هيـــئة تنـــمية البـــحث
والتـــــطوير والابتـــكار
Research, Development
& Innovation Authority

National RDI Activity in Motion

Saudi Arabia's RDI Performance



2025

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Foreword

Message from

H.E Dr. Munir M.Eldesouki

The Acting Governor of the Research, Development and Innovation Authority

Saudi Arabia is transforming its Research, Development, and Innovation (RDI) ecosystem into a powerhouse of economic growth, reinforcing Vision 2030's ambition to position the Kingdom as a global leader in technology and high-value industries. This report documents that journey, tracking progress across the five RDI pillars for policymakers, ecosystem leaders, researchers, and international partners who are shaping and investing in Saudi Arabia's innovation future.

The Kingdom of Saudi Arabia targets to raise its R&D investments, and this is being pursued through bold regulatory reforms, targeted funding mechanisms, and a strengthened intellectual property landscape. In doing so, Saudi Arabia is building a dynamic innovation ecosystem that strengthens entrepreneurship, advances private-sector leadership, and fosters stronger linkages between academia and industry. These shifts are not only accelerating economic diversification, but also helping to elevate the Kingdom's global standing in innovation.

Innovation is no longer confined to research papers or patents; it is a driving force in building more resilient and diversified economies. As the Kingdom advances its national transformation, innovation is becoming a unifying pillar, bridging education, enterprise, technology, and governance. Public and private sectors are increasingly aligned around a shared vision that places innovation at the center of long-term development.

Significant progress has been made, GERD has grown steadily, the number of active researchers has expanded, and the startup ecosystem is maturing, yet structural challenges remain, including deepening private-sector R&D intensity and strengthening the commercialization pipeline. The trajectory, nonetheless, is unmistakable: Saudi Arabia is investing in knowledge and creativity as engines of national progress and global competitiveness.

This report provides a comprehensive look at the Kingdom's innovation journey, highlighting not only milestones, but also the strategic enablers being activated to scale impact. It explores how institutions, policies, and investments are uniting to build a resilient, adaptive, and globally connected RDI ecosystem. More than a record of progress, it is a call to action: to deepen collaboration, sustain momentum, and unlock the Kingdom's full potential for innovation, and we invite every reader to consider where they can contribute to that effort.

02.Executive Summary



Saudi Arabia is placing research, development, and innovation (RDI) at the heart of its national transformation. Under Vision 2030, the Kingdom is accelerating its shift toward a more diversified, knowledge-based economy, built on talent, technology, and the ability to generate and apply new ideas. Innovation has become a national priority, supported by dedicated institutions, expanding investment, and a long-term commitment to translating RDI into economic and societal value.

This national direction reflects a broader global movement. Around the world, countries are turning to RDI as a strategic lever to address complex challenges, from energy transitions and climate resilience to health security and digital disruption. Despite ongoing economic uncertainty, global R&D spending has continued to grow, reaching SAR 10.8 trillion in 2024 and CAGR of 4.9% over the past decade. This steady rise underscores a shared global understanding that innovation is essential to resilience, competitiveness, and sustainable growth. Saudi Arabia is actively aligning with this global shift by ramping up investment in its innovation capacity. Its Gross Domestic Expenditure on R&D (GERD) increased by 103% between 2021 and 2024, marking a significant step toward building the scientific and technological foundations needed for future economic leadership.

The results of these national efforts are becoming increasingly visible. Over the past few years, the Kingdom has achieved notable gains across several global indicators. These advances are the outcome of coordinated national reforms, including institutional upgrades, regulatory streamlining, enhanced digital infrastructure, and a more dynamic business environment. Collectively, they are laying the foundation for a high-performing RDI ecosystem capable of attracting talent, mobilizing private sector innovation, and delivering long-term impact.

	E-Government Development	IMD World Competitiveness Ranking
KSA Standing	**6th** Out of 193 countries in 2024	**17th** Out of 69 countries in 2025
Change over the years	**+46** Increase in rankings since 2018	**+9** Increase in rankings since 2019

	International IP Index	Global Innovation Index
KSA Standing	**25th** Out of 55 countries in 2025	**46th** Out of 139 countries in 2025
Change over the years	**+14** Increase in rankings since 2020	**+22** Increase in rankings since 2019

As part of a structured national approach, the Research, Development and Innovation Authority is leading efforts to deepen and scale progress through five pillars: Human Capital, Funding Mechanisms, Policy & Regulations, Innovation Networks, and Private Sector Enablement. Each pillar addresses a critical dimension of ecosystem development, advancing talent, broadening funding access, modernizing regulation, strengthening collaboration, and enabling firms to innovate and commercialize.

To showcase the strength and momentum of Saudi Arabia's research, development, and innovation (RDI) ecosystem, this snapshot presents key indicators across five pillars: Human Capital, Funding Mechanisms, Policy & Regulations, Innovation Networks, and Private Sector Enablement. Each metric highlights tangible progress in Saudi Arabia's shift toward a dynamic, knowledge-based economy.

Human Capital

4.2%
of KSA's 2025 GDP spent on education, more than the global average of ~4%

+49%
Increase in STEM graduates among tertiary students from 2018 to 2024

+68%
Growth in number of researchers (FTE) from 2021 to 2024

Funding Mechanisms

103%
Growth in Gross Domestic Expenditure on R&D (GERD) from 2021 to 2024

+59%
Increase in number of VC deals from 2021 to 2025

+240%
Growth in disclosed PE value from 2021 to 2025

Policy & Regulations

+41%
Growth in "Government Effectiveness" in percentile score (WGI) from 2020 to 2023

+12
Increase in "Entrepreneurship Policies and Culture" rank within (GII) from 2022 to 2025

+360%
Increase in "Established Business Ownership" within the GEM monitor from 2020 to 2025

Innovation Networks

70%
of academia industry research projects were funded in 2023, exceeding the global average of ~59.6%

12
Innovation Districts under the National Innovation Alliance as of 2024

12
Active Technology Transfer Offices (TTOs) in 2024

Private Sector Enablement

+34%
Increase in IA share of market cap, excluding Aramco, from 2017 to 2023

+189%
Growth in patent filings from 2020 to 2025

+178%
Growth in industrial designs filings from 2020 to 2025

Building on the quantitative progress in the five pillars, this section outlines the strategic initiatives and institutional enablers shaping Saudi Arabia's RDI transformation. Each narrative reflects how targeted policies, initiatives, and reforms, tailored to Human Capital, Funding Mechanisms, Policy & Regulations, Innovation Networks, and Private Sector Enablement—are translating investment into long-term capacity, competitiveness, and impact.

Human Capital

Targeted initiatives anchored by the Human Capability Development Program are developing Saudi Arabia's local talent, enhancing STEM and research pathways while also attracting global minds through programs like the Study in Saudi platform and the Premium Residency for exceptional talent.

Funding Mechanisms

Through direct grants, salary subsidies, global expansion support, and co-investment schemes, the Kingdom is expanding its RDI funding landscape, lowering financial barriers, complementing private capital, and empowering innovators to scale.

Policy & Regulations

Modernized business laws, strengthened IP protection, and enhanced labor flexibility are fostering an innovation-friendly environment, supported by digital platforms, regulatory sandboxes, and public services that reduce barriers and improve institutional responsiveness.

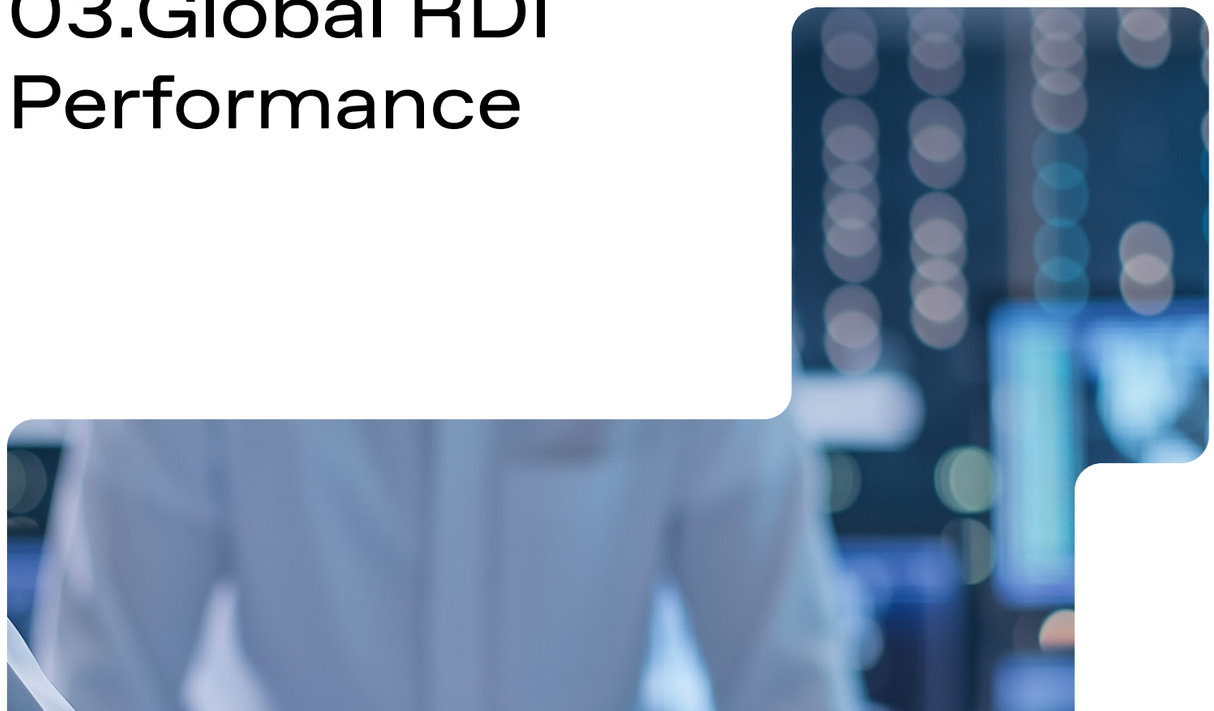
Innovation Networks

Strengthened collaboration between academia, industry, and government, along with expanded innovation districts and open innovation platforms, is enabling a more connected and agile ecosystem, supporting knowledge flow and positioning the Kingdom as a globally competitive RDI hub.

Private Sector Enablement

Efforts such as the National IP Strategy, expanded IP services, and support for filings are empowering firms to commercialize RDI investments and grow intangible assets—signaling the private sector's rising role in the knowledge-based economy.

03.Global RDI Performance



The global landscape of research, development, and innovation (RDI) is steadily evolving, emerging as a crucial driver of economic growth. Nations are increasingly recognizing the importance of investing in RDI as a key component of developing a knowledge-based economy, essential for achieving sustainable socioeconomic prosperity.

This growing interest in transitioning from traditional resource-based economies to knowledge-driven ones is evident in the rising global R&D expenditure, the growing strength of RDI-intensive industries, and the expansion of intangible assets within the private sector. Strategic policies and public investments play a vital role in this transformation, as governments implement frameworks that foster innovation and enhance collaboration between sectors. These efforts not only unlock new economic opportunities but also strengthen a country's competitiveness on the global stage.

By prioritizing RDI, nations position themselves to develop cutting-edge technologies, drive efficient production processes, and create high-value jobs. This commitment to innovation empowers countries to adapt to changing market demands and maintain leadership in high-impact sectors, ultimately contributing to long-term growth and resilience.

SAR 10.8 Trillion
Global R&D expenditure in 2024

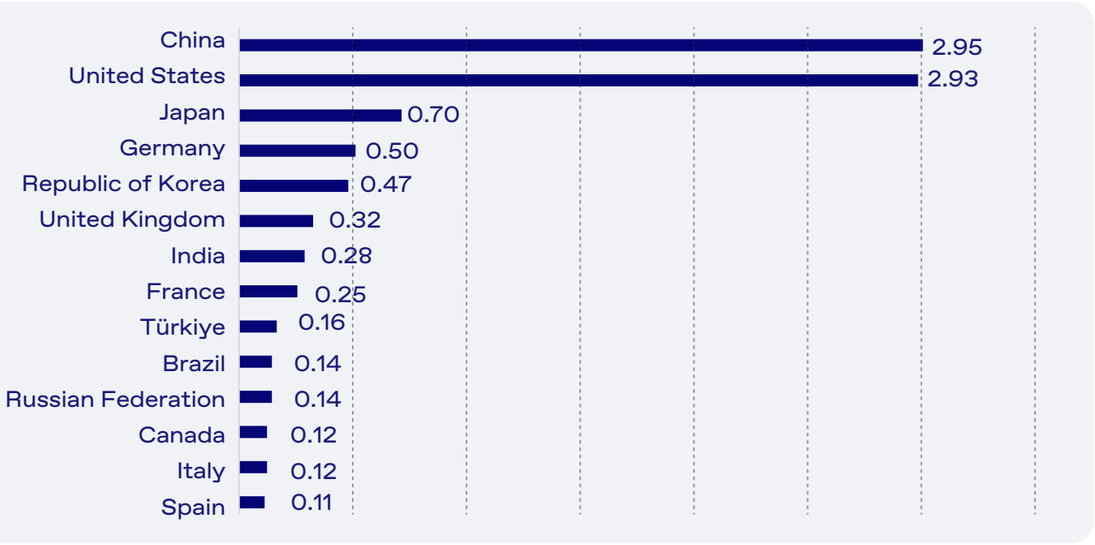
Global R&D spending has grown steadily over the past decade, rising from SAR 6.1 trillion in 2012 to 10.8 trillion in 2024—a compound annual growth rate (CAGR) of 4.9%, as shown in Figure 1. This consistent increase reflects a sustained global commitment to innovation and signals the rising strategic value of RDI across economies. However, this global trend masks clear disparities.
A concentrated set of countries accounts for a large share of R&D investment, supported by strong policy coordination, mature institutions, and high absorptive capacity. These nations invest heavily and consistently convert spending into technological advances and economic outcomes. Others, despite rising interest in RDI, face challenges in scaling up—such as funding gaps, talent shortages, and weak research-industry linkages. As a result, innovation performance depends not just on how much countries invest, but on how well they align strategy, capacity, and delivery.

