innate ability to adapt. Now, however, the whispers of change are becoming a roar for a more ambitious future.

Federal Minister for Planning, Development and Special Initiatives Ahsan Iqbal, addressing the business community, captured this sentiment perfectly. His message was not one of gentle encouragement but a clear directive: set ambitious targets, embrace technology, and move beyond the identity of a low-cost producer. He challenged the exporters to strive for the creation of internationally recognized brands, a quantum leap that would signify a matured industrial ecosystem. The minister's analogy was powerful and deeply resonant, suggesting that those who earn foreign exchange for the country should be treated as national heroes. This frames economic activity not just as a commercial endeavor but as a patriotic duty, a cornerstone of national strength and sovereignty. He rightly pointed to Germany, a nation that has perfected the art of high-value manufacturing and engineering, as a model for Pakistan to study and emulate.

The historical parallels are instructive. Post-World War II, Germany itself rose from the ashes by focusing on precision, quality, and technical education. Its "Mittelstand" – the small and medium-sized enterprises that are the backbone of its economy – are world leaders not by being the cheapest, but by being the best. Ahsan Iqbal's vision for a complementary partnership with Germany in engineering, technology, manufacturing, and technical education is a blueprint for a similar transformation. He correctly identified that Pakistan's demographic dividend, a young



and eager workforce, needs to be sharpened with skills that meet international standards. The German model of vocational training, with its dual system of classroom instruction and on-the-job apprenticeship, offers a proven path to bridge the gap between education and employability. This is not a new idea, but the urgency and clarity with which it was presented signals a departure from the past.

The event itself was marked by a significant milestone: the signing of a Memorandum of Understanding between the GPCCI and the PRGMEA to promote readymade garment trade. This agreement is a tangible step towards institutionalizing the relationship and providing a formal framework for cooperation. It acknowledges that the path to high-value exports is paved with partnerships, information sharing, and a supportive business environment. The presence of the German Ambassador, Ina Lepel, who emphasized the importance of the GSP+ status, added a layer of diplomatic weight to the proceedings. Her remarks on the resilience of Pakistan's business sector

were a nod to the challenges overcome, but her reminder of the work that remains on GSP+ issues was a sobering reality check. The GSP+ concession is a privilege, not a right, and it demands continuous improvement in governance, human rights, and environmental standards. The history of this trade preference is one of conditional benefits, and Pakistan must remain vigilant and proactive to retain it.

Former Federal Minister for Commerce Khurram Dastgir Khan offered a valuable historical perspective, recalling Pakistan's successful and arduous efforts to secure the GSP+ status in 2014. This was a diplomatic and bureaucratic victory that opened doors for hundreds of Pakistani products, particularly in the textile sector. His call for trade associations to assist small exporters in gaining greater access to European markets is a recognition that the benefits of such agreements must trickle down to the grassroots. This is where the true potential for inclusive growth lies. When a small manufacturer in the interior of Punjab can, with the right support and

information, access a lucrative market like Germany, the impact on poverty alleviation and economic stability is profound.

A particularly poignant moment was the congratulation of Sialkot-based Forward Sports for manufacturing footballs for the FIFA World Cup 2026. This is not merely a commercial contract; it is a story of national pride. The football that will be kicked on the world's biggest stage, bearing the mark of "Made in Pakistan," is a powerful symbol of what is achievable. It defies the old narrative of Pakistan as solely a producer of low-quality goods. It demonstrates that with precision, quality control, and innovation, Pakistani manufacturers can compete at the highest level. This success should be a catalyst for others, a beacon that illuminates the path to high-value branding.

The GPCCI President's decision to extend the chamber's activities beyond the traditional metropolitan centers of Karachi, Lahore, and Islamabad to Sialkot is a strategic move that recognizes the city's pivotal role in Pakistan's export economy. It is a formal acknowledgment that the future of Pakistan's industrial growth lies in its secondary cities, where a unique entrepreneurial spirit exists. The invitation to Sialkot's industrialists to join the GPCCI and leverage its platform for developing trade and investment links is an open door to a world of opportunity. The speeches by PRGMEA office-bearers, including Ijaz A. Khokhar and Sohail A. Sheikh, underscored the need for stronger institutional cooperation to move into higher-value segments. Their leadership, particularly Khokhar's election as the vice president of the International Apparel Federation, signals that Pakistan's private sector is ready to take its place on the global stage.

In essence, the Business Networking Reception was a microcosm of Pakistan's current crossroads. It was a moment to look back at a history of resilience and potential, and to look forward to a future defined by ambition and innovation. The call is clear: the era of complacency is over. The journey from a low-cost manufacturer to a creator of high-value, internationally recognized brands is arduous, but it is the only path to sustainable economic prosperity. The event in Sialkot was not just about networking; it was about igniting a new national consciousness, where the exporter is the hero, the skilled worker is the asset, and Germany is not just a trading partner but a mentor for a brighter, more prosperous Pakistan. ■





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ORAL MOTOR EXERCISES IN SPEECH-LANGUAGE PATHOLOGY: UNDERSTANDING THEIR ROLE

WHY ORAL MOTOR SKILLS MATTER

When we think about speech therapy, we often picture a child practicing sounds such as /p/, /b/, /t/, or /k/. But before and alongside speech production, speech-language pathologists often look at something more fundamental: how the structures of the mouth move and work together. The lips, tongue, jaw, and cheeks are involved in eating, swallowing,

facial movements, and speech. This is why oral motor skills continue to attract attention in speech-language pathology.

Oral motor exercises refer to activities designed to facilitate movement, awareness, coordination, or control of the oral structures. Examples may include controlled tongue movements, lip-closure activities, jaw exercises, and selected oral-sensory or motor tasks. Their value, however, depends greatly on the individual, the underlying difficulty, and the purpose for which they are being used.

ORAL MOTOR EXERCISES AND SPEECH: WHAT DOES THE EVIDENCE SAY?

This is where clinicians need to be careful. Oral motor exercises are widely used and discussed, but popularity alone does not establish effectiveness. McCauley et al. (2009) conducted an evidence-based systematic review of nonspeech oral motor exercises and found insufficient evidence to support or refute their effectiveness for improving speech outcomes.

A Cochrane review by Lee and Gibbon (2015) similarly found limited evidence for nonspeech oral motor treatment in

children with developmental speech sound disorders. Only a small number of studies met their inclusion criteria, and the available evidence did not demonstrate a clear advantage over conventional speech intervention.

This does not mean that every oral motor activity is without value. Instead, it reminds clinicians that each activity should have a clear clinical purpose and should be connected to the person's functional needs.

As McCauley et al. (2009) explained, the evidence was "insufficient to support or refute" the use of nonspeech oral motor exercises for speech outcomes (p. 343). For clinicians, this is an important reminder to use clinical reasoning and evidence rather than routine.

POTENTIAL BENEFITS WHEN THERE IS AN IDENTIFIED NEED

Oral motor activities may be relevant when an assessment identifies difficulties involving oral movement, coordination, range of motion, or functional oral control. For some individuals, activities that increase awareness of the lips, tongue, or jaw may help them understand and control the position of these structures.

The key is to connect the activity to a meaningful outcome. If a child has difficulty maintaining lip closure, for example, the clinician may consider whether this difficulty affects feeding, drooling, or another functional skill. Similarly, if tongue movement is limited, the therapist can determine whether that limitation is contributing to speech or feeding difficulties.

In this sense, oral motor work is best viewed as one possible component of an individualized treatment plan rather than a universal exercise program.

ORAL MOTOR SKILLS AND FEEDING

One area in which oral motor function is clearly relevant is feeding and swal-

**ORAL MOTOR EXERCISES
SHOULD NOT REPLACE
DIRECT SPEECH PRACTICE
OR SERVE AS A UNIVERSAL
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THESE TARGETED EXERCISES
CAN SUPPORT SPEECH AND
FEEDING WHEN TAILORED
TO AN INDIVIDUAL'S
FUNCTIONAL NEEDS.**



lowing. Children with pediatric feeding disorders may experience difficulties with lip closure, tongue movement, chewing, or other oral motor skills. The American Speech-Language-Hearing Association (ASHA, n.d.) identifies impairments in these areas as potential factors in pediatric feeding and swallowing difficulties.

However, oral motor exercises should not automatically be considered a complete treatment for feeding difficulties. Functional practice is important. If the goal is chewing, therapy should provide meaningful opportunities to practice chewing and managing food safely, alongside any preparatory activities that the assessment indicates are appropriate.

This functional approach makes therapy more meaningful because it connects what happens in the therapy room with what the child needs to do during everyday meals and routines.

ORAL MOTOR EXERCISES SHOULD NOT REPLACE SPEECH PRACTICE

One of the most important principles in speech-language pathology is that speech problems should be treated with speech whenever possible. Moving or strengthening the tongue in isolation does not automatically teach a child how to produce a particular speech sound.