Figure 1. Global R&D Expenditure PPP SAR Trillion



Note: Data for 2019 is not available
Source: Statista

Figure 2. R&D Expenditure Among Selected Top-Spending Countries, PPP SAR Trillion, 2025



Source: Statista

The world's largest economies are significantly ramping up their investments in RDI, as illustrated in Figure 2. Leading this trend in 2025 is China, which invested around 2.95 trillion SAR in R&D, followed by the United States with 2.93 trillion SAR. Other major players include Japan, Germany, and South Korea, each investing hundreds of billions of SAR annually.

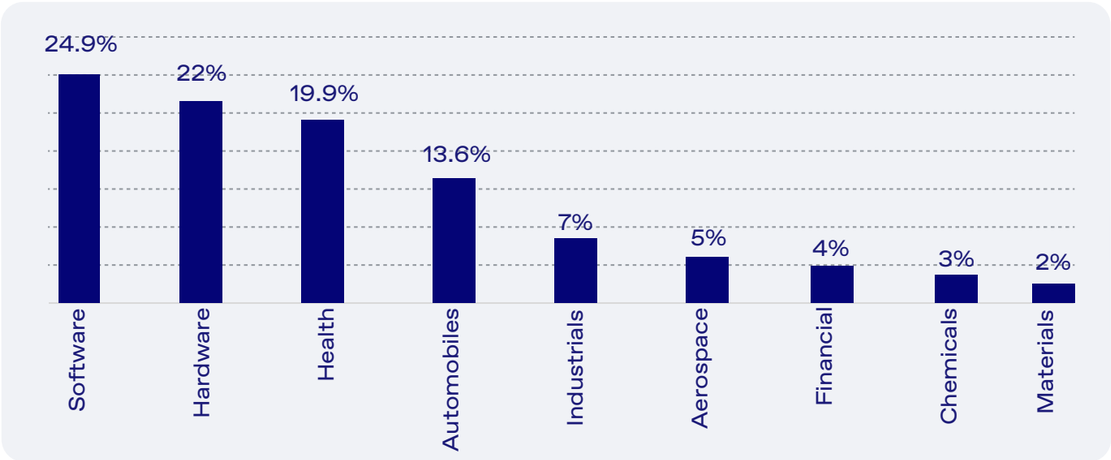
To strengthen their positions, these countries are enacting strategic initiatives such as the CHIPS and Science Act in the USA and "Made in China 2025" in China. These policies prioritize critical sectors including semiconductors, artificial intelligence (AI), and advanced manufacturing, aiming to secure a competitive advantage in the technologies that will define the future global economy.

18X
China's R&D spending grew since the early 2000s

The race for innovation is not exclusive to established economies; emerging markets like Turkey and Russia are also making substantial gains. For instance, since the early 2000s, China has increased its R&D spending by more than 18-fold, reflecting its rapid rise as a global innovation leader.

The private sector plays a pivotal role in driving innovation and shaping the competitive dynamics of the global R&D landscape. In the USA, for example, Amazon, Alphabet, and Meta alone invested a combined 572 billion SAR in R&D in 2022, accounting for approximately 20% of the country's total R&D expenditure. This underscores the significant impact of leading technology companies in propelling innovation ecosystems.

Figure 3. Global R&D Investment by Sector, Top 2,000 Companies, 2025



Source: EU Industrial R&D Scoreboard

As nations increasingly prioritize innovation to drive economic growth and competitiveness, a closer look at the sectoral distribution shows that ICT software, hardware, health, and automotive account for the largest shares of global corporate R&D investment. Among the world's top 2,000 R&D companies, these four sectors represented more than 80% of total R&D investment. Figure 3 illustrates the distribution of R&D investment across the leading companies.

Hardware & Software

These sectors are heavily investing in AI, quantum computing, cloud infrastructure, and cybersecurity, which are revolutionizing automation, digital services, and data-driven decision-making. Such advancements are crucial for enhancing operational efficiency and securing sensitive information in an increasingly digital world.

Healthcare

This sector focuses on advancements in personalized medicine, biotechnology, and digital health, with R&D growth accelerating developments in mRNA vaccines, gene therapy, and AI-powered diagnostics. These innovations are essential for improving patient outcomes and addressing complex health challenges.

Automobiles

The automotive industry is experiencing a significant push for electric vehicles (EVs) and autonomous mobility, leading to substantial investments in battery technology, charging infrastructure, and smart mobility solutions. This shift is vital for reducing carbon emissions and meeting evolving consumer demands for sustainable transportation.

Industrials

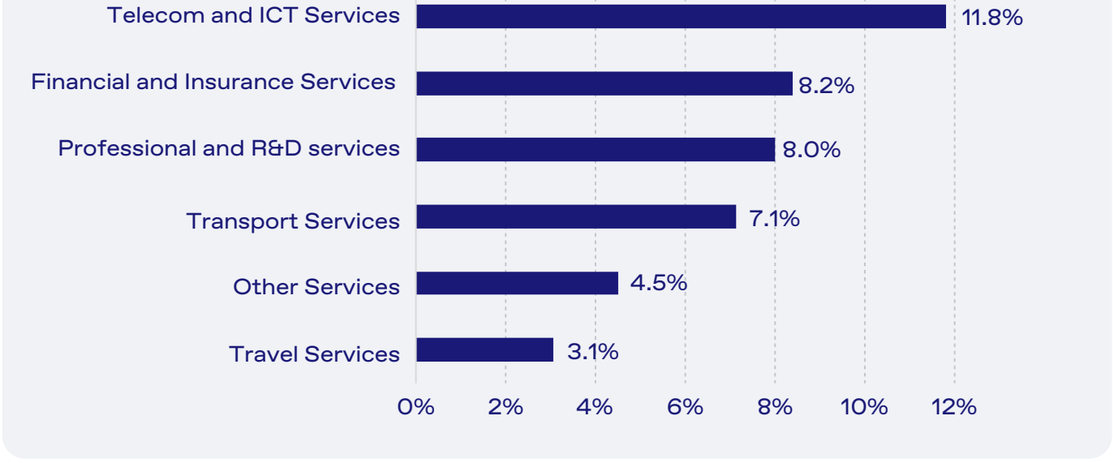
This sector focuses on innovation in energy-intensive industries and circular technologies. R&D activity supports the development of greener industrial processes and resource-efficient solutions, with the sector leading international green patenting in these areas.

The increasing focus on knowledge-intensive sectors is shaping industry strategies and contributing to the evolving structure of global trade. This shift is increasingly visible in world services exports, which reached around SAR 33.5 trillion in 2024 and expanded at a CAGR of 6.8% between 2019 and 2024. As illustrated in Figure 4, the three fastest-growing service categories all include knowledge-intensive activities. Telecom and ICT Services led growth at 11.8%, underscoring the expanding role of digital connectivity and technology in global services trade. Financial and Insurance Services followed at 8.2%, reflecting their enabling role in mobilizing capital, managing risk and supporting investment. Professional and R&D Services grew by around 8.0%, highlighting the increasing contribution of expertise and specialized capabilities to cross-border trade.

The remaining service categories continue to play important roles in supporting international connectivity and economic activity. However, their comparatively slower export expansion further distinguishes the performance of knowledge- and technology-intensive services over the five-year period. Together, these trends point to a broader transition toward services driven by knowledge, technology and advanced capabilities, reinforcing their importance to economic productivity, innovation and long-term competitiveness.

SAR 33.5 Trillion
in global services exports in 2024

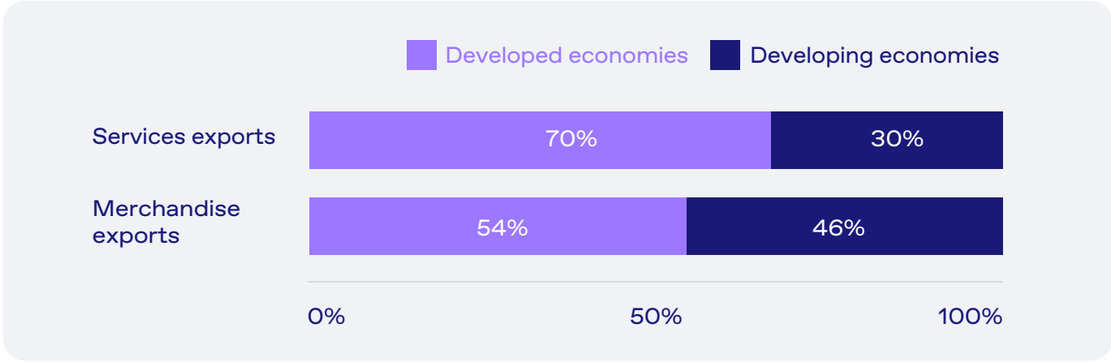
Figure 4. World Services Export Growth by Category, CAGR, 2019–2024



Source: OECD–WTO Balanced Trade in Services (BaTIS) Database and Team Analysis

Alongside the rising value of services exports, their distribution across economy groups provides another perspective on the changing structure of global trade. As illustrated in Figure 5, developed economies accounted for around 70% of global services exports and 54% of global merchandise exports in 2024, while developing economies accounted for 30% and 46%, respectively. This distribution indicates that developed economies hold a stronger relative position in global services trade than in merchandise trade.

Figure 5. Distribution of Global Services and Merchandise Exports by Economy Group, 2024 (% Share)



Source: UNCTAD

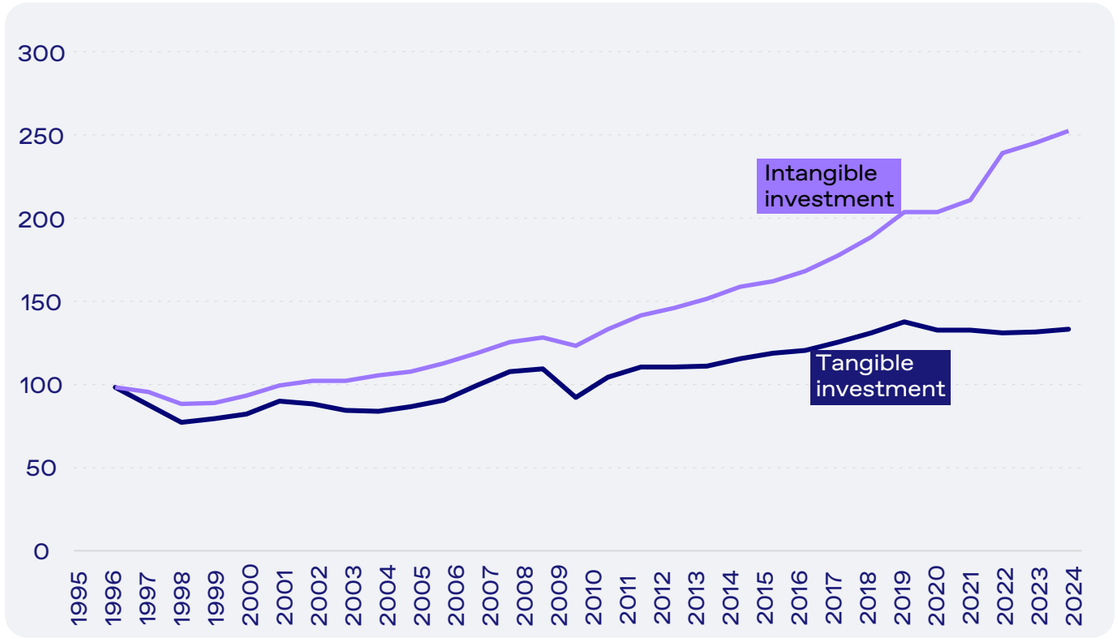
As economies increasingly prioritize innovation and knowledge-based production, intangible assets are becoming a dominant force in value creation. These include intellectual property, software, and data, now central not only to corporate strategy but to how countries structure their competitiveness and economic resilience.

According to the 2024 World Intangible Investment Highlights, published by the World Intellectual Property Organization (WIPO) and Luiss Business School (LBS), the analysis covers 26 major economies, including 22 European Union (EU) member states, the United States, the United Kingdom, Japan, and India. Intangible investment has grown three times faster than tangible investment between 2008 and 2023. Despite significant global shocks, such as the 2008 financial crisis, the COVID-19 pandemic, and rising inflation, this trend has accelerated. In the economies covered, representing a substantial share of global GDP, intangible investment overtook tangible investment around 2009 and has continued to outpace it ever since. By 2024, indexed intangible investment had more than doubled relative to 1995 levels, while tangible investment plateaued.