For example, a child working on /t/ may practice tongue placement as part of therapy, but treatment should progress toward syllables, words, phrases, and conversation. The goal is not simply to make the tongue move; it is to help the child communicate more clearly.

Therefore, when oral motor activities are clinically indicated, they should complement—not automatically replace—direct speech practice. The treatment plan should always be guided by the specific speech, language, feeding, or swallowing goals identified through assessment.

THE IMPORTANCE OF INDIVIDUALIZED ASSESSMENT

The role of the speech-language pathologist is not simply to provide exercises. It is to determine which intervention is most appropriate for a particular person. Before beginning an oral motor program, the clinician should consider the individual's speech characteristics, oral structure and function, feeding and swallowing status, sensory needs, motor abilities, and functional communication goals.

The most useful clinical question is not simply, "Can this person perform an oral motor exercise?" A more important question is, "Does this activity help the person communicate, eat, swallow, or participate more effectively?"

This shift—from exercise-centered therapy to function-centered therapy—is an important part of evidence-informed speech-language pathology.

CONCLUSION: PURPOSEFUL, FUNCTIONAL THERAPY

Oral motor exercises can have a place in speech-language pathology when they are carefully selected for an identified functional need. They may support oral awareness, movement, coordination, and aspects of feeding and oral control. At the same time, current evidence does not justify presenting nonspeech oral motor exercises as a universal treatment for speech sound disorders.

Good speech therapy is individualized. It combines research evidence, clinical expertise, and the needs of the person receiving therapy. Ultimately, the goal is not simply stronger or better-controlled oral movements. The goal is clearer communication, safer and more efficient feeding when relevant, and greater participation in everyday life.

اپیل برائے زکوٰۃ

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PROTECTING OUR POLLINATORS: AMSTERDAM'S APPROACH TO BEES & BIODIVERSITY

WALI KHAN, FOUNDER OF GENERATION BEE AMSTERDAM, IN CONVERSATION WITH LIAN HEINHUIS, DEPUTY MAYOR OF AMSTERDAM

How can a modern city grow while protecting the natural world that sustains it? Why are bees and other pollinators essential to urban life? And what role can citizens, schools and local communities play in creating a greener future?



Lian Heinhuis,
Deputy Mayor for Sustainability &
Energy Transition, Amsterdam

A CITY WHERE PEOPLE AND NATURE COEXIST

■ **Wali Khan:** What does a typical working day look like for you as Deputy Mayor?

Lian Heinhuis: Much of my work involves consultation and meetings with different municipal departments that are working on related issues. At the same time, I try to spend a great deal of time out in the city, meeting residents and visiting different parts of Amsterdam.

I also make a point of visiting green spaces and playgrounds, especially places where we want to make a real impact. I believe it is important to see how our decisions at the government level translate into reality in neighborhoods and affect the daily lives of residents. For me, maintaining that balance between policymaking

and being out in the city is very important.

AMSTERDAM'S ENVIRONMENTAL PRIORITIES

■ **Wali Khan:** What are your current environmental priorities for the Municipality of Amsterdam?

Lian Heinhuis: Climate change remains one of our greatest challenges. Amsterdam has long wanted to be a frontrunner in tackling climate change, and we intend to continue that commitment.

We must take responsibility for our own emissions and reduce the contribution our city makes to climate change. Climate change is no longer simply a future threat. We are already experiencing its effects. That makes it essential for us to reduce our negative

impact as much as possible.

At the same time, we need to think about how people and nature can coexist. Nature needs space within the city. This includes trees and plants, but also insects, birds and other wildlife.

Amsterdam is a densely populated city, and urban development can put pressure on natural habitats. One of our major challenges is therefore finding the right balance and ensuring that both people and nature have a place in the city.

WHY POLLINATORS MATTER

■ **Wali Khan:** Why are pollinators so important for Amsterdam?

Lian Heinhuis: Pollinators play a fundamental role in maintaining biodiversity. They enable many plants to reproduce, which is one of their



most important function.

By supporting plant reproduction, bees, butterflies and other pollinators contribute to biodiversity throughout the city and to the wider natural system within our urban environment.

AMSTERDAM AS A POLLINATOR FRIENDLY CITY

■ **Wali Khan:** How does Amsterdam's approach to pollinator protection fit within broader Dutch environmental policy?

Lian Heinhuis: Amsterdam has always attached great importance to being at the forefront of initiatives such as pollinator protection.

We have been actively monitoring bee and butterfly populations since 2000. For more than 26 years, we have consistently collected information about these populations, and we use that knowledge when making decisions about the future of the city.

We consciously take bees and butterflies into consideration when planning and developing Amsterdam. These efforts reflect principles that are important throughout the Netherlands,

but Amsterdam is also strongly committed to them independently. Even if other parts of the Netherlands were not doing this, we would still believe it was the right thing to do.

A NEW STANDARD FOR URBAN PLANTS

■ **Wali Khan:** What concrete measures has the municipality taken to protect pollinators?

Lian Heinhuis: One of the most important steps we have taken is our decision to use only toxin free plants in the city.

Plants placed in flowerbeds, parks and other public spaces must be toxin free. We began implementing this approach at the start of this year because we want to create a healthier environment for nature.

But we also want to encourage others to follow our example.

The municipality is a major purchaser of plants. By creating the demand for toxin free plants, we hope plant nurseries will recognize that the market is changing and begin producing more plants in this way. Our ambition is for this initiative to have an impact beyond Amsterdam and contribute to healthier conditions for pollinators and urban biodiversity more broadly.

We are also exploring the possibility of creating dedicated habitats for wild bees. Life can be challenging for

wildlife in a densely populated city, so we want to investigate whether specific areas can be created where wild bees can live and thrive.

HOUSING, GREEN SPACE AND THE CHALLENGE OF LIMITED LAND

■ **Wali Khan:** Amsterdam needs more housing, but it also needs parks and habitats for wildlife. How can the city balance these competing demands?

Lian Heinhuis: This is one of the biggest challenges facing any city. There is never enough space for everything we want and need to do.

Take energy, for example. I am looking at alternative ways of heating homes, including extracting heat from deep underground. But bringing that heat to the surface requires considerable space. You may need an area roughly the size of a football field.

At the same time, Amsterdam is facing a housing crisis and needs more homes. So, different priorities are competing for the same limited space.

That is why we have made clear agreements about protecting important green areas. There are parts of Amsterdam that are already beautiful and valuable green spaces, and we have decided that these areas should remain protected.

Without such agreements, we could easily find ourselves thinking that we could build on a small woodland or a park. Of course, we could build almost everywhere. But while that might help address one problem, it could create many others.

The challenge is therefore to constantly seek the right balance between housing, infrastructure, energy, nature and public space.

ARE POLLINATOR NUMBERS IMPROVING?

■ **Wali Khan:** The Netherlands launched a national strategy in 2018 to halt the decline of pollinators. What results are you seeing?

Lian Heinhuis: Amsterdam has



IN THIS INSIGHTFUL CONVERSATION, WALI KHAN, FOUNDER OF GENERATION BEE AMSTERDAM, SPEAKS WITH LIAN HEINHUIS, DEPUTY MAYOR OF AMSTERDAM, ABOUT THE CITY'S ENVIRONMENTAL PRIORITIES, POLLINATOR PROTECTION, BIODIVERSITY, GREEN SPACES, SUSTAINABLE DEVELOPMENT AND THE IMPORTANCE OF RECONNECTING CHILDREN AND COMMUNITIES WITH NATURE.

developed its own plans and policies for pollinator protection.

The encouraging news is that we are seeing an increase in the number of pollinator species in Amsterdam. That is very positive in itself and shows that our efforts can make a difference.

THE POWER OF NEIGHBORHOOD COMMUNITIES

- **Wali Khan:** How can neighborhood initiatives complement government policy in promoting sustainability?

Lian Heinhuis: Neighborhood initiatives are extremely important. Residents themselves have a crucial role to play.

Across Amsterdam, you can find community gardens that are maintained by local residents. They are wonderful spaces, not only because they support nature and pollinators, but also because they bring people together.

They give residents the opportunity to work with plants, grow things and put their green thumbs to use. In that sense, they benefit both people and nature.

Amsterdam also has a long tradition of school gardens. We have had them for more than a century, and they are not available everywhere in the Netherlands.

School gardens are particularly important because they give every child the opportunity to experience nature, including children who live in large apartment buildings and may not have a garden at home.

They can develop an appreciation for plants, flowers and the natural world from an early age.

The municipality cannot achieve a green and healthy city by itself. It requires a joint effort from all Amsterdammers.

Fortunately, I see many people who genuinely care about greenery, flowers and plants. That gives me a lot of energy.

I believe we should find even more ways to involve residents and give



Terragon Nature Lab, Amsterdam

them a genuine sense of ownership of their neighborhoods and local green spaces.

GIVING CHILDREN BACK THEIR CONNECTION WITH NATURE

- **Wali Khan:** What do you hope Amsterdam will achieve in the coming years in the area of nature and sustainability?

Lian Heinhuis: I would love to see more neighborhood gardens and more school gardens. I believe school gardens should be a permanent part of the city. They are closely connected to education, and they are something I personally, deeply care about as well.

I have two young children myself. We do not have a garden, but we visit the park very often. There, they can learn about flowers, plants and nature simply by being outdoors.

I believe every child in Amsterdam should have genuine access to green space close to home. Whether that is a neighborhood garden, a park, or ideally both, children should be able to experience nature as part of their everyday lives.

There is another issue that we also need to address: getting people outdoors.

Today, people spend much more time in front of screens, and many children and young people spend a great deal of time indoors. As the

Deputy Mayor responsible for outdoor play, I want to encourage children to get outside and experience the city

again, preferably in green spaces.

Amsterdam has some wonderful examples. Natureluur in New West and Jeugdland in East are places where children can play while directly interacting with nature.

They do not simply learn about nature from a book or a screen. They experience it.

For me, these places are an essential part of a healthy, sustainable and livable city. I hope Amsterdam will continue to develop and expand such spaces in the years ahead.

A GREENER FUTURE STARTS WITH EVERYONE

The conversation with Deputy Mayor Lian Heinhuis highlights an important message. Building a sustainable city is not only about government policy. It is about creating a relationship between people, communities and nature.

From toxin free plants and wild bee habitats to community gardens and school gardens, Amsterdam is exploring practical ways to make urban life more compatible with biodiversity.

The future of nature in our cities cannot be secured by governments alone. It requires residents, schools, businesses, communities and the younger generation to become active partners.

For Wali Khan and Generation Bee Amsterdam, the message is particularly relevant. Protecting pollinators means protecting biodiversity and ultimately protecting the quality of life of the people who share the city with them. ■



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FROM LEGACY TO LEADERSHIP: SYED SHEHARYAR ALI ON THE FUTURE OF TREET

TREET GROUP IS PURSUING A DIVERSIFIED FUTURE ACROSS GROOMING, ENERGY STORAGE, BATTERIES AND HEALTHCARE. ITS LEADERSHIP EMPHASIZES MANUFACTURING EXCELLENCE, INTERNATIONAL BRANDS, PREDICTABLE POLICIES, SUSTAINABILITY, AI-DRIVEN EFFICIENCY AND PROFESSIONAL GOVERNANCE, WHILE URGING YOUNG ENTREPRENEURS TO BUILD GLOBALLY COMPETITIVE BUSINESSES FROM PAKISTAN AND FOCUS ON LONG-TERM, KNOWLEDGE-BASED INDUSTRIES.

1. Treet has evolved from a blade manufacturer into a diversified group. What's your vision for the next decade?

I want Treet to be a company that makes things people use every day and does it well enough that the country of origin stops being a disadvantage. That's the whole ambition, and it's harder than it sounds.

Practically, we're built on three legs now. Grooming and personal care, which is where we came from and where we've moved from selling blades to building brands. Batteries and energy storage, which is where the demand curve in this country is steepest. And healthcare through Renacon, where we're in dialysis, an area most people don't want to be in because it's difficult.

Ten years out, I'd like each of those to be able to stand on its own without the others carrying it. A conglomerate where one business subsidises three others isn't a conglomerate, it's a bailout with a letterhead.

2. Seventy years of legacy versus the need to disrupt. How do you balance it?

Honestly, legacy is mostly useful as a warning. It tells you what worked in a mar-

ket that no longer exists.

What we've kept is the manufacturing discipline. Treet people know how to run a plant, control a cost line, and hold quality on a product that sells for very little money. That's a real inheritance and you can't buy it.

What we've had to let go of is the idea that we're a blade company. We spent years being very good at making a commodity while the margin in that commodity went to zero. Genesis and Estela exist because at some point you have to accept that the thing you're famous for is not the thing that will pay for your future.

3. High energy costs, taxation, currency volatility, import competition. What has to change?

Everyone in industry gives you the same list, so let me be more useful and rank it.

Energy first. Not the tariff alone, the unpredictability of it. I can plan around an expensive rupee. I cannot plan around not knowing what a unit costs eighteen months from now. Capital investment dies in that uncertainty, and capital investment is the only thing that makes manufacturing competitive over time.

Taxation second, and specifically the fact that the documented sector pays for the undocumented one. Every honest manufacturer in this country is carrying a passenger.

Currency third. It hurts, but exporters have some natural hedge in it.

The import competition question I'd answer differently. I don't want protection. I want a level starting line. Under-invoiced imports aren't competition, they're just smuggling with paperwork.

4. Taking more Pakistani brands international. Where's the opportunity?

The opportunity is real but I'd caution against the version of this conversation where we all agree Pakistani brands should go global and then nothing happens.

Going international as a brand is a completely different business from exporting as a manufacturer. Exporting means finding a buyer. Branding means spending money in a market for two or three years before it returns anything, in a currency you don't earn, against competitors with a hundred years of shelf presence.

Where I think it works for us is in markets where we're already known and where the consumer profile isn't far from ours. We've

had Treet on shelves in parts of Africa and the Middle East for decades. That's an asset most Pakistani companies don't have. The mistake would be starting with the hardest markets because they're the most flattering to talk about.

5. Exports to 45-plus countries. Strategy for Europe, Africa, the Middle East, Central Asia?

WE'RE DELIBERATELY NOT TREATING THOSE FOUR AS ONE PLAN.

Africa and the Middle East are where we grow through the same route we've always used, which is distribution partners who know their trade, plus more product per partner than we're giving them today. That's the fastest return available to us.

Central Asia interests me because of logistics. If the corridors through Afghanistan and into the CIS ever work properly, we're closer to those consumers than most of our competition is. I'd call that a watch-and-position market rather than a today market.

Europe is the long game. Europe means certifications, retailer audits, sustainability documentation, and a level of consistency that forces you to improve your own factory. Even if the volumes take years, the discipline you have to build to get there is worth it on its own.

6. Batteries and energy storage. What's Treet's role in the transition?

We're already in it, and not theoretically. Daewoo Battery is one of the more recognised names in the market, and we've moved on the cell sourcing side to bring in quality that customers can actually verify.

That last part matters more than people think. This is a market flooded with counterfeit product. A customer buying a battery has no way of knowing what's inside it until it fails on a motorway at two in the morning. If we can build a position where our name on the box is a guarantee of what's in the box, that's worth more than any technology story.

On the transition itself, I'd separate electric vehicles from energy storage. Storage demand in Pakistan is here now, driven by solar going up on every second roof. EVs will come, but the honest answer is the timeline depends on charging infrastructure and financing, neither of which we control.

7. The automotive industry and EVs. How is Treet preparing?

BY NOT BETTING THE COMPANY ON A DATE.

The mistake I see is people assuming the EV curve in Pakistan will look like the EV curve somewhere else. It won't. Our two- and three-wheeler market is where the real electrification will happen first, because that's what people actually ride and the economics work at that size.

So we're building capability that's useful either way. Cell relationships, chemistry knowledge, quality systems, and a brand people trust. If EV adoption is fast, we're in position. If it takes another decade, that same capability is still earning money in conventional batteries and in storage. I'd rather be early on the capability and patient on the timing than the reverse.

8. Automation, AI, robotics, data analytics. Where's the biggest opportunity in operations?

PROCUREMENT AND COST VISIBILITY, AND IT'S NOT CLOSE.

Robots on a line are the version of this that photographs well. But in a business like ours, the money sits in knowing what you're paying for every input, across three business units, and whether that's the right price this week. Most manufacturing companies in this country cannot answer that question quickly. We're getting better at it and every point of improvement drops straight to the bottom line.

After that, quality inspection. Machine vision on a blade line or a battery line catches things a tired human at the end of a shift will miss.

I'd be careful about the word transformation here. We're doing a series of unglamorous improvements. That's what it actually looks like.

9. How important will AI be to Treet's future?

Useful, and being oversold at the same time. Both of those are true.

Where I already see it working is in the boring middle of the company. Forecasting demand so we don't stock out on a product



that's selling. Reading through supplier contracts. Sorting through customer complaints to find the pattern instead of the loudest voice. Helping a small marketing team produce work a big team used to produce.

Where I'm sceptical is anyone claiming AI will make the strategic decisions. It won't. It'll get you to the decision faster with better information in front of you, and then you still have to be the one who says yes or no and lives with it.

10. Long-term vision for healthcare investments?

Renacon is in renal care, and specifically dialysis. It's an unglamorous business with a brutal reality behind it, which is that kidney disease in Pakistan is far more common than people realise and treatment is expensive enough to bankrupt a family.