Figure 6 illustrates this structural transformation in capital formation, where intangible investment has consistently outpaced physical capital over the past two decades. This divergence reflects a broader shift toward knowledge-intensive growth, where the most valuable firms, spanning industries such as high-tech, pharmaceuticals, automotive, and financial services, derive their competitive edge from intangible rather than physical capital. These capabilities include know-how, software, brand equity, design, and organizational expertise, all of which increasingly underpin market value and innovation potential.

The rise of intangible investment signals a broader economic realignment: economies that effectively invest in intangible infrastructure, such as R&D systems, digital capabilities, and organizational knowledge, are likely to secure stronger positions in the global innovation landscape.

Figure 6. Growth of Tangible and Intangible Investment in Selected Economies



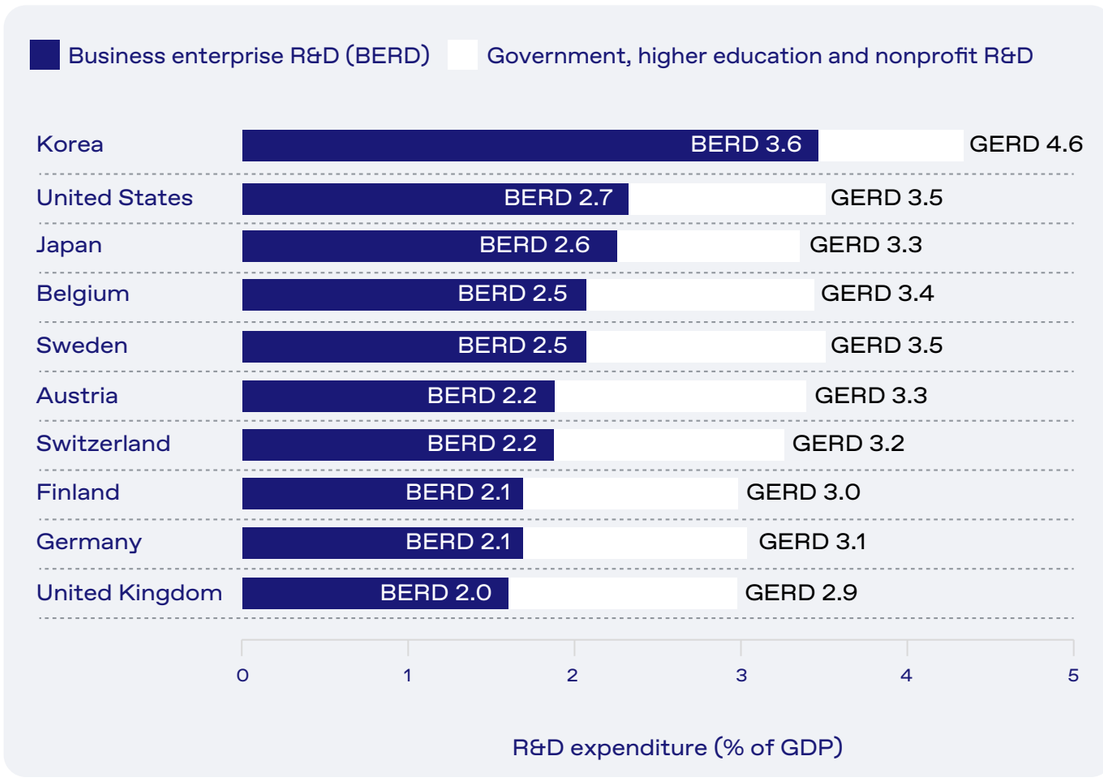
Source: WIPO

Governments actively seek to foster innovation through a range of policy interventions, such as direct funding, tax incentives and public research programmes, aimed at reducing the cost and uncertainty of R&D and encouraging business participation. The relative roles of the state and industry nevertheless vary across countries and sectors. A recent OECD study shows that business enterprise R&D (BERD) accounts for close to 70% of gross domestic expenditure on R&D (GERD) across its member economies, with governments applying different policy mixes and levels of support to stimulate business R&D.

Figure 7 highlights selected OECD economies with high BERD as a share of GDP in 2021. Despite their strong business R&D performance, government approaches varied, Korea combined relatively strong direct funding with tax incentives, the United States used a more balanced mix, and Japan relied more heavily on tax incentives. Germany and Finland recorded comparatively limited support through these measured channels. The appropriate policy mix may vary according to an economy's structure, national priorities and the maturity of its innovation ecosystem.

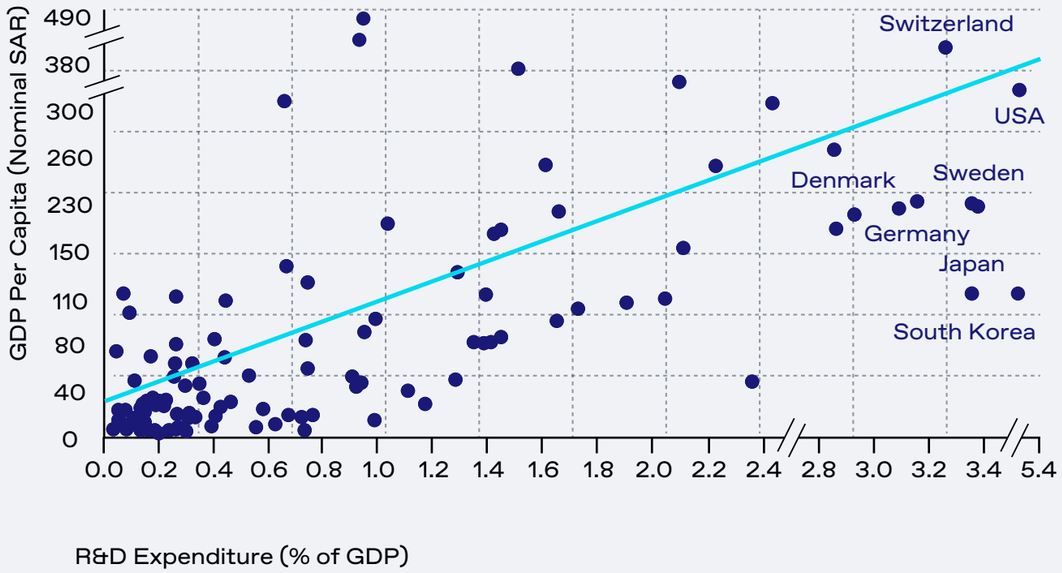
Public support remains important even in advanced innovation systems. In 2021, governments across the OECD delivered approximately 60% of their measured financial support for business R&D through tax incentives. An OECD study estimated that, on average, each monetary unit of tax support or direct funding induced around 1.4 units of additional business R&D expenditure. Evidence further suggests that tax incentives generate greater additional R&D among firms with lower initial R&D expenditure, which is often smaller, while direct funding is generally better suited to longer-term and higher-risk projects. These differences highlight the complementary roles that the two forms of support can play in fostering business R&D.

Figure 7. GERD and BERD Among Selected OECD Economies, % of GDP, 2021



Source: OECD

Figure 8. Correlation between R&D expenditure & GDP per capita, 2020-2021



Source: UIS, World Bank

In both advanced and emerging economies, investment in RDI has become a key driver of long-term economic performance. While prosperity depends on a mix of factors—such as education, trade, and institutional quality—R&D intensity consistently distinguishes many high-performing economies.

Figure 8 highlights a consistent pattern: countries that allocate a higher share of GDP to R&D tend to report higher levels of GDP per capita. Economies such as Switzerland, the United States, and Sweden stand out not only for their significant R&D spending but also for their ability to translate innovation into economic value and social well-being.

This trend is also mirrored in the broader impact of RDI on national capabilities. Economies with strong R&D systems tend to generate more patents, attract high-value investment, and foster globally competitive industries. Over time, this leads to stronger productivity, more dynamic job markets, and deeper participation in knowledge-intensive global value chains.

They are also better equipped to adapt to disruption, whether technological, environmental, or geopolitical, through faster innovation and resource reallocation. These economies also tend to cultivate more vibrant innovation ecosystems, characterized by strong university–industry collaboration, effective intellectual property frameworks, and access to venture financing. These conditions support both established firms and emerging innovators, helping to accelerate the commercialization of ideas and the spread of innovation across sectors.

While the chart does not imply direct causation, the pattern supports a clear conclusion: sustained RDI investment strengthens a country's ability to compete, grow, and deliver rising living standards. In a knowledge-driven global economy, embedding innovation into national strategy is increasingly seen not just as beneficial, but essential for long-term resilience and shared prosperity.

Key Insights

1 Global R&D Investment Is Accelerating, Led by Major Economies

R&D spending has grown by 4.9% annually over the past decade, driven by ambitious national strategies and expanding corporate activity. The United States and China lead global investment, while countries like South Korea, Germany, and Japan maintain strong innovation momentum.

2 Strategic Sectors are Powering Innovation-Led Growth

Sectors such as software, hardware, health, and automotive account for the largest shares of global R&D investment. Breakthroughs in AI, biotechnology, and electric vehicles are reshaping economies, accelerating technological change, and unlocking new value across sectors.

3 Knowledge-Intensive Activities Lead Global Services Export Growth

Global services exports reached around SAR 33.5 trillion in 2024, expanding at a CAGR of 6.8% between 2019 and 2024. The three fastest-growing categories all include knowledge-intensive activities: Telecom and ICT Services, Financial and Insurance Services, and Professional and R&D Services.

4 The Growing Role of Intangible Assets in Value Creation

Intangible investment has consistently outpaced tangible investment over the past two decades. This trend highlights a broader shift toward knowledge-intensive growth, with intellectual property, software, data, and organizational expertise increasingly underpinning market value and innovation potential.

5 R&D Investment Drives Global Competitiveness and Prosperity

Countries that allocate over 3% of GDP to R&D often show higher income levels, strong high-tech exports, and greater economic adaptability. Innovation appears to be a contributing factor in building competitiveness and resilience in a knowledge-driven global economy.

04. Saudi Arabia's RDI Performance



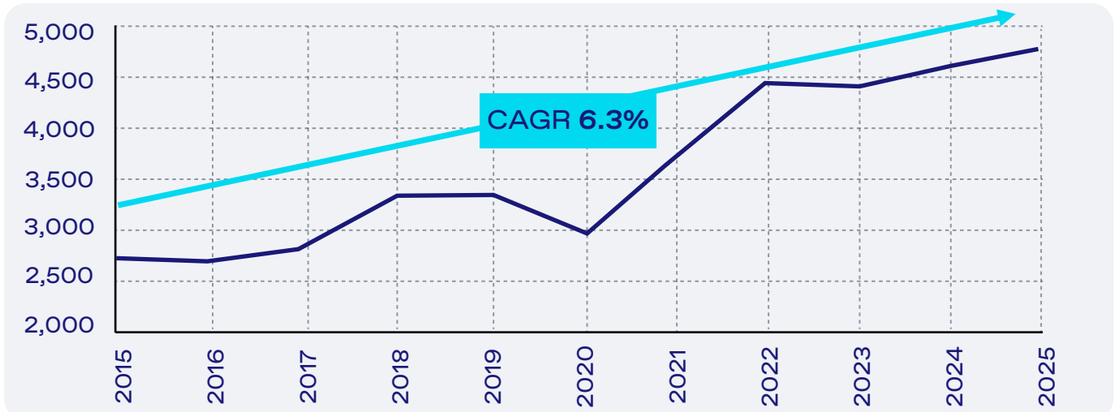
As global attention increasingly turns to innovation as a driver of sustainable growth and competitiveness, Saudi Arabia is positioning research, development, and innovation (RDI) as a core pillar of its national transformation. Guided by Vision 2030, the Kingdom is working to diversify its economy, reduce reliance on oil, and build a more prosperous, knowledge-driven society. Innovation is seen as both a catalyst for economic diversification and a foundation for enhancing productivity and national resilience.

To support this shift, Saudi Arabia is expanding research funding, prioritizing key sectors, and implementing reforms to improve commercialization and innovation efficiency. These efforts are contributing to notable improvements in global innovation rankings and strengthening the foundations of a dynamic RDI ecosystem.

Saudi Arabia has sustained robust economic growth over the past decade, reinforcing its status as the largest economy in the Middle East and North Africa (MENA) region. With nominal GDP reaching approximately SAR 4.8 trillion in 2025, the Kingdom continues to demonstrate strong macroeconomic performance, supported by fiscal reforms, strategic investments and a growing non-oil sector. As shown in Figure 9, nominal GDP increased from approximately SAR 2.6 trillion in 2015 to SAR 4.8 trillion in 2025, representing a compound annual growth rate (CAGR) of 6.3%, more than twice the global average of around 2.9%. Despite the 2020 global slowdown, the economy rebounded swiftly, particularly between 2021 and 2022. This sustained growth highlights Saudi Arabia's resilience and ongoing progress toward building a dynamic and innovation-led economy.