Our position is in the consumables and solutions side, and the long-term vision is to go further up the value chain rather than wider across therapeutic areas. I'd rather be genuinely important in one area of medicine than present in ten.

There's also an export story there that we haven't finished writing. Dialysis products are regulated, which is a barrier, and barriers are good news once you're past them.

11. Young population, low productivity. What can large companies do?

Employ people properly and train them,

which sounds obvious and is rarer than it should be.

The productivity problem isn't a work-ethic problem. I've never met a Pakistani worker who didn't want to do well. It's that we put people on old equipment with no training and no path, and then wonder why output per head is low.

What a company our size can genuinely do is offer structured technical training, real apprenticeships, and a visible route from the shop floor to a supervisory role. What we cannot do is fix the schooling that arrives at our gate. That's a state responsibility and no amount of corporate goodwill substitutes for it.

I'll say one more thing. If you want productivity, hire women. Half the available talent in this country is barely being used and companies that figure this out will simply have a bigger pool to choose from than their competitors.

12. Professionalising and institutionalising a family business?

The hardest part is not hiring professionals. It's letting them actually decide things.

Most family businesses in Pakistan bring in good people and then keep the real decisions in the family. Everyone can see it, so the good people leave within eighteen months and the family concludes that professional managers don't work here.

What we've tried to do is put real P&L ownership into the businesses. Each unit owns its own numbers, including procurement, and the results are their results. That changes behaviour more than any consultant's org chart.

The other thing I've learned is that the family has to accept being held to the same standard. If the rule applies to the head of a division but not to a family member, you don't have a governance system, you have a story about one.

13. You became CEO young. The leadership lesson with the greatest impact?

That being right isn't the job.

When I was younger I thought if I did the analysis properly and reached the correct answer, the organisation would follow. It doesn't. People follow when they understand why, when they trust you'll back them if it goes wrong, and when they've seen you change your mind in front of them at least once.

The second lesson took longer. Bad news

has to travel to me faster than good news, and that only happens if the person carrying it doesn't get punished for it. If your team is managing your mood, you're getting a filtered picture of your own company.

14. A decision that looked risky and created an opportunity?

MOVING INTO PREMIUM GROOMING. GENESIS AND ESTELA.

On paper it was hard to defend. We were a value brand in a price-sensitive market taking on multinationals in the premium segment, with heavy spend on the marketing side before we had a rupee back. Plenty of sensible people thought it was the wrong use of the money.

The reasoning was that our margin in the commodity segment was going to keep compressing no matter how well we ran the plant. You can be the best in the world at making something nobody pays for. The only way out was up.

Early response has been strong enough that our problem became supply rather than demand, which is a much better problem to have.

15. Which international markets offer the most for Pakistani companies?

The Gulf, and I don't think it's a close call. Proximity, a large Pakistani population, buyers who already know our products, and payment terms you can actually live with.

China I'd frame differently. China is where we source, learn and partner more than where we sell. Trying to sell consumer goods into China as a Pakistani company is a very expensive education.

Central Asia is the interesting one nobody has cracked, mostly for logistics reasons. Africa is genuinely open, and the companies willing to do the unglamorous distribution work there will be rewarded for it.

16. Three policy reforms, immediately?

One, a predictable industrial energy tariff with a horizon of at least three years, so people can commit capital.

Two, broaden the tax base rather than deepening it. Adding another point onto the same documented companies every year is not a policy, it's a habit.

Three, fix imports at the border. Under-in-

voicing and smuggling do more damage to Pakistani manufacturing than any tariff schedule. If a local manufacturer paying full duty cannot compete with the same product arriving under-declared, no other reform matters much.

17. Sustainability, energy efficiency, sustainable manufacturing?

Let me answer this without the usual language.

For us, sustainability started as a cost programme and became something more. When energy is your second largest cost line, efficiency isn't a values question, it's survival. Solar on plants, waste heat, water recycling, reducing packaging weight. All of it started as cost work.

Where it becomes strategy is exports. If we want to be on a European shelf, we'll be audited on this. Our customers' customers will ask. So the choice is to build it now while it's optional or scramble later when it's a condition of entry.

Batteries deserve a separate mention. Lead-acid recycling in Pakistan largely happens in unregulated backyard operations and it is poisoning people. That's a real problem in our industry and anyone serious about it should say so out loud.

18. What role should conglomerates play beyond business?

I'd rather companies do a small number of things properly than sponsor everything and mean none of it.

For me it's been sports and music, which people find an odd combination for a manufacturer. I chair the kickboxing federation and I'm involved with the All Pakistan Music Conference. Neither has anything to do with razors.

The reason is that a country is not only an economy. Young people need somewhere to put their energy and something to be proud of that isn't a GDP figure. A kid in a training hall with a coach is a kid with a structure around them. Classical music in this country would quietly disappear in a generation if a handful of people didn't keep funding it.

I don't think it makes us money. I think it's part of what you owe the place you operate in.

19. Which businesses have the greatest potential in five years?

Batteries and energy storage, on demand growth alone. The market is expanding whether or not we do anything clever, and

we intend to do something clever. Premium grooming second, because that's where we're building actual brand equity rather than just volume, and brand equity is the only thing in consumer goods that compounds.

Healthcare is the one I'd watch. It's the smallest, it's the most regulated, and it has the longest runway if we get it right.

20. Your message to young Pakistani entrepreneurs?

BUILD SOMETHING THAT WOULD BE GOOD ANYWHERE, THEN SELL IT FROM HERE.

The instinct is to build for the constraint. Cheap because the market is poor, local because export is hard, imitative because it's safer. You end up with a business that only survives while the constraint holds.

Also, pick something boring. The attention goes to apps and funding rounds. The money, and more importantly the durability, is in industries where you have to actually know something. Manufacturing, logistics, agriculture, healthcare. It's slower and less flattering and it's still where fortunes get built here.

And stay long enough to get good. Most of what I know I learned in years three through ten, and most people don't stay that long.

21. If we meet in 2030, what would make you say Treet was transformed?

THREE THINGS, AND I'D WANT ALL THREE.

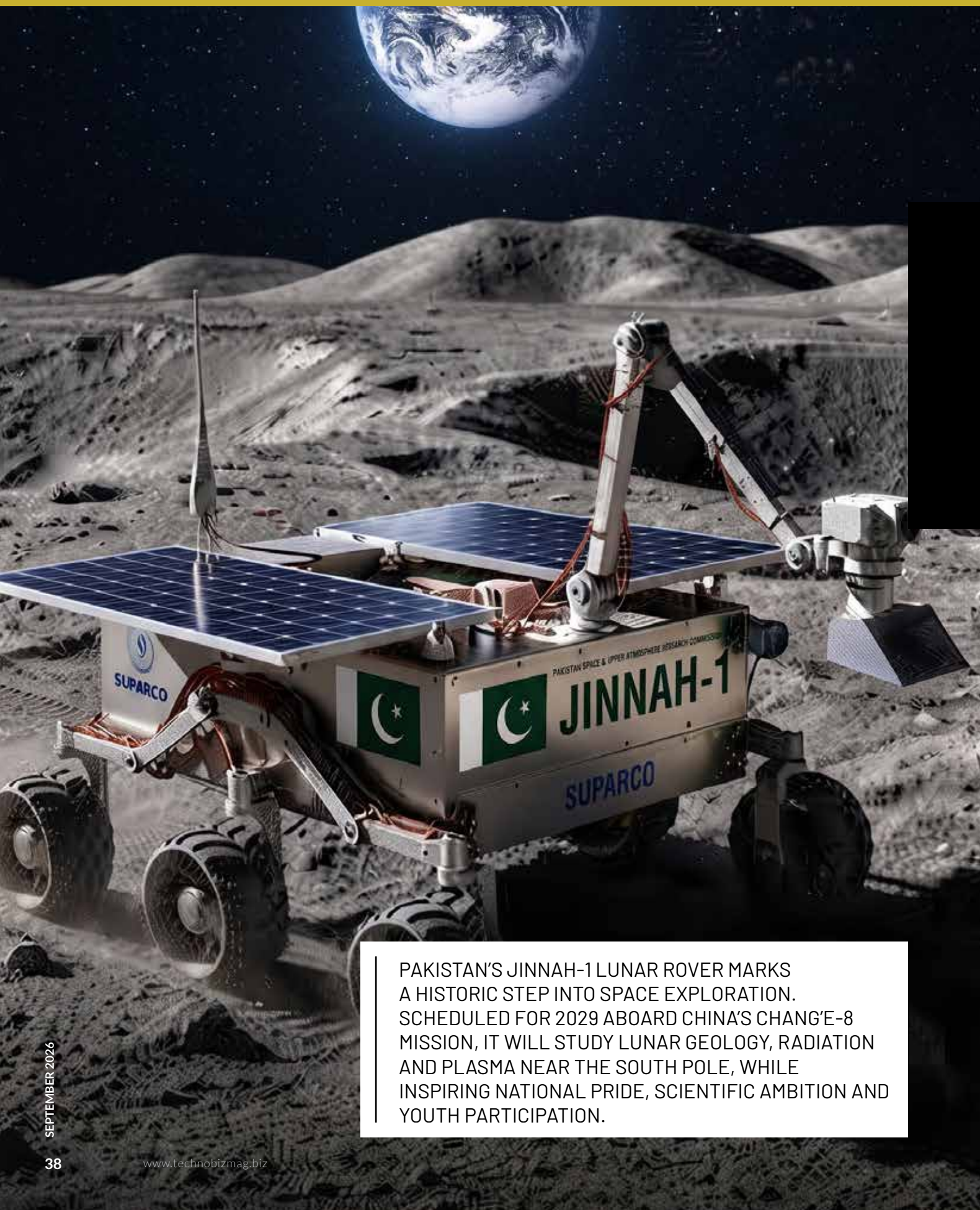
That each business stands on its own. If in 2030 one unit is still carrying the others, we grew but we didn't transform.