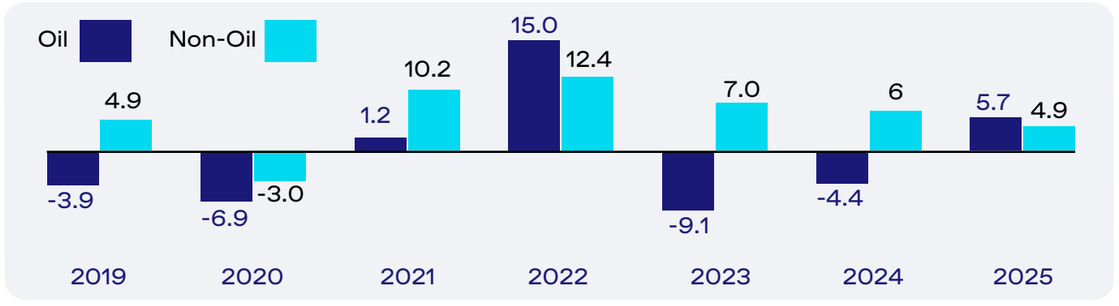
Non-oil activities, accounting for 55% of GDP in 2025, continue to support Saudi Arabia's broader transformation goals. As shown in Figure 10, non-oil activities grew by 4.9% in 2025, reinforcing the Kingdom's economic diversification and providing a stable foundation for future innovation and competitiveness.

Figure 9. Nominal GDP, SAR Billion



Source: GASTAT

Figure 10.Real GDP Growth Rate by Main Activity, Year-on-Year (%)



Source: GASTAT

Figure 11. GDP by Economic Activity (ISIC4), 2025 Current Prices in Billion SAR

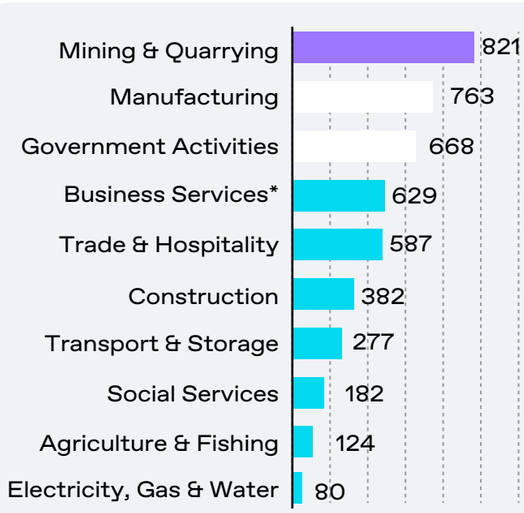
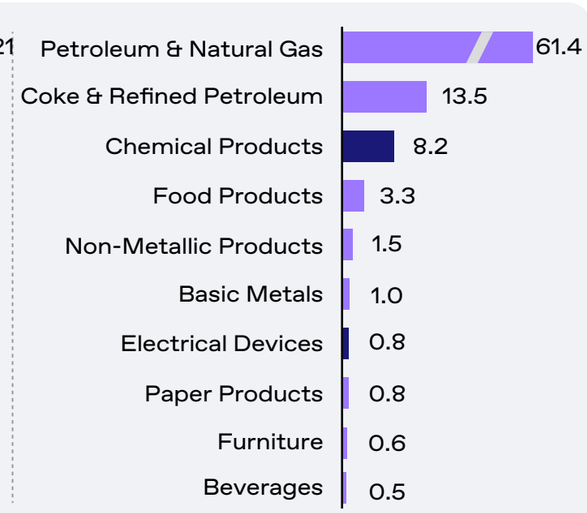
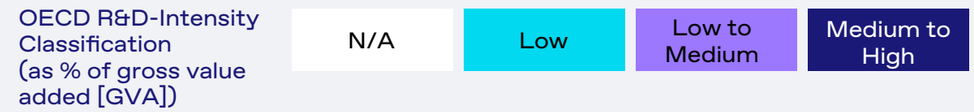


Figure 12. Industrial Production Index, 2025, Weight





*Business Services include Finance, Insurance, Real Estate.
Source: GASTAT

While Saudi Arabia continues to advance its economic diversification agenda, oil-related and Low R&D-intensive sectors remain central to the national economic structure. As illustrated in Figure 11, mining and quarrying remained the largest economic activity in 2025, contributing around SAR 821 billion, equivalent to approximately 17% of nominal GDP. Its Low to Medium R&D-intensity classification indicates that a large share of national output remains anchored in resource-based activity. Manufacturing ranked second, contributing approximately SAR 763 billion, equivalent to approximately 16% of nominal GDP. Its scale, however, includes a diverse mix of industries with different R&D-intensity profiles. Across the rest of the classified economy, all sectors fall within the Low category, indicating that the broader production base remains concentrated in activities with limited R&D intensity.

A similar concentration is evident in Figure 12, where IPI weights are heavily concentrated in oil-related segments, notably petroleum and natural gas (61.4%) and coke and refined petroleum (13.5%), which together comprise around 75% of the Industrial Production Index (IPI). Although non-oil manufacturing segments remain considerably smaller in weight, chemical products, classified as Medium to High R&D intensity, hold the third-largest share at 8.2%. This indicates that higher-intensity industrial activity is present, although its weight remains limited relative to the oil-related components of the index. Sustained investment in Medium to High R&D-intensive sectors will be essential to deepening the transition and accelerating progress toward the Kingdom's Vision 2030 goals.

Figure 13. KSA's Rankings In Innovation-Related Indicators

	E-Government Development	IMD World Competitiveness Ranking
KSA Standing	**6th** Out of 193 countries in 2024	**17th** Out of 69 countries in 2025
Change over the years	**+46** Increase in rankings since 2018	**+9** Increase in rankings since 2019

	International IP Index	Global Innovation Index
KSA Standing	**25th** Out of 55 countries in 2025	**46th** Out of 139 countries in 2025
Change over the years	**+14** Increase in rankings since 2020	**+22** Increase in rankings since 2019

As part of Vision 2030, Saudi Arabia is consistently advancing its position in global innovation-related indices, highlighting the impact of targeted reforms and strategic investments that support economic growth and diversification. These improvements reflect the Kingdom's transition toward a competitive, knowledge-based economy. As illustrated in Figure 13, Saudi Arabia has made notable progress across several internationally recognized indices:

UN E-Government Development Index (EGDI) – Published by UNDESA, this index evaluates the use of information and communication technology (ICT) in public service delivery. Saudi Arabia rose from 52nd in 2018 to 6th in 2024, a 46-rank improvement, fueled by enhancements in digital infrastructure, online services, and citizen engagement.
IMD World Competitiveness Ranking – Issued by the International Institute for Management Development, this index measures how effectively countries convert resources into long-term value. Saudi Arabia improved from 26th in 2019 to 17th in 2025, a 9-rank improvement, reflecting gains in government efficiency, labor market performance, and digital capability.
International Intellectual Property Index – Produced by the U.S. Chamber of Commerce's Global Innovation Policy Center (GIPC), this index assesses the strength of IP protection and enforcement. The Kingdom climbed from 39th in 2020 to 25th in 2025, marking a 14-rank improvement, supported by stronger legal frameworks, enforcement mechanisms, and regulatory reforms that promote innovation.
Global Innovation Index (GII) – Published by the World Intellectual Property Organization (WIPO), the GII ranks countries based on innovation inputs (e.g., institutions, human capital, infrastructure) and outputs (e.g., patents, high-tech exports). Saudi Arabia advanced from 68th in 2019 to 46th in 2025, a 22-rank improvement, supported by expanded R&D investment, education reform, and momentum in high-tech sectors.

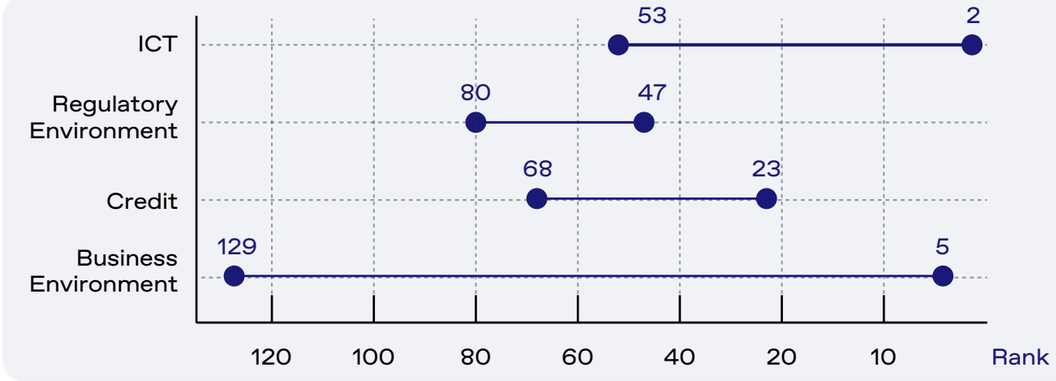
Saudi Arabia's improved position in the Global Innovation Index (GII), rising 22 ranks over the past few years, reflects steady progress in strengthening its innovation landscape. This includes a 18 rank gain in innovation inputs, from 49th in 2019 to 31st in 2025, and a 24 rank improvement in innovation outputs, moving from 85th to 61st. The stronger output performance underscores early returns from national reform efforts, while a solid input base continues to be built to support sustained innovation.

As shown in Figure 14, the Kingdom recorded exceptional advances across key input pillars. Most notably, the business environment improved by 124 ranks, supported by significant gains in ICT infrastructure 51, credit availability 45, and regulatory environment 33.

These developments reflect growing institutional readiness and market support for innovation. Meanwhile, Figure 15 illustrates meaningful progress in output indicators, particularly intangible assets 41, knowledge creation 24, knowledge diffusion 12, and creative goods and services 5, marking early evidence of innovation-driven outcomes.

This current divergence between input and output rankings is typical during the early stages of transformation, as foundational reforms precede measurable results. With these enablers now in place, Saudi Arabia is well positioned to convert its innovation capacity into stronger outputs and long-term global competitiveness.

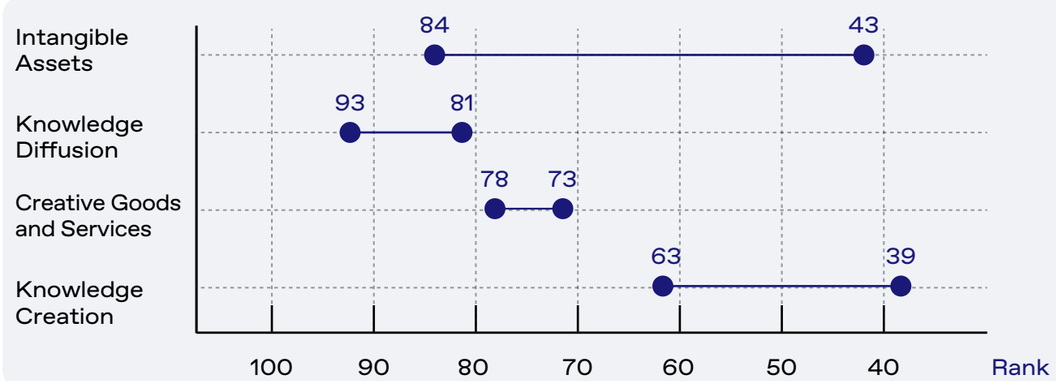
Figure 14. KSA Ranking in GII Inputs, 2019-2025



Source: Global Innovation Index, WIPO

18
Rank improvement in innovation inputs

Figure 15. KSA Ranking in GII Outputs, 2019-2025



Source: Global Innovation Index, WIPO

24
Rank improvement in innovation outputs

Key Insights

1

National Diversification Progress Backed by Strong Growth

The non-oil sectors now make up more than 50% of real GDP for Saudi Arabia, reflecting steady progress in economic diversification. Nominal GDP reached SAR 4.8 trillion in 2025, representing a compound annual growth rate (CAGR) of 6.3%, more than double the global average. While oil remains significant, the expanding role of non-oil and focus on knowledge-based sectors signals a positive structural shift.

2

Global Indicators Reflect Saudi's Positive Performance

Targeted reforms and strategic investments have elevated Saudi Arabia's standing in key global rankings. Over recent years, the Kingdom has climbed 46 places in the UN E-Government Development Index, 22 in the Global Innovation Index, 14 in the International IP Index, and 9 in the IMD World Competitiveness Ranking, reflecting growing institutional strength and sustained innovation progress.

3

Strong Input Foundations are Powering Early Output Gains

Notable improvements in the GII input pillars, such as a 124 rank leap in business environment and strong advances in credit, ICT, and regulation, are laying the groundwork for long-term innovation capacity. These are translating into early output improvements, with rising performance in knowledge creation and diffusion, and a 41 rank jump in intangible assets, signaling early returns on recent innovation investments.