That a meaningful share of our revenue comes from outside Pakistan, earned by our own brands rather than as a contract manufacturer for someone else's.

And that the company would run well without me for six months. That's the real test. Anything built around one person isn't an institution, it's a personality, and personalities don't last seventy more years.

ONE SMALL ROVER, ONE GIANT VISION

HOW JINNAH-1 WILL REDEFINE PAKISTAN'S PLACE IN SPACE



PAKISTAN'S JINNAH-1 LUNAR ROVER MARKS A HISTORIC STEP INTO SPACE EXPLORATION. SCHEDULED FOR 2029 ABOARD CHINA'S CHANG'E-8 MISSION, IT WILL STUDY LUNAR GEOLOGY, RADIATION AND PLASMA NEAR THE SOUTH POLE, WHILE INSPIRING NATIONAL PRIDE, SCIENTIFIC AMBITION AND YOUTH PARTICIPATION.



The announcement from the Pakistan Space and Upper Atmosphere Research Commission, or Suparco, was not just a news release; it was the sound of a door swinging open to a future that has long existed only in the realm of dreams and science fiction. In a ceremony held in the nation's capital, Islamabad, the agency unveiled the official name for Pakistan's first lunar rover, and the choice was as profound as the mission itself. The name is Jinnah-1, a fitting tribute to the nation's founder, Quaid-i-Azam Muhammad Ali Jinnah, but more than that, it is a declaration of intent. It is a name that carries the weight of history while looking unflinchingly toward the stars, a name that symbolizes not just a technological endeavor, but a national ambition to carve out a place among the global community of space-faring nations.

The very idea of Pakistan sending a rover to the Moon is an achievement that deserves to be celebrated with a sense of awe and immense national pride. For decades, the pursuit of space exploration has been the domain of a select few global superpowers. To see Pakistan, a nation that has faced its own share of challenges and complexities, take such a bold and definitive step into this arena is nothing short of inspiring. This is not merely a scientific project; it is a powerful statement of resilience, ambition, and the unyielding spirit of a country that refuses to be left behind in the march of human progress. The Jinnah-1 mission, scheduled for 2029, places Pakistan on a trajectory that is both humbling and exhilarating, aligning its destiny with the very frontiers of human knowledge.

The choice of the lunar south pole as the rover's destination is a testament to the serious and ambitious nature of this endeavor. This is not a journey to a well-trodden part of the Moon, but a venture into one of the most challenging and scientifically promising regions of our celestial neighbor. The lunar south pole is a landscape of stark contrasts and extreme conditions, characterized by deep craters that remain in permanent shadow and peaks that bask in near-constant sunlight.

It is a region of profound scientific interest because it is believed to contain water ice within its permanently shadowed craters. This water ice is not merely a curiosity; it is the key to sustainable human presence on the Moon, potentially providing resources for drinking, oxygen production, and even rocket fuel for missions further into the solar system. By targeting this region with Jinnah-1, Suparco has signaled that it is not just participating in space exploration, but is actively contributing to its most cutting-edge and consequential aspects.

The collaborative nature of this mission, with Jinnah-1 hitching a ride to the lunar surface as part of China's Chang'e-8 mission, highlights the power of international partnership in the pursuit of ambitious goals. Space exploration has always transcended national borders, serving as a bridge for peaceful cooperation and shared scientific discovery. For Pakistan to be a part of this historic Chinese mission is a significant milestone, reflecting a bond of trust and mutual scientific respect. It is a clear indication that Pakistan is not just a passive observer in the global space race but an active and valued participant. This collaboration offers a unique opportunity for Pakistani scientists and engineers to learn from one of the world's most ad-

vanced space programs, gaining invaluable experience and expertise that will undoubtedly fuel the nation's future ambitions in space.

While the destination is awe-inspiring, the heart of this story lies in the selection process and the name itself. It is a beautifully democratic and deeply human narrative that adds a profound layer of meaning to the mission. Suparco initiated a nationwide competition for the naming of the rover, and the response was overwhelming, with a staggering four thousand proposals pouring in from every corner of the country. This mass participation speaks volumes about the collective excitement and imagination that space exploration ignites in the hearts of Pakistani citizens. It shows that the dream of reaching for the stars is not confined to laboratories and academic institutions; it is a shared national aspiration. From this vast pool of creative ideas, one name resonated with the highest purpose and symbolism, and it was the most fitting tribute imaginable.

The selection of the name "Jinnah-1" through a lucky draw from among seven participants who had proposed it adds a charming twist to the tale, but the significance of the name itself is what truly matters. By naming the rover after Quaid-i-Azam Muhammad Ali Jinnah, Suparco

has connected the nation's past with its future in a powerful and symbolic way. As Suparco Chairman stated, it pays tribute to the founding father and symbolizes the country's resolve, progress, and new space horizons. It is a name that carries the weight of the nation's struggle for independence and the visionary leadership that brought it into existence. Jinnah, who famously spoke of unity, faith, and discipline, would likely have been a proponent of the kind of discipline and unity of purpose required for such a demanding scientific undertaking. The rover, therefore, becomes more than a machine; it becomes a legacy, a representation of the nation's foundational ideals now reaching out to touch the lunar surface.

And then, there is the human element that makes this story so poignant and unforgettable. The winner of the competition was seventeen year old Tayyab Karim from Bahawalnagar, a young man whose simple act of naming has forever linked him to a historic moment in his country's history. Tayyab is not a prominent scientist or a high ranking official; he is a student, a symbol of the youthful energy and intellectual potential that pulses through the nation. His victory is a powerful reminder that great dreams are not the sole property of the powerful. It is an inspiration to millions of young Pakistanis, proving that

an idea, regardless of its source, can spark a movement and leave an indelible mark on the world. In a way, Tayyab represents the future of Pakistan, a future that is now quite literally taking a giant leap toward the Moon.

The scientific objectives of Jinnah-1 are comprehensive and far reaching, designed to push the boundaries of our understanding of the lunar environment. The rover will conduct experiments to study plasma, radiation, and the lunar surface's geology. These are not simple tasks. Analyzing the plasma environment will help scientists understand the interaction between the solar wind and the lunar surface, a fundamental process that shapes the Moon's atmosphere. Studying radiation is crucial for ensuring the safety of future astronauts and understanding the broader space weather environment. The geological surveys will examine the composition of the lunar soil and rocks, searching for clues about the Moon's history and its formation. Perhaps most exciting is that Jinnah-1 will conduct key experiments related to future lunar research and the prospect of a human presence on the Moon. This is forward looking science of the highest order, aiming to answer questions that are critical for the next phase of human spaceflight. The data collected by this small rover will contribute to the global body of knowledge that will eventually enable humanity to establish a permanent foothold on another world.

In looking at this achievement, it is impossible not to also recognize the context of a new, exciting, and competitive era of lunar exploration. The world is once again turning its gaze to the Moon, and this time, it's not just for a fleeting visit. With NASA targeting the lunar south pole for the return of astronauts and China advancing its own ambitious plans, Jinnah-1 places Pakistan squarely in the middle of this new space race. India's successful landing of Chandrayaan-3 in the same region is another testament to the growing interest and capabilities in the area. The world is watching, and Pakistan's participation adds a new and welcome dimension to this global pursuit. This competition is not about conflict; it is about collective human endeavor, and with Jinnah-1, Pakistan has raised its hand to be an active contributor. It is a signal that the nation is ready to be a part of writing the next great chapter in the story of human exploration, embracing the challenges and celebrating the discoveries that lie ahead on the dusty, silent plains of the Moon. ■



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SHOULD GOVERNMENTS IMPOSE WEALTH REDISTRIBUTION POLICIES TO ADDRESS INCOME INEQUALITY, OR DOES SUCH INTERVENTION UNDERMINE ECONOMIC GROWTH AND PERSONAL FREEDOM?