4.1 Saudi Arabia’s RDI Performance: Human Capital



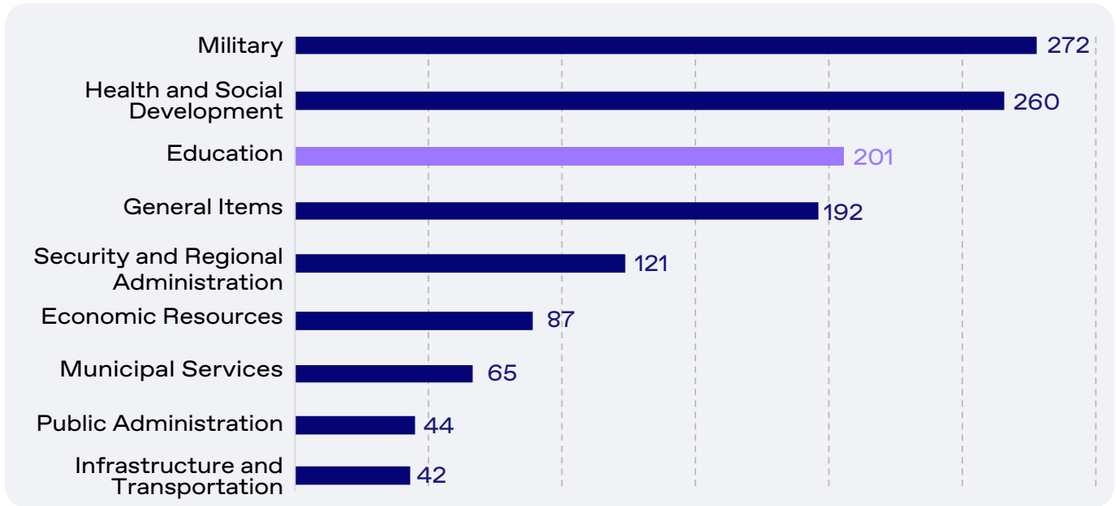
Human capital is the foundation of any thriving research, development, and innovation (RDI) ecosystem. It encompasses the skills, knowledge, and capabilities of individuals that drive and support scientific discovery, technological advancement, and the translation of ideas into economic and societal value. Nations that invest strategically in developing and sustaining a skilled talent pipeline across the RDI value chain position themselves at the forefront of global competitiveness and resilience. Saudi Arabia’s investments in talent are central to advancing its innovation agenda. These efforts also reinforce other RDI pillars, supporting industry collaboration, enhancing the impact of funding, and enabling firms to absorb and apply new knowledge effectively.

As illustrated in Figure 16, the Kingdom allocated SAR 201 billion to the education sector in its 2025 national budget, representing approximately 4.2% of 2025 GDP. This makes education one of the largest budget allocations, following military and health and social development. Recent estimates from the World Bank suggest that global education spending as a share of GDP averages around 4%. This places Saudi Arabia slightly above the global average in education investment, with reforms aiming to boost returns on learning.

A particular focus within this investment is the strengthening of STEM (science, technology, engineering, and mathematics) education, an essential driver of innovation capacity and a critical enabler across the RDI ecosystem. By enhancing STEM learning at all levels, from foundational education to advanced research training, Saudi Arabia is cultivating the next generation of scientists, engineers, and technologists capable of contributing to national priorities and global scientific progress.

Supporting this direction, the Human Capability Development Program (HCDP), a flagship initiative under Vision 2030, is playing a pivotal role in preparing citizens for the future labor market. The program places a strong emphasis on digital literacy, advanced technical skills, and lifelong learning. The HCDP aims to bridge the gap between educational outcomes and labor market needs, particularly in high-demand sectors such as artificial intelligence, biotechnology, space, and renewable energy. Through such integrated efforts, Saudi Arabia is laying the groundwork for a dynamic and innovation-ready workforce that will drive sustainable economic and technological advancement.

Figure 16. KSA Budget Allocation by Sector, SAR Billion, 2025



Source: KSA Ministry of Finance
* General items: Government contribution to pension funds and social insurance, debt, balancing account allocation, contributions to international organizations, government programs and facilities, subsidies, and contingency provision.

Figure 17. STEM Graduates* as % of Tertiary Graduates

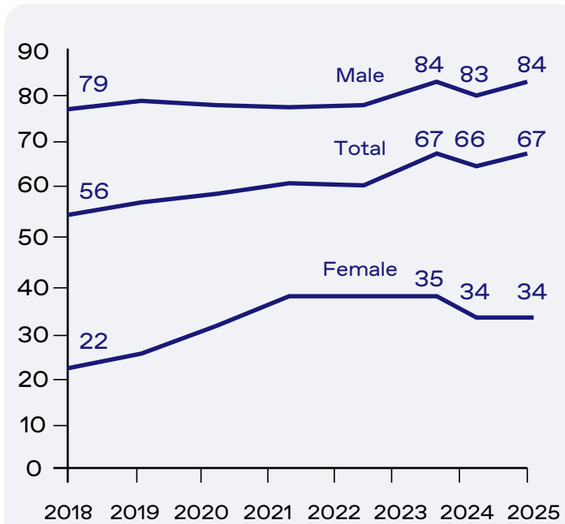


Note: Data for 2023 is not available
Source: UNESCO

The share of STEM graduates in Saudi Arabia has continued to rise over recent years, increasing from 21.1% in 2018 to 31.5% in 2024, a total growth of about 49%. This trend reflects the Kingdom's strategic investment in STEM education as a key enabler of innovation and future economic competitiveness. Figure 17 illustrates this upward trajectory, signaling strong alignment between education outcomes and national development goals. This progress underscores the impact of initiatives such as the Human Capability Development Program (HCDP) in preparing a skilled workforce for high-growth sectors. Together, these gains indicate a widening talent pipeline capable of supporting advanced industries and accelerating the transition to a more innovation-driven economy.

Figure 18. Labour Market Participation, % of Population Aged +15

Alongside the rise in STEM education, Saudi Arabia has made steady progress in labour market participation among individuals aged 15 and older. As shown in Figure 18, overall participation increased from 56% in 2018 to 67% in 2025, surpassing the global average of around 60% according to the International Labour Organization (ILO). Male participation remained consistently high, rising from 79% to 84%, while female participation grew significantly from 22% to 34%. These gains reflect national reforms aimed at promoting broader economic inclusion, with a strong focus on increasing women's participation and advancing the goals of Vision 2030. The upward trend signals the emergence of a more inclusive and capable workforce, better positioned to support the Kingdom's shift toward a knowledge-based, innovation-driven economy.

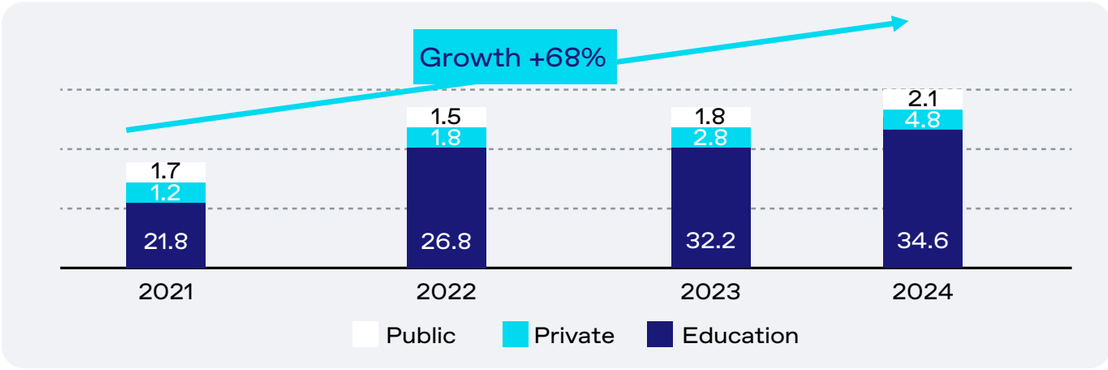


Source: GASTAT

* Includes sum of graduates in the fields of ICT, engineering, manufacturing, construction, mathematics, statistics and natural sciences.

Building on the Kingdom's progress in STEM education and workforce development, the growth in the number of researchers is a key indicator of human capital advancement. Researchers are central to the RDI ecosystem, driving discovery and innovation across sectors. As illustrated in Figure 19, the number of researchers in Saudi Arabia grew from 24.7 thousand in 2021 to 41.5 thousand in 2024, a substantial 68% increase in just three years. This growth was led by the education sector, which accounted for 83% of the total in 2024. The private and public sectors also saw gains, with the private sector increasing by 300%, while the public sector rose by around 24% between 2021 and 2024, reflecting early diversification in research capacity. While the expansion underscores the Kingdom's investment in academic research, the relatively low private sector involvement highlights an opportunity for deeper industry engagement.

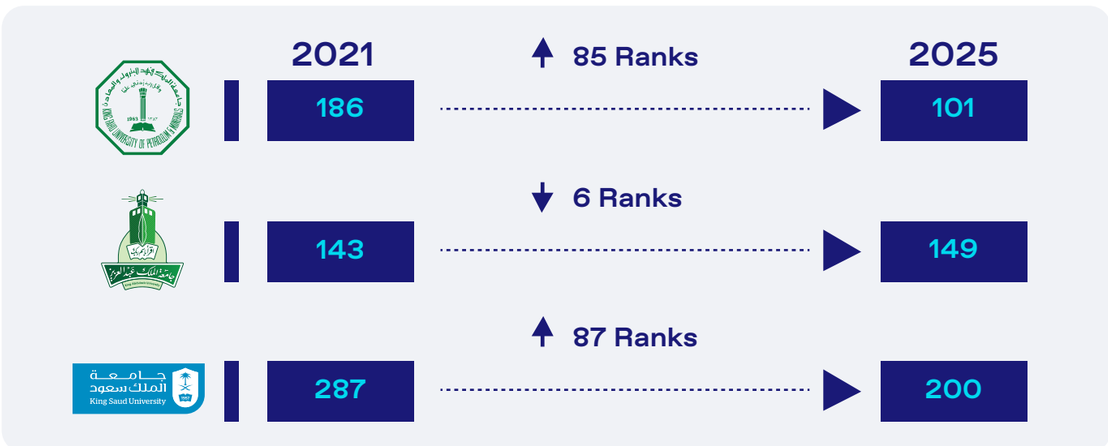
Figure 19. Number of Researchers (FTE), Thousand



Source: GASTAT

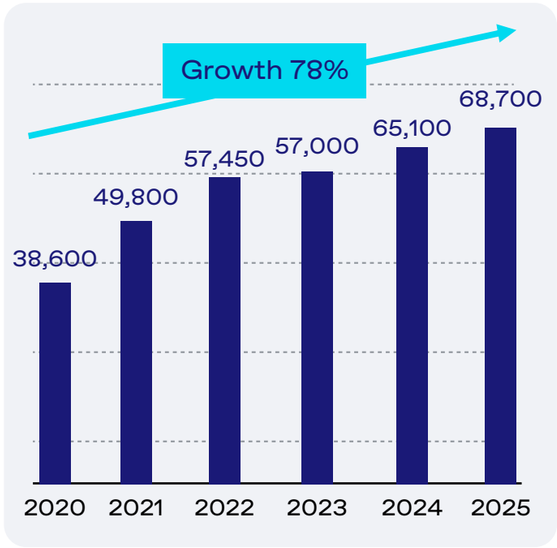
Saudi Arabia's rising university rankings reflect broader national efforts to build a knowledge-based, innovation-driven economy. By 2025, three leading institutions, KFUPM, KAU, and KSU, were ranked within the top 200 globally in the QS World University Rankings. Both KFUPM and KSU achieved substantial improvements since 2021, with KFUPM advancing 85 places from 186th to 101st, and KSU advancing 87 places from 287th to 200th. KAU maintained a solid position, ranking 149th in 2025 despite a slight drop. As shown in Figure 20, this collective progress highlights the strengthening role of Saudi universities in supporting national RDI efforts particularly in fostering high-quality environments that enable research, talent development, and long-term innovation capacity.

Figure 20. Top 3 Saudi Universities in Top 200 QS Rankings



Source: QS World University Rankings

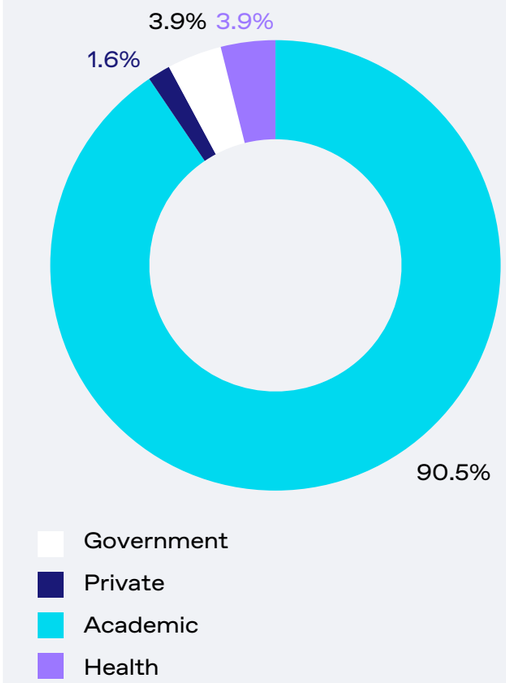
Figure 21. Number of scientific and technical publications



Source: Clarivate

Saudi Arabia's commitment to advancing its research and innovation ecosystem is clearly reflected in the sharp rise in scientific and technical publication output. Research publications are a vital indicator of national research capacity, international visibility, and academic momentum. Between 2020 and 2025, the Kingdom achieved a remarkable 78% increase in publication volume, according to Clarivate. As illustrated in Figure 21, output grew from 38,600 publications in 2020 to 68,700 in 2025, marking a significant leap in scientific activity over five years. This strong upward trajectory signals the growing global footprint of Saudi research institutions and demonstrates the impact of sustained national investment in R&D capacity, infrastructure, and talent development.