FAAYZ OMER

Libertarians argue that redistribution infringes upon individual property rights and discourages innovation. Economist Milton Friedman famously stated, “A society that puts equality before freedom will get neither.”

Egalitarians contend that extreme income inequality undermines social cohesion and democratic values. Philosopher John Rawls argued that inequalities are only justifiable if they benefit the least advantaged members of society. This perspective suggests that redistribution is not only ethical but also essential for long-term societal stability.

Global income inequality remains substantial, with the top 10% earning 52% of global income, while the bottom 50% earn just 8.5% (World Inequality Report, 2022). The IMF argues that reducing excessive inequality can promote sustainable economic growth, as a 2015 IMF study found that a 1 percentage-point increase in the income share of the poorest 20% was associated with up to a 0.38 percentage-point increase in GDP growth over five years. However, redistribution policies should be designed carefully to avoid weakening economic incentives. The United States prioritises lower taxes, free markets and individual responsibility, with supporters arguing that this encourages entrepreneurship, investment and job creation. However, lower redistribution can leave disadvantaged groups with fewer opportunities and weak-

er access to essential services. This highlights the trade-off between maximising economic freedom and promoting greater equality. France’s former wealth tax (ISF) illustrates the potential costs of excessive redistribution. One estimate found that around €200 billion in capital left France after the tax was introduced, suggesting that high wealth taxes can discourage investment and encourage capital flight. However, this figure is debated. Nonetheless, taxation can reduce inequality and raise revenue, but if rates are perceived as excessive or poorly structured, they may weaken investment incentives and reduce the effectiveness of the policy.

In 2024, Italy doubled its “flat tax” on foreign income under PM Giorgia Meloni, following public outcry for fairer taxation. The decision comes as more countries are seeking to tax the wealthier half of their population to address monetary disparities (The Guardian). Spain’s Economy Minister, Carlos Cuerdo, proposed a 2% tax on the assets of the world’s 3,000 billionaires, aiming to raise \$250 billion annually to address income inequality (The Guardian).

Conversely, some governments refute extensive wealth redistribution, citing hindrance to investment and limiting personal freedom. The U.S. favors low taxes and minimal wealth redistribution, emphasizing free markets and individual responsibility. Advocates say this boosts entrepreneurship and job creation. The U.S. rejected a billionaire wealth tax, fearing it would deter investment and drive capital offshore (Forbes). Similarly, Hong Kong

maintains low corporate and income taxes, with no capital gains or inheritance tax. Officials argue this policy attracts foreign investment and fosters economic growth, keeping unemployment low and wages competitive (World Economic Forum).

Extreme economic inequality can destabilise societies, leading to poverty, reduced mobility, and social unrest as wealth becomes concentrated among a small elite, amounting to a large proportion of the population struggling with meagre wages, inciting political unrest and mistrust. Wealth redistribution programs aim to ensure a fairer distribution of resources, fostering social cohesion. Redistribution can also cause economic growth as lower income individuals spend a higher percentage of income on their needs while wealthier individuals save or invest more. By redistributing wealth through methods like progressive taxation, governments can increase disposable income for lower income households, increasing consumer demand and economic activity. Research shows that more equitable income distribution leads to stronger, sustainable economic growth. The IMF found that excessive inequality hampers long-term growth by limiting access to education and healthcare, thus preventing upward mobility (IMF). The OECD reports that income inequality negatively impacts growth, specifically highlighting the gap between low-income households and the rest of the population (OECD).

Technological advancements in automation and AI have significantly reshaped

the global economy, leading to an increase in income and wealth inequality. Automation replaces routine tasks performed by low and average skilled workers, resulting in job displacement and wage suppression in some industries. A study by MIT economists Daron Acemoglu and Pascual Restrepo found that each additional robot in the U.S workforce eliminated approximately 3.3 workers, contributing to a decline in wages and uncertain job security (NEWS.MIT.EDU). The benefits of automation tend to accrue to high-skilled professionals and capital owners who design, implement, and invest in these technologies. This dynamic concentrates wealth among a small segment of the population, exacerbating economic disparities. Research indicates that automation increases inequality by raising returns to wealth, as the gains from increased productivity are not evenly distributed across the workforce.

Tax policies that favor the wealthy contribute to significant wealth inequality, necessitating redistribution policies to address the imbalance. When tax loopholes, offshore banking, and reduced corporate tax rates allow the ultra-rich to accumulate and preserve wealth across generations, governments lose critical revenue needed for public services and social programs. This exacerbates inequality, as the wealthy benefit disproportionately while lower-income groups face underfunded education, healthcare, and infrastructure. The OECD (2023) recorded that tax havens shelter an estimated \$11.3 trillion, depriving governments of resources to invest in equitable growth. Wealth concentration in nations like Switzerland and the Cayman Islands enables the ultra-rich to avoid higher tax rates, further widening the wealth gap. Therefore, redistribution policies, such as progressive taxation and closing tax loopholes, aim to rectify this by ensuring the wealthy contribute a fairer share to public finances.

Wealth Redistribution programs require significant government expenditure on social safety nets, healthcare, education, and other related social welfare programs. If not imposed properly or governed efficiently with a plan, such policies can strain government budgets and may actually lead to higher taxes or increased public debt in the future. In the U.S., the Congressional Budget Office (CBO) consistently reports that entitlement programs such as Social Security and Medicaid, which are key to wealth redistribution in the country, accounted for nearly 40% of federal spend-

ing. These programs are designed to allow wealth from higher income individuals to flow to lower income individuals through payroll taxes to provide benefits such as retirement income. Though a larger amount of the population has required these benefits in recent years, the cost of these programs continues to put a heavy strain on government finances, inciting long term fiscal challenges in exchange for less income equality in the present (CBO - Federal Budget).

Germany’s wealth redistribution programs are an investment in human capital and social mobility. These initiatives ensure that people from lower-income backgrounds have access to skills development, which improves employability and supports higher productivity. The country’s dual education system, combining classroom education with apprenticeships, creates a highly skilled workforce, underscoring wealth distribution policies as beneficial for long-term economic growth. A report from the OECD highlights that Germany’s investment in education has been a crucial factor in its low youth unemployment rate and strong industrial sector.

Wealth redistribution can foster social stability by reducing income inequality, promoting cohesion between the masses, and reducing political unrest. However, heavy government intervention can also be perceived as authoritarian control over one’s personal wealth, sparking resistance. Canada provides an example of how progressive taxation can help finance universal public services, particularly healthcare, allowing citizens to access essential treatment regardless of income. This can reduce the economic burden on lower-income households and contribute to greater social security and equality of opportunity.

However, the effectiveness of redistribution depends heavily on sound economic management. Argentina demonstrates that extensive government intervention and poorly managed fiscal policies can contribute to economic instability when public spending is not supported by sustainable government finances. Therefore, Argentina’s experience does not show that redistribution itself causes economic crises; rather, it highlights the risks of implementing redistributive policies without adequate fiscal discipline and broader economic reforms. This comparison suggests that redistribution is most effective when combined with responsible government spending and policies that maintain economic stability.

A concentration of wealth within a few hands causes the less fortunate to suffer, with no guarantees that these people will receive even proper education or healthcare as a result of their economic issues. Consequently, it is socially unjust. Issues that arise as a result, such as disorder within the state, weaken the economy, as fewer people can afford to spend on goods and services. Countries such as Sweden and Norway demonstrate that addressing economic inequality through effective redistribution and strong social policies can contribute to greater social stability, equal opportunities, and sustainable economic performance. Therefore, tackling economic inequality should be considered a foremost issue in this debate, as reducing inequality can help ensure that the benefits of economic growth are shared more widely across society.

Wealth redistribution programs are of utmost importance because they provide a framework for ensuring that the benefits of economic growth reach a wider proportion of society, particularly lower-income groups. Without effective redistribution, economic growth may become increasingly concentrated among higher-income groups, limiting opportunities for those at the bottom of the income distribution and potentially weakening social mobility. Progressive taxation, as seen in countries such as Finland and Belgium, can help fund public services and social welfare programs while reducing excessive income inequality. Although redistribution may not address the structural causes of inequality on its own, it remains an important short/medium term measure for protecting vulnerable groups and creating more equal opportunities.

Wealth redistribution remains a complex yet essential policy debate, balancing economic growth, personal freedom, and social equity. While economic inequality justifies intervention, excessive taxation can deter investment and innovation. Successful models, like those in Nordic countries, show that well-managed redistribution can promote stability and prosperity. However, poorly implemented policies, as seen in Venezuela, can harm economies. Governments must strike a balance, ensuring fair wealth distribution while maintaining economic incentives. Ultimately, the effectiveness of wealth redistribution depends on strategic implementation that fosters both social welfare and sustainable economic growth.