Figure 22. Publications by Sector, period of 2018-2022



Source: RDI by Clarivate

Publications by sector highlight the contributions of different segments within Saudi Arabia's research, development, and innovation (RDI) ecosystem. As shown in Figure 22, academic institutions drive research output, accounting for around 91% of all scientific and technical publications over the period of 2018–2022. In comparison, the government and health sectors each contribute around 3.9%, while the private sector contributes around 1.6%. Among private sector contributors, industry players like Aramco and SABIC are leading research efforts, setting an example for broader private sector engagement.

This distribution underscores academia's dominant role in advancing research across the Kingdom. The modest output of scientific publications from the private and health sectors is largely attributed to their focus on patents and commercialization, rather than publishing in scientific journals. Actively encouraging greater publication activity from non-academic sectors can potentially help diversify research efforts and better align them with industry expertise and needs.

To further reinforce Saudi Arabia's transition toward a knowledge-based and innovation-driven economy, several strategic programs have been launched to nurture young talent. Among them are the Saudi Research Science Institute (SRSI) at King Abdullah University of Science and Technology (KAUST), Mawhiba Research Enrichment Program, Inbound Summer Research Program at King Fahd University of Petroleum and Minerals (KFUPM), and the Entrepreneurship and Innovation Content Program by Monsha'at are summarized below. These programs target students at both secondary and tertiary education levels, building a robust pipeline of future researchers, innovators, and entrepreneurs. They help students develop the skills, confidence, and mindset needed to thrive in an increasingly innovation-driven world. Such initiatives play a pivotal role in enhancing national capabilities across the research, development, and innovation (RDI) landscape, while also aligning closely with Saudi Arabia's Vision 2030 goals for human capital development and economic diversification.

Saudi Research Science Institute (SRSI) Program

Description
Hands-on research experience in state-of-the-art laboratories under the guidance of KAUST faculty.

Audience
Gifted high school students

Duration
Six weeks during summer

Mawhiba Research Enrichment Program

Description
Introduction to scientific research and intellectual property fundamentals, delivered in top research institutions labs.

Audience
Gifted high school students

Duration
Four weeks during summer

Inbound Summer Research Program

Description
Immersive experience engaging in hands-on, faculty-mentored research in KFUPM's laboratories.

Audience
Gifted non-KFUPM students at both university and high school levels

Duration
Eight weeks during summer

Entrepreneurship and Innovation Content Program

Description
A curriculum-based program with in-class and online options, to build entrepreneurial mindset, innovation skills, and real-world problem-solving.

Audience
University and high school students

Duration
Ongoing

In parallel with developing local capabilities, Saudi Arabia is taking significant steps to attract global talent to strengthen its research, development, and innovation (RDI) ecosystem. By opening its doors to international students, researchers, and skilled professionals, the Kingdom is positioning itself as a regional and global hub for knowledge exchange, scientific collaboration, and high-impact innovation.

These efforts are supported by policies and programs that facilitate temporary academic and professional engagement, including tailored visa pathways, residency options for skilled individuals, and expanded partnerships with global universities and research institutions. These initiatives aim to create an environment where international expertise can contribute meaningfully to the economic diversification efforts and priority research and innovation areas, helping to boost national capabilities while also enriching the Saudi RDI landscape with diverse perspectives and skills.

The initiatives below represent key components of this approach, offering targeted mechanisms to engage international contributors in Saudi Arabia's innovation landscape. Collectively, these efforts support the development of a knowledge-based economy that is more globally connected, and capable of sustaining long-term scientific and technological progress.

Study in Saudi Platform

A platform that connects international students with top Saudi universities, fostering academic collaboration, cultural exchange, and research-driven growth through both funded and non-funded study tracks.

Branch Campuses

As part of HCDP national efforts to expand access to world-class education, several international branch campuses are set to open in Saudi Arabia, such as the University of New Haven, scheduled for 2026, and IE University, which received approval to establish its presence.

Premium Residency

The Special Talent and Entrepreneur Residency tracks under the Premium Residency Program aim to attract global experts, innovators, and entrepreneurs to Saudi Arabia, becoming a global hub for top minds and talents.

Key Insights

1 Strong Foundation in Human Capital Development

Saudi Arabia's progress in RDI is underpinned by substantial investment in education, amounting to SAR 201 billion in 2025 and representing 4.2% of GDP, which is slightly above the global average. This progress is guided by the Human Capability Development Program (HCDP), which aims to boost returns on learning, technology transfer, and economic transformation.

2 Advances in STEM Education and Workforce Participation

A 49% increase in STEM graduates from 2018 to 2024 underscores efforts to build technical and scientific skills. Labour market participation also rose by 20% from 2018 to 2025, reaching a level that is above the global average. This reflects the impact of national reforms that expand opportunities and strengthen the innovation talent pipeline.

3 Academic Institutions Anchor Research Growth and Output

The number of researchers in Saudi Arabia grew by a notable 68% between 2021 and 2024, driven largely by higher education institutions. In parallel, scientific and technical publications increased significantly by 78% from 2020 to 2025. Academic institutions produced most of these publications, averaging 91% of the country's output, underscoring their current dominant role in driving RDI capacity.

4 Talent Development Initiatives Fueling Innovation

A suite of targeted programs, such as those run by SRSI, Mawhiba, KFUPM, and Monsha'at, nurture the next generation of researchers, innovators, and entrepreneurs. These initiatives engage high school and university students across academic, research, and entrepreneurial activities, playing a pivotal role in strengthening the national RDI landscape and building a skilled talent pipeline.

5 Fostering a Diverse and Global Innovation Ecosystem

Initiatives like the Study in Saudi platform, international branch campuses, and the Premium Residency Program have been launched to attract top global talent. These efforts aim to bring in researchers, students, and professionals to collaborate on research, drive knowledge exchange, and strengthen the national RDI ecosystem, positioning the Kingdom as a hub for diverse talent and innovation.

4.2 Saudi Arabia's RDI Performance: Funding Mechanisms

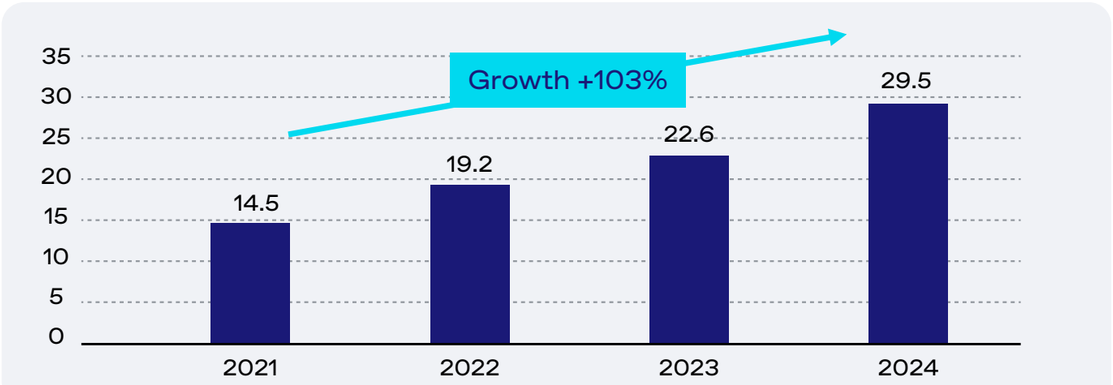


A robust and diverse funding landscape is a cornerstone for driving sustained growth in research, development, and innovation (RDI). Financial investment not only builds scientific infrastructure but also accelerates the translation of research into real-world applications, by enabling startups to attract talent, supporting industry–academia collaboration, and leveraging regulatory reforms such as IP incentives and co-investment schemes. In Saudi Arabia, this integrated approach is reflected in the steady rise of Gross Domestic Expenditure on R&D (GERD), a key indicator of national commitment to scientific progress and innovation capacity.

As illustrated in Figures 23 and 24, Saudi Arabia's GERD increased from SAR 14.5 billion in 2021 to SAR 29.5 billion in 2024, representing 103% growth. Over the same period, Business Enterprise Expenditure on R&D (BERD) rose from SAR 5.1 billion to SAR 11.8 billion, equivalent to 131% growth, while its share of GERD increased from approximately 35% to 40%.

These trends underscore stronger financial foundations for Saudi Arabia's RDI ecosystem and growing business-sector participation. Increased expenditure supports scientific capacity, drives innovation, and helps build the infrastructure needed for a thriving knowledge-based economy.

Figure 23. Gross Domestic Expenditure on R&D (GERD), SAR Billion



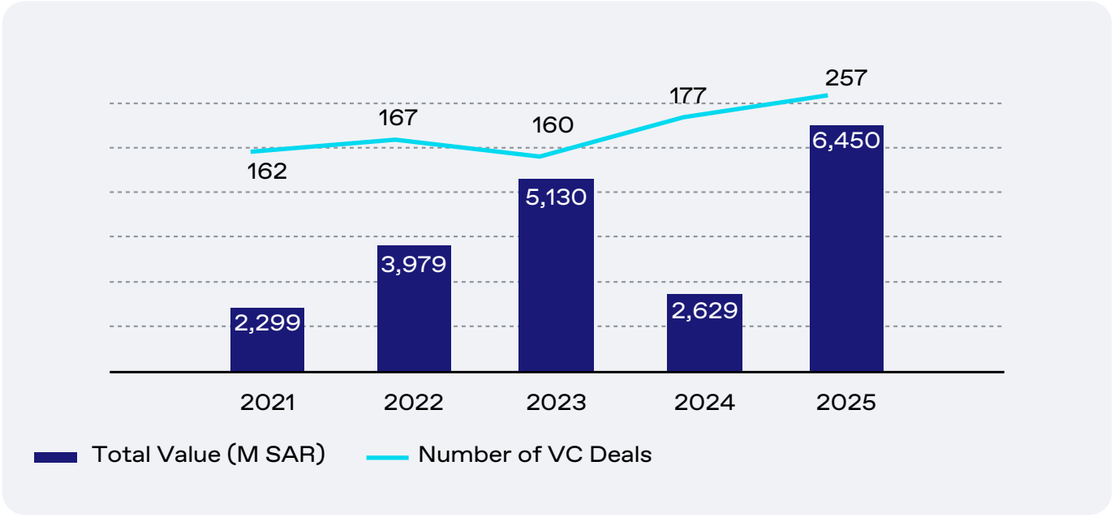
Source: GASTAT

Figure 24. Business Enterprise Expenditure on R&D (BERD), SAR Billion



Source: GASTAT

Figure 25. KSA VC Funding, SAR Million



Source: SVC by Magnitt

Venture capital (VC) plays a pivotal role in driving innovation, fostering entrepreneurship, and accelerating the growth of emerging industries. By providing essential funding to startups and high-growth companies, VC supports the development of cutting-edge technologies, the commercialization of research, and the creation of a dynamic entrepreneurial ecosystem. Figure 25 illustrates the evolution of Saudi Arabia's VC funding and deal activity from 2021 to 2025, showing record highs in both funding and transactions in 2025, reflecting the resilience and maturity of the Kingdom's VC ecosystem. The insights below highlight Saudi Arabia's strategic push to build a strong VC ecosystem, fostering innovation and diversifying its economy in line with Vision 2030:

Rising Deals: VC deals increased from 162 in 2021 to 257 in 2025, reflecting a stronger startup pipeline and growing investor confidence.

Larger Rounds: Average deal size rose from around SAR 14M in 2021 to SAR 25M in 2025, supporting startups' ability to scale.

Funding Growth: Total funding reached a record SAR 6.5B in 2025, growing by approximately 180% from SAR 2.3B in 2021.

Sector Highlights: FinTech led 2025 funding with SAR 1.9B, accounting for 29% of total capital deployed, while also remaining the most active sector with 55 deals.

Investor Base: The investor base expanded to a record 194 investors in 2025, with international investors accounting for 34% of all investors, up from 28% in 2024.

Across the global investment landscape, private equity (PE) and venture capital (VC) serve different functions in driving economic growth and innovation. While VC typically supports early-stage startups, PE provides capital and strategic guidance to help more mature businesses scale and transform. In Saudi Arabia, this dual approach creates a robust funding environment aligned with Vision 2030's goals of economic diversification and innovation. Figure 26 illustrates the evolution of PE funding and transactions in Saudi Arabia from 2021 to 2025, reflecting broader economic and sectoral shifts. The insights below highlight Saudi Arabia's deliberate efforts to build a strong PE ecosystem, advancing innovation, scaling key industries, and diversifying its economy in line with Vision 2030:

Rising Deals: PE deals increased from 17 in 2021 to 25 in 2025, after peaking at 43 in 2023, reflecting a recovery in activity following the post-2023 correction.