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DEPUTY INSPECTOR GENERAL OF FORESTS,
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In the world of wildlife conservation, where dedication, courage, and a deep connection with nature are essential, Haseena Anbarin stands as an inspiring example of perseverance and leadership. Serving as the Deputy Inspector General of Forests at the Federal Ministry of Climate Change and Environmental Coordination, she has built a remarkable career dedicated to protecting Pakistan's biodiversity and strengthening conservation efforts. A qualified forester and passionate nature conservationist, Haseena is also among the pioneering women who entered Pakistan's traditionally male-dominated wildlife sector and helped create space for future generations of women professionals.

Her journey is one rooted in an early and enduring connection with nature. Growing up in Bannu, Haseena developed a fascination with the natural world at a young age. Her father's captivating stories about forests and the remarkable creatures that lived within them sparked her imagination and curiosity. Surrounded by her family's vegetable gardens and crop fields, she spent her formative years close to the land, observing the rhythms of nature and

developing a sense of appreciation for the environment. These experiences would eventually shape not only her academic choices but also her lifelong mission.

Driven by this passion, Haseena pursued a Master's degree in Forestry, laying the foundation for a career that would take her to the forefront of wildlife and environmental conservation. Her decision to enter the field was particularly significant at a time when women were rarely seen in wildlife departments and field-based conservation roles. Yet, she chose to follow her passion and challenge the limitations imposed by traditional expectations.

In 2008, Haseena made history by becoming the first female officer in the KP Wildlife Department. This achievement was more than a personal milestone. It represented an important step towards greater inclusion and gender diversity within Pakistan's wildlife conservation sector. Entering a profession largely dominated by men required courage, determination, and an exceptional commitment to her work. Haseena faced skepticism, mistrust, and cultural resistance, but she refused to allow these challenges to define her future.

Instead, she allowed her dedication and performance to speak for themselves.

Over more than 15 years with the KP Wildlife Department, Haseena contributed extensively to in-situ wildlife conservation and the protection of natural ecosystems. Her work involved a wide range of responsibilities, from inspecting and evaluating wildlife projects to developing conservation plans and supporting efforts to protect biodiversity. She also worked to promote conservation education and strengthen awareness among communities, recognising that the long-term success of environmental protection depends not only on government institutions but also on the people who live closest to nature.

Another important area of her work has been addressing human-wildlife conflict. As human populations expand and natural habitats come under increasing pressure, encounters between communities and wildlife can become more frequent and complex. Finding solutions requires a careful balance between protecting wildlife and addressing the concerns and safety of local populations. Throughout her career, Haseena has contributed her expertise and experience to resolving such challenges and promoting approaches that support both conservation and community well-being.

Today, as the Deputy Inspector General of Forests at the Federal Ministry of Climate Change and Environmental Coordination, she continues to contribute her knowledge and experience to the broader environmental and conservation agenda. Her career reflects a strong understanding of the interconnected nature of forests, wildlife, biodiversity, communities, and climate. At a time when environmental challenges are becoming increasingly urgent, experienced conservation professionals play a critical role in shaping policies and initiatives that can protect natural resources for future generations.

The challenges she faced also highlight an important reality for women working in traditionally male-dominated professions. Skepticism, cultural resistance, and workplace barriers can discourage talented women from entering or remaining in these fields. Haseena's experiences underscore the importance of creating stronger systems to prevent harassment and ensure safe, respectful, and supportive working environments. Progress requires more than simply opening doors. It also requires ensuring that women have the support, protection, and opportunities needed to thrive once they enter.

Throughout her career, Haseena Anbarin has shown that meaningful conservation requires both professional expertise and personal conviction. From the childhood stories that first inspired her imagination to her years of service in wildlife conservation and her current leadership role, her journey reflects a consistent commitment to protecting Pakistan's natural heritage.

Her story is ultimately one of resilience, purpose, and hope. Haseena Anbarin did not allow social expectations or professional barriers to prevent her from following her calling. Instead, she transformed her love for nature into a lifelong mission and, in doing so, became a trailblazer for women in Pakistan's conservation sector.

As Pakistan faces growing environmental and climate-related challenges, stories like Haseena's serve as a powerful reminder that conservation is not only about protecting forests and wildlife. It is also about empowering people, challenging barriers, and inspiring a new generation to take responsibility for the natural world. Haseena Anbarin continues to prove that one determined individual can open doors, influence change, and leave a lasting legacy for both people and the planet.

JAZBA SHAFI, RANGE OFFICER AT THE WILDLIFE & FISHERIES DEPARTMENT AJK, HAS SPENT OVER A DECADE PROTECTING WILDLIFE THROUGH CONSERVATION, COMMUNITY ENGAGEMENT, EDUCATION, RESCUE OPERATIONS, AND ENVIRONMENTAL AWARENESS, INSPIRING FUTURE GENERATIONS.



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AFTER YANG

SCI-FI/DRAMA

A QUIET VISUALLY EXQUISITE SCIENCE-FICTION DRAMA EXPLORING MEMORY, FAMILY, IDENTITY, LOSS, AND HUMANITY. WHEN AN ANDROID COMPANION MALFUNCTIONS, HIS FAMILY DISCOVERS HIDDEN MEMORIES THAT CHALLENGE THEIR UNDERSTANDING OF CONNECTION, LOVE, CULTURE, AND WHAT IT TRULY MEANS TO BE HUMAN.

Some science fiction films take audiences to distant galaxies. Others imagine futuristic wars, artificial intelligence, or technological revolutions. Then there are rare films that use the future to look quietly and deeply at the present. **After Yang** belongs firmly to that category.

Written and directed by Kogonada, **After Yang** is a beautifully crafted science-fiction drama that transforms a seemingly simple story about a malfunctioning android into a profound meditation on memory, family, identity, love, loss, and what it truly means to be human. Starring Colin Farrell, Jodie Turner-Smith, Justin H. Min, Malea Emma Tjandrawidjaja, and Haley Lu Richardson, the film presents a near future that feels remarkably calm, intimate, and believable.

At its centre is Jake, played with remarkable sensitivity by Colin Farrell. He lives with his wife Kyra and their adopted daughter Mika. Their family also includes Yang, an advanced android purchased to serve as a companion and cultural guide for Mika. Yang is not treated simply as a machine. Over time, he has become something far more complicated: a brother, a teacher, a friend, and an essential part of the family.

When Yang suddenly malfunctions, Jake begins searching for a way to repair him. What initially appears to be a technical problem slowly becomes an emotional journey. As Jake investigates Yang's past, he begins to discover aspects of Yang's existence that no one in the family ever truly understood. At the same time, Jake is forced to confront his own emotional distance from his wife and daughter. The story gradually reveals that the attempt to understand an artificial being may actually teach the humans around him how to understand themselves.

The film does not ask the familiar science-fiction question: "Can a machine become human?" Instead, it quietly asks whether humanity itself is something we fully understand. If a being can experience beauty, preserve memories, form attachments, and leave behind traces of a meaningful life, does it matter whether that being was born or manufactured?

Kogonada approaches these questions with remarkable restraint. There are no massive action sequences, dystopian wars, or dramatic speeches explaining the future. Instead, the world of **After Yang** is presented through details. Homes are elegant and minimal. Technology is advanced but ordinary. Androids exist alongside humans without constant spectacle. The future has simply become another version of everyday life.

Colin Farrell delivers one of the most understated performances of his career. Jake is not a traditional science-fiction hero. He is uncertain, emotionally disconnected, and often uncomfortable with his own feelings. Farrell allows these flaws to remain visible, creating a character who feels deeply human precisely because he does not always know how to connect with the people closest to him.

Jodie Turner-Smith brings quiet complexity to Kyra, while Malea Emma Tjandrawidjaja delivers an emotionally sincere performance as Mika, the young girl most deeply affected by Yang's absence. However, it is Justin H. Min's portrayal of Yang that becomes the film's emotional centre.

Yang is calm, observant, intelligent, and gentle. Yet the





brilliance of Min's performance lies in its subtlety. He never turns Yang into a robotic stereotype or a conventional imitation of human behaviour. Instead, he creates a presence that exists somewhere between the familiar and the unknowable. Yang may be artificial, but the questions surrounding his life become increasingly personal.

The film is also visually stunning. Cinematographer Benjamin Loeb creates a world that feels both futuristic and timeless. The compositions are precise and often painterly, reflecting Kogonada's deep appreciation for architecture, space, and visual storytelling. Every room, window, landscape, and carefully framed character seems to carry emotional meaning.

The future in **After Yang** is not dominated by flashing screens and metallic cities. It is quiet, natural, and strangely beautiful. Trees, gardens, sunlight, and human-made spaces exist alongside sophisticated technology, creating a vision of the future that feels more contemplative than threatening.