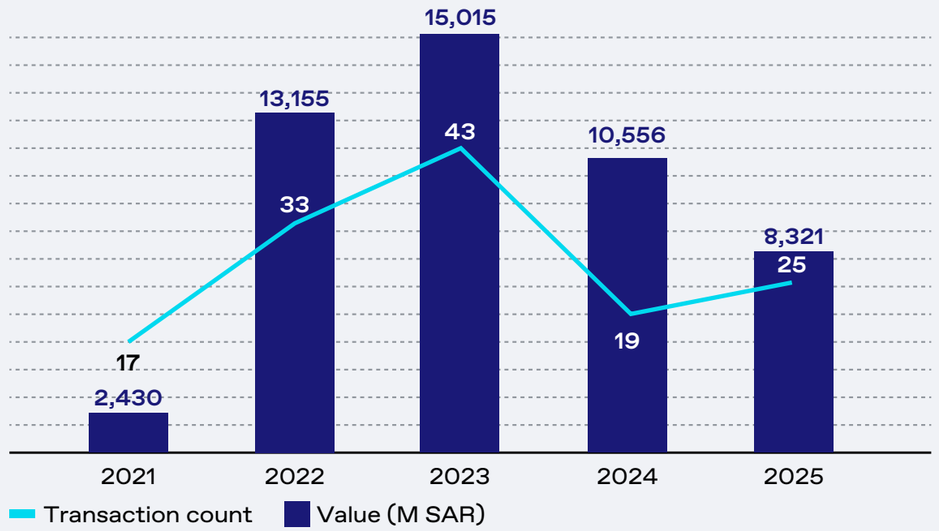
Larger Rounds: Total disclosed PE value rose from SAR 2.4B in 2021 to SAR 8.3B in 2025, representing approximately 240% growth and signaling a larger, more mature PE market.

Funding Shifts: Total disclosed PE value moderated from its SAR 15B peak in 2023 to SAR 8.3B in 2025, reflecting more disciplined capital deployment after a period of rapid expansion.

Sector Highlights: Media and Entertainment accounted for 89% of disclosed PE value in 2025, while Enterprise Software led deal activity with 20% of transactions, highlighting both capital concentration and sector diversification.

Investor Base: Active PE investors expanded by 85%, from 13 in 2024 to 24 in 2025, with Saudi-based investors accounting for 17 of the total, reflecting stronger domestic participation.

Figure 26. KSA PE Value, SAR Million



Source: SVC by Magnitt

There are multiple ways of funding RDI, from private investments and structured lending to direct grants and indirect support mechanisms. Saudi Arabia recognizes the importance of offering a range of funding mechanisms to support its knowledge economy. To stimulate the RDI scene, many initiatives have been launched, including grants, subsidies, discounted services, co-investment programs, and government-backed loans at lower interest rates. Together, these initiatives create a supportive environment for researchers, startups, and corporates to pursue bold ideas and build capabilities that might otherwise be constrained by market or financial barriers.

Public sector funding initiatives are designed to complement private capital and lending, raising market sophistication and increasing RDI appetite. They ensure that even high-potential but early or unproven concepts have the resources they need to flourish and create new markets. These initiatives are part of efforts to nurture a vibrant, knowledge-based economy and advance Vision 2030's strategic goals of diversification, competitiveness, and sustainable growth. The schedule below highlights a selection of these public sector initiatives and how they play a pivotal role in supporting Saudi Arabia's RDI ecosystem and fostering a culture of innovation.

Entity	Initiative	Description	Funding Mode
RDI Authority	The Saudi Innovation Grants Program (SIGP)	Provides non-dilutive grants of up to SAR 4 million to support R&D commercialization, proof-of-concept, and collaborative projects. It fosters innovation across national priority sectors, enabling the translation of research and ideas into economic and social value.	Direct Funding
ntdp	TechCrew	Offers salary subsidies covering 50% of tech professional salaries for up to 18 months, helping startups reduce operational costs and attract skilled talent to drive growth sustainably.	Direct Funding
ntdp	Bridge	Provides financial support to high-growth Saudi tech ventures for global expansion, covering up to SAR 4.8 million or 70% of costs over 24 months, helping these firms establish a global presence.	Direct Funding
ntdp	Relocate	Provides financial incentives up to SAR 5.25 million for international startups to establish local operations in Saudi Arabia, strengthening the local tech ecosystem and attracting global expertise.	Direct Funding
ntdp	Nextera	Provides financial grants of up to SAR 5 million to support research in emerging and deep technologies, helping transform research into technology products and fostering sustainable innovation.	Direct Funding
kafalah	Kafalah	Offers loan guarantees of up to 90% (maximum SAR 15 million) to improve SME access to bank financing, reducing financial risk and supporting growth and expansion.	Indirect Funding
monsha'at	Mazaya	Provides discounts on a wide range of private sector services, including medical insurance, IT systems, and shipping, helping SMEs reduce operational costs and reallocate resources for growth and innovation.	Indirect Funding
SVC	Co-Investment Initiative	Co-investing up to 65% in VCs and funds and up to 30% in direct funding rounds for startups, catalyzing private sector investment, building trust, and boosting overall capital availability.	Indirect Funding

The success of Saudi Arabia's funding landscape is exemplified by the emergence of several homegrown unicorns, startups that have reached billion-dollar valuations, including companies such as Tabby, Almosafer, STC Pay, and Tamara, as highlighted in the schedule below. While these unicorns may not be directly tied to RDI-driven innovation, their growth underscores the strength and maturity of the Kingdom's entrepreneurial ecosystem and its ability to support diverse business models.

This reinforces investor confidence in the potential for returns across a wide range of business concepts. It also signals a broader market shift, where consumers are increasingly receptive to new products and services. This evolving environment encourages entrepreneurs and innovators to pursue different ideas and approaches. These developments highlight the importance of maintaining a robust and inclusive funding landscape—one that supports innovative and diverse entrepreneurial initiatives, ensuring the Kingdom continues to build a resilient, knowledge-based economy.

Entity	Name	Description	Valuation
tabby	Tabby	A Buy-Now-Pay-Later (BNPL) platform in the MENA region. It offers consumers flexible payment solutions and interest-free installment plans.	SAR 12.38b
Almosafer	Almosafer	A Travel services platform in the Middle East. It offers flight bookings, hotel reservations, and curated travel experiences for leisure and business travelers.	SAR 5.15b
stc pay	STC Pay	A Fintech platform offering a comprehensive digital wallet for individuals and businesses. It facilitates local and international money transfers, bill payments, and card services.	SAR 4.99b
tamara	Tamara	A Buy-Now-Pay-Later (BNPL) platform in the MENA region. It provides consumers with flexible payment solutions for online and in-store purchases.	SAR 3.75b

Source: CB Insights

Key Insights

1

Strong National Growth in RDI Funding

Saudi Arabia's R&D funding environment has seen significant growth, with GERD rising from SAR 14.5 billion in 2021 to SAR 29.5 billion in 2024, a 103.4% increase. This demonstrates Saudi Arabia's commitment to strengthening its R&D ecosystem and positioning research and innovation as key drivers of economic diversification.

2

Vibrant Venture Capital Landscape

Venture capital activity in Saudi Arabia grew from 162 deals in 2021 to 257 deals in 2025, representing a 59% increase. Total funding reached a record SAR 6.5B in 2025, growing by approximately 180% from SAR 2.3B in 2021. This reflects a more dynamic and diversified investment landscape within the Kingdom's VC ecosystem, supported by a stronger startup pipeline, larger funding rounds, and rising investor confidence.

3

Evolving Private Equity Environment

Private equity funding in Saudi Arabia demonstrated strong growth between 2021 and 2025. Total disclosed PE value rose by approximately 240%, from SAR 2.4 billion in 2021 to SAR 8.3 billion in 2025, despite moderating from its 2023 peak. This growth reflects a more mature investment landscape that supports sector transformation and contributes to building a diversified, innovation-driven economy.

4

Public Funding Initiatives Strengthening RDI

A comprehensive suite of public sector funding initiatives, including grants, subsidies, discounted services, and co-investment programs, complements private capital and lending, raising market sophistication and increasing RDI appetite. These initiatives ensure that even high-potential but early or unproven concepts have the resources they need to flourish and create new markets.

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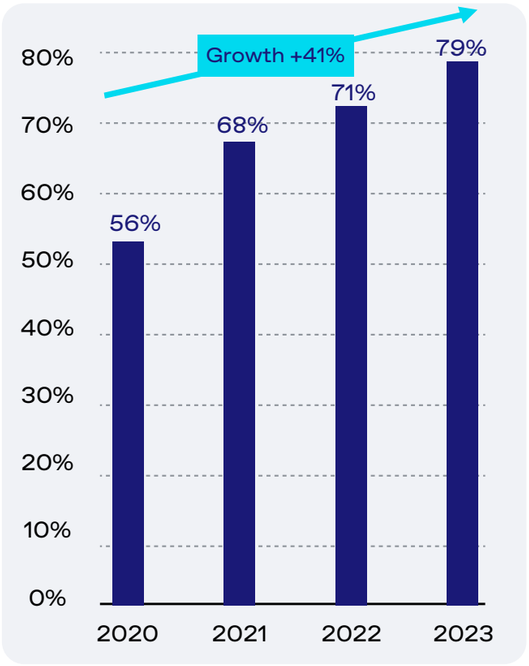
Funding Sparks Success and Growth

The evolving funding landscape has enabled the rise of homegrown unicorns, collectively valued at over SAR 26 billion. This reinforces investor confidence in future returns and signals the growing potential for aspiring innovators and entrepreneurs to thrive within the Kingdom's vibrant ecosystem.

4.3 Saudi Arabia's RDI Performance: Policy & Regulations



Figure 27. Government Effectiveness (WGI), in Percentile Rank

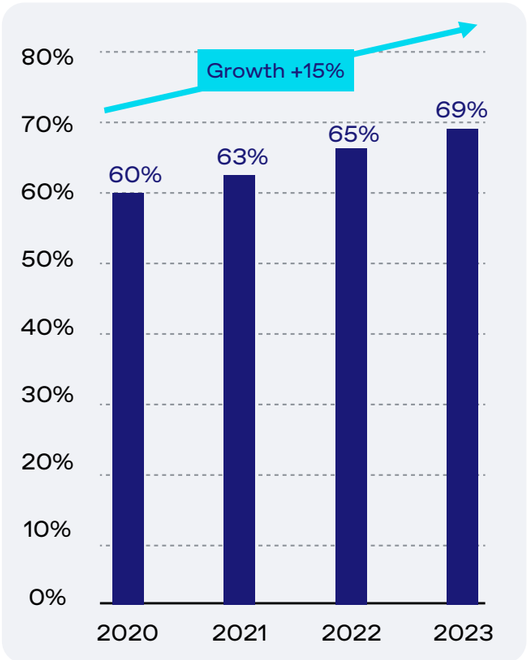


Source: World Bank

Policy and regulatory effectiveness are critical for unlocking the full potential of economic prosperity and diversification. In Saudi Arabia, ongoing reforms are laying the groundwork for a dynamic RDI landscape, as clear, flexible regulations boost investor confidence, enable IP-driven growth, and help translate human capital into real innovation outcomes. Robust regulatory frameworks are essential for fostering knowledge-based activity and sustainable growth, creating an environment where businesses can thrive, researchers can collaborate, and new ideas can flourish locally and globally.

Saudi Arabia's progress is reflected in a 41% increase in Government Effectiveness between 2020 and 2023, as measured by the Worldwide Governance Indicators (WGI). This indicator captures perceptions of public-service quality, civil-service independence, policy formulation and implementation, and government credibility. As shown in Figure 27, the percentile rank rose from 56% to 79%, reflecting efforts to modernize public institutions, improve service delivery and strengthen governance processes that support RDI activities and investment.

Figure 28. Regulatory Quality (WGI), in Percentile Rank



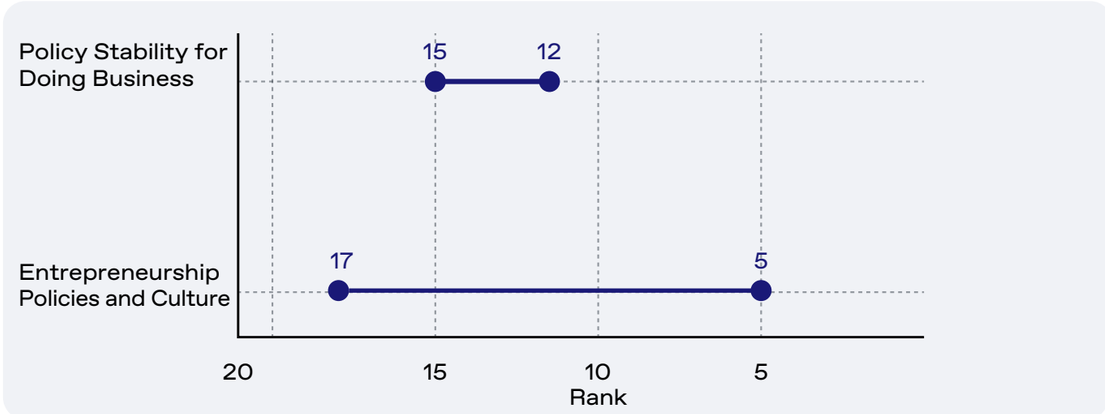
Source: World Bank

Similarly, Figure 28 shows regulatory quality improving from 60% in 2020 to 69% in 2023, a 15% increase during this period. Regulatory quality measures the government's ability to formulate and implement policies that promote private sector development and entrepreneurship. This progress reflects reforms to streamline procedures, foster competition, and remove barriers to market entry—all of which are essential for driving innovation and expanding opportunities for businesses of all sizes.