Music also plays an essential role in shaping the film's emotional atmosphere. The score, associated with artists including Aska Matsumiya and Ryuichi Sakamoto, complements the film's meditative rhythm and reinforces its sense of memory and longing. Rather than telling audiences what to feel, the soundscape allows emotions to emerge gradually.

Our lives, the film suggests, are not defined only by major achievements or dramatic moments. Sometimes meaning exists in small experiences: a conversation, a walk, a view from a window, a shared meal, or a moment spent watching something beautiful. The film invites viewers to consider how much of life passes unnoticed while we remain focused on work, responsibility, or the future.

The story also explores identity, particularly through Mika's relationship with Yang. As an adopted child growing up in a multicultural family, Mika relies on Yang as a connection to aspects of her heritage that her parents struggle to provide. This adds another layer to the film's exploration of belonging. Yang is not merely a technological companion. He represents memory, culture, and connection.

In many ways, *After Yang* is less interested in predicting the future than examining the emotional challenges we already face today. Technology can preserve memories, connect people across distance, and create increasingly sophisticated forms of artificial intelligence. But can technology solve loneliness? Can it teach us how to love? Or does it simply reveal the emotional gaps that already exist within our lives?

These questions helped establish the film as a notable work of modern science fiction. *After Yang* received the 2022 Alfred P. Sloan Feature Film Prize at the Sundance Film Festival, with the jury

recognising its thoughtful exploration of technology, memory, loss, connection, privacy, and identity.

Kogonada's greatest achievement is his ability to make silence meaningful. After Yang moves at a deliberate pace, but its stillness is never empty. A pause between characters can reveal more than a page of dialogue. A simple image can carry the weight of an entire relationship.

In an era where science fiction often competes to create bigger worlds, louder action, and more spectacular effects, After Yang chooses another path. It turns inward.

It reminds us that the most fascinating mystery in the universe may not be found on another planet or inside a futuristic machine. It may exist in the relationships we neglect, the memories we fail to appreciate, and the people we believe we understand.

After Yang is ultimately a film about saying goodbye, but it is also about learning how to truly see. It asks us to pay attention before the moments we take for granted become memories. It suggests that perhaps being human is not about having all the answers. Perhaps it is about continuing to wonder, remember, connect, and care.

Quiet, intelligent, visually exquisite, and deeply moving, *After Yang* is more than a science-fiction film. It is a gentle reminder that life is made meaningful not by how long we exist, but by what we notice while we are here. ■

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TECH NEWS



GOOGLE LAUNCHES DIGITAL PASBAN TO STRENGTHEN ONLINE SAFETY IN PAKISTAN

Google has launched Digital Pasban, a new initiative designed to improve digital safety awareness among Pakistani internet users and families. As part of the programme, Google.org has committed \$500,000 to support Urdu-language digital safety tools expected to reach around 200,000 households. The initiative focuses on helping users better understand online risks, protect personal information and navigate digital platforms more safely. Google has also signed an agreement with the Pakistan Telecommunication Authority to strengthen awareness around child online safety and encourage responsible use of internet services. The initiative comes as Pakistan’s rapidly expanding digital population faces increasing exposure to online fraud, cyber threats, misinformation and privacy risks. By providing safety resources in local languages, the programme aims to make digital literacy more accessible to families and younger users across the country.

PUNJAB AND HUAWEI EXPAND COOPERATION IN AI, SMART SERVICES AND DATA CENTRES

Punjab is moving to deepen cooperation with Chinese technology giant Huawei in artificial intelligence, digital infrastructure and smart public services. During a meeting in Lahore, Punjab Chief



Minister Maryam Nawaz discussed plans to train 1,000 young people as Huawei master trainers, while 300 women trainers will receive specialized AI training. The two sides also discussed establishing an artificial intelligence delivery unit in Punjab and developing six data centres, including a proposed sovereign data centre at Nawaz Sharif IT City. Punjab also invited Huawei to expand investment in the province’s technology infrastructure. The planned initiatives are intended to strengthen local AI expertise, improve digital public services and create a larger pool of technology professionals capable of supporting Pakistan’s growing digital economy. The proposed data-centre network could also help improve local computing capacity and support the development of AI-powered government and business applications.

ZINDIGI AND DAT AI SYSTEMS PARTNER TO DEVELOP DIGITAL FINANCIAL SOLUTIONS

Pakistan’s digital-finance ecosystem is seeing deeper collaboration between financial technology companies and AI developers. Zindigi, powered by JS Bank, and DAT AI Systems signed a Memorandum of Understanding to explore technology-driven solutions for government organizations, educational institutions, corporations and other organizations. The partnership will investigate integrated services involving digital payments, identity verification, fee collection, wallets, accounts, disbursements and institutional operations. DAT AI Systems brings AI and messaging-based technology designed for workforce management, data collection and real-time operations, while Zindigi contributes its digital banking and payment infrastructure. The collaboration reflects the growing convergence of artificial intelligence, digital identity and financial services in Pakistan and could lead to new locally developed platforms for large-scale institutional digitalization. By combining AI-enabled workflows with secure financial infrastructure, the initiative could help organizations automate routine processes, improve transparency, strengthen data-driven decision-making and enhance service delivery. It also highlights the potential for technology partnerships to support Pakistan’s broader digital transformation agenda, particularly as institutions seek faster, more



accessible and efficient ways to manage payments, employees, beneficiaries, students and customers at scale.



AI ALLIANCE TAKES SHAPE BETWEEN PAKISTAN AND SAUDI ARABIA FOR A SMARTER DIGITAL FUTURE

Pakistan and Saudi Arabia have agreed to strengthen cooperation in artificial intelligence, data governance and emerging technologies. Pakistan’s Federal Minister for IT and Telecommunication Shaza Fatima Khawaja and Saudi Data and Artificial Intelligence Authority President Abdullah bin Sharaf Alghamdi agreed to continue consultations aimed at expanding technological collaboration between the two countries. The cooperation comes as both Pakistan and Saudi Arabia accelerate national digital transformation programmes and seek to develop stronger AI capabilities. Areas such as responsible AI adoption, data governance, digital infrastructure and emerging technologies could provide opportunities for knowledge exchange, investment and joint technology initiatives. The partnership could also encourage collaboration between technology companies, researchers, startups and public-sector institutions, creating new opportunities for innovation and skills development. For Pakistan, stronger engagement with Saudi Arabia could open pathways to Gulf technology markets, investment opportunities and large-scale digital projects. It may also support the development of locally relevant AI solutions, advanced data-management frameworks and digital infrastructure capable of serving rapidly growing economies. The development highlights Pakistan’s growing international engagement around artificial intelligence and the digital economy, while positioning Saudi Arabia as an increasingly important partner in the country’s technology and innovation ambitions.

FROM LOCAL SHOPS TO GLOBAL MARKETS: PAKISTAN’S SMES GET AN AI-POWERED DIGITAL BOOST

Pakistan’s Ministry of Information Technology and Telecommunication has partnered with Meta to launch the Small Business Growth Academy, a programme designed to help small and medium-sized enterprises adopt digital and AI-powered technologies. The initiative will provide practical training in Meta’s digital platforms, online marketing tools and AI-enabled technologies, helping businesses improve productivity, reach customers and compete more effectively in domestic and international markets. The programme is being implemented with AtomCamp and supported by organizations including Ignite, P@SHA, the Pakistan Software Export Board and SMEDA. Special emphasis is being placed on women-led businesses and smaller enterprises that often



face barriers to adopting advanced technology. Beyond technical training, the initiative could strengthen digital entrepreneurship, improve online customer engagement and help businesses build sustainable technology-driven growth models. Officials believe the programme can help Pakistani SMEs become more digitally competitive while opening new opportunities for entrepreneurship, e-commerce and technology-enabled exports. By equipping entrepreneurs with practical digital skills and AI tools, the initiative could also contribute to job creation, innovation and broader participation in Pakistan’s rapidly expanding digital economy.



PAKISTAN STRENGTHENS SEMICONDUCTOR AMBITIONS WITH THREE REGIONAL RESEARCH HUBS

Pakistan is laying the foundation for a domestic semiconductor ecosystem by establishing dedicated education and research clusters across the country’s major regions. The latest agreement with NED University completes the institutional structure of the Semiconductor Education & Research Cluster, joining NUST in the north and ESUPAK-UET Lahore in central Pakistan. The programme forms part of a broader national effort to develop highly skilled engineers and researchers in semiconductor design, electronics and related technologies. With artificial intelligence, smartphones, electric vehicles, telecommunications equipment and data centres increasingly dependent on advanced chips, developing domestic semiconductor expertise is becoming a strategic priority for countries seeking greater technological independence. Pakistan’s three-cluster model is expected to encourage research, industry collaboration and specialized workforce development while creating opportunities for Pakistani engineers to participate in the international semiconductor value chain. The initiative could also strengthen links between universities, technology companies and international partners, enabling knowledge transfer and practical innovation.



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