Together, these improvements demonstrate the Kingdom's commitment to building a robust ecosystem that supports a wide range of innovative and entrepreneurial activities. They lay a strong foundation for future growth, ensuring that Saudi Arabia's policy and regulatory environment remains a key driver of RDI and knowledge-based economic progress, both now and in the years to come.

Building on the significant improvements in government effectiveness and regulatory quality, Saudi Arabia's broader efforts to create a supportive innovation and entrepreneurship environment are evident in international assessments. As shown in Figure 29, the Kingdom's ranking in the Global Innovation Index (GII) for Policy Stability for Doing Business improved from 15th in 2022 to 12th in 2025, while its ranking for "Entrepreneurship policies and culture" rose from 17th to 5th over the same period. These gains reflect the impact of regulatory reforms and initiatives that foster a more enabling environment for businesses and innovators.

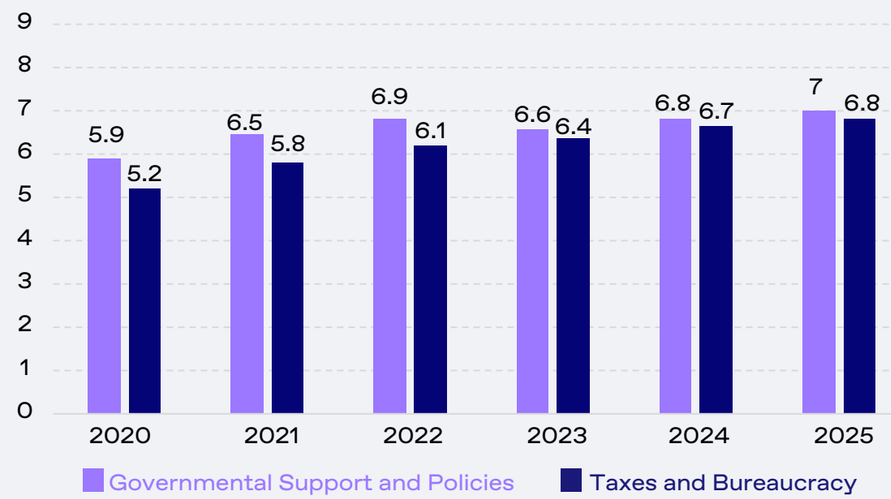
Figure 29. Business Environment Rank, GII 2022-2025



Source: WIPO

Figure 30 highlights Saudi Arabia's performance in the National Entrepreneurship Context Index (NECI), a perception-based indicator from the Global Entrepreneurship Monitor (GEM) that reflects expert and entrepreneurial views on regulatory quality, government support, access to finance, and cultural norms. In 2025, the Kingdom ranked third globally, signaling a strong enabling environment for entrepreneurship and innovation. Between 2020 and 2025, scores for "Governmental Support and Policies" and "Taxes and Bureaucracy" saw steady improvement. The former rose from 5.9 to 7, and the latter from 5.2 to 6.8, indicating improved regulatory efficiency and more supportive public policies. These gains reflect the impact of reforms aimed at reducing barriers and empowering entrepreneurs. They demonstrate how policy enhancements are translating into measurable outcomes—reinforcing Saudi Arabia's position as a regional leader in the innovation-driven economy.

Figure 30. National Entrepreneurship Context Index (NECI), GEM Score



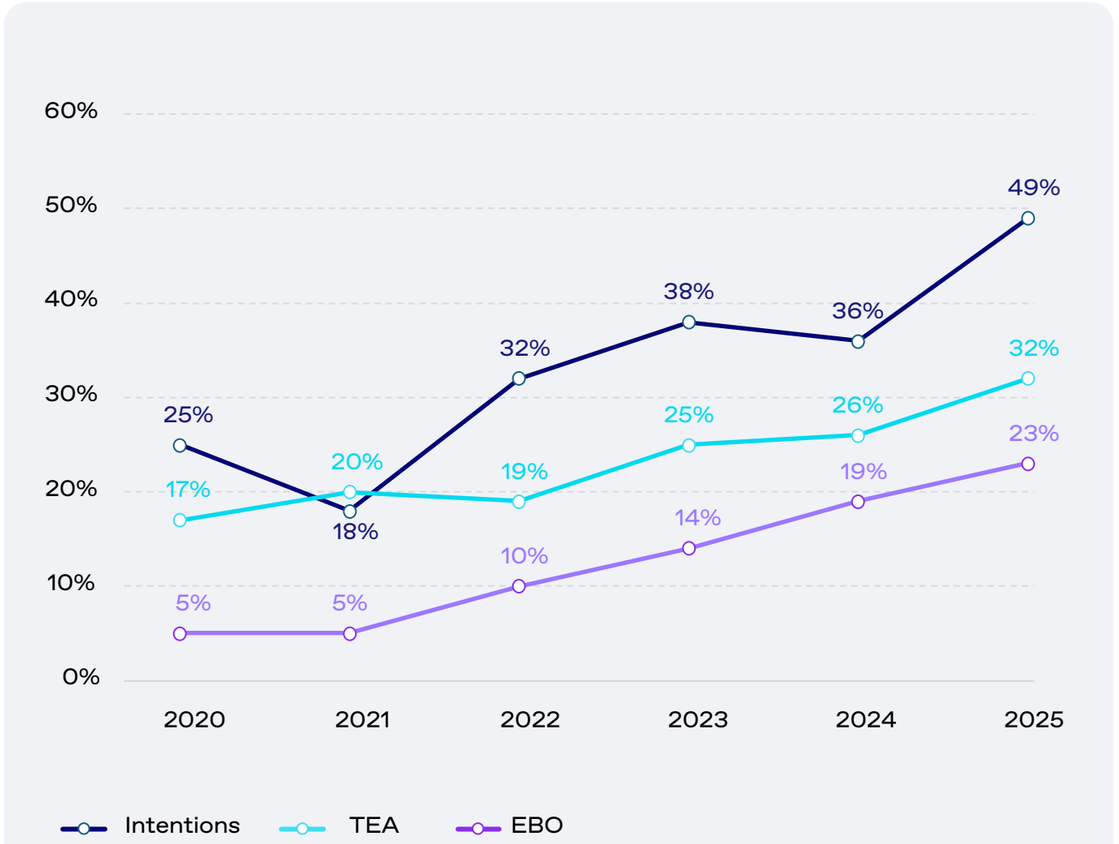
Source: GEM

The policy and regulatory reforms shaping Saudi Arabia's innovation and entrepreneurship environment have also significantly influenced entrepreneurial behaviors and intentions within the Kingdom. These enabling factors are translating into tangible growth across all entrepreneurial activity phases among working-age Saudis from 2020 to 2025, fostering a more robust and dynamic innovation-driven economy.

As illustrated in Figure 31, there has been notable growth across entrepreneurial intentions, Total Early-stage Entrepreneurial Activity (TEA), and Established Business Ownership (EBO). Entrepreneurial intentions increased by 96%, rising from 25% in 2020 to 49% in 2025, reflecting stronger interest in pursuing new business opportunities despite dips in 2021 and 2024. TEA rose by approximately 88%, from 17% to 32%, as more Saudis engaged in early-stage entrepreneurial activity. Meanwhile, EBO increased by 360%, climbing from 5% to 23%, signaling substantial growth in established business ownership and underscoring the Kingdom's shift toward a more entrepreneurial society and more sustainable venture creation over time.

While the data does not establish a direct causal link between these stages, the parallel upward movement suggests that growing entrepreneurial intentions are likely supporting and reinforcing early-stage entrepreneurial activity and eventual business ownership. This collective growth highlights the broader impact of supportive policies and regulatory reforms, which have reduced barriers, expanded access to capital, and nurtured a culture that values entrepreneurship and innovation as drivers of economic diversification and long-term development.

Figure 31. Business Activity Phases in Working-age Saudis in KSA, %



Source: GEM

Policies and regulations are powerful instruments for shaping markets, driving economic transformation, and enhancing innovation capacity. By removing structural barriers, ensuring legal clarity, and enabling regulatory agility, they foster an environment where new ideas can translate into commercial value. In Saudi Arabia, the ongoing evolution of the regulatory landscape is accelerating private sector participation, strengthening investor protections, supporting entrepreneurial activity, and advancing the shift toward a knowledge-based economy. The reforms highlighted below represent a selection of broader legislative efforts introduced between 2021 and 2025, reflecting the Kingdom's commitment to modernizing its business environment and laying a solid legal foundation for a more competitive, innovation-driven future.

Type	Description
Business Environment	**Companies Law (2023) :** Introduced a unified legal framework that redefined company types, allowed single-shareholder entities, eased capital requirements, and enhanced governance mechanisms, empowering startups, facilitating private ownership, and enabling flexible corporate growth under Vision 2030.
	Commercial Registration & Trade Names Law (2024): Established a centralized national register for all business activities and reformed trade name rules, enabling multilingual names, protecting name rights, and simplifying compliance, supporting business clarity, legal certainty, and transparent market entry.
Finance & Investment	**Capital Market Law Amendment (2021):** Expanded the regulatory scope to include financial instruments such as venture capital and equity crowdfunding, introduced new fund structures, and enhanced investor protections, enabling startup fundraising and aligning capital markets with entrepreneurship and innovation.
	Investment Law Reform (2024): Replaced the prior licensing system with a streamlined one, granted equal rights and protections to foreign investors, and reinforced safeguards for intellectual property and capital mobility, enhancing investor confidence and enabling greater private sector participation.
Innovation & IP	**Patent & Design Law Amendments (2023):** Introduced key reforms aligning industrial design system with the Hague Agreement, extended design protection from 10 to 15 years, revised maintenance fee structures, and enhanced examination procedures, streamlining international filings and strengthening IP protection to support innovation and creative industries.
	Patent Law Implementing Regulations (2024): Operationalizing the 2023 legal amendments, these regulations clarified definitions, standardized filing, and documentation procedures, and incorporated processes for Hague Agreement applications, ensuring consistent implementation and enabling effective use of the updated patent and design framework.
Workforce & Civic Infrastructure	**Saudi Labor Law Amendments (2025):** Introduced flexible employment models, such as part-time, freelance, hybrid, and remote work, alongside extended probation periods to support better talent-employer alignment, and updated leave entitlements, fostering a dynamic and attractive labor environment that supports the evolving demands of an innovation-driven economy.
	The Saudi Civil Transactions Law (2023): This codified civil law governs contracts, property rights, torts, and other obligations across 721 articles. It enhances legal clarity and reduces interpretive uncertainty, strengthening domestic and cross-border dealings while supporting individuals, startups, and innovation-driven enterprises.

Beyond legislative measures, Saudi Arabia has introduced a wide array of public initiatives and instruments aimed at accelerating innovation, entrepreneurship, and economic diversification. These initiatives span digital platforms, funding programs, capacity-building tools, and market facilitation mechanisms. By addressing regulatory bottlenecks, enhancing service delivery, and expanding access to knowledge, finance, and opportunity, these instruments complement legal reforms and further enable a dynamic RDI ecosystem. The following examples represent a selection of impactful public policy tools supporting Vision 2030.

Type	Description
Business Environment	**Monsha'at SME Support Centers:** Provide a wide range of tailored in-person and online consultations for entrepreneurs and SMEs, including legal, licensing, and marketing advisory services. These centers empower business owners to navigate regulatory challenges, ensure compliance, and strengthen their contribution to an innovation-driven economy.
	"Saudi Made" program: Promotes Saudi-made products and services across local and international markets by offering a range of support services, such as branding, marketing, and preferential procurement access, to enhance the competitiveness of domestic businesses. These efforts foster industrial innovation and support broader goals of economic diversification and non-oil export growth under Vision 2030.
Finance & Investment	**SAMA Regulatory Sandbox:** Enables innovators to pilot emerging financial technologies and instruments within a controlled environment, fostering responsible experimentation that helps shape agile, forward-looking financial regulations and supports the development of innovative financial solutions contributing to economic growth.
	"MIZA" Platform: A unified gateway to streamline the investor journey in Saudi Arabia. It offers a range of services, including licensing, permits, and regulatory guidance, through a single interface. The platform simplifies administrative procedures and enhances the ease of doing business, aiming to attract greater foreign direct investment into the Kingdom.
Innovation & IP	**RDI Open Access Portal:** A centralized digital platform providing free access to government-funded research infrastructure and datasets. It enables researchers and innovators to browse, request, and utilize scientific equipment and resources through a streamlined online process, promoting efficient, data-driven research and advancing Saudi Arabia's knowledge economy.
	SAIP Development and Enablement Services: SAIP offers a suite of support programs, including IP consultancy, the IP Academy, and the National Network of IP Support Centers. These initiatives provide training, guidance, and advisory services to individuals, startups, and institutions, enhancing IP protection, enabling commercialization, and strengthening long-term innovation capacity across Saudi Arabia.
Workforce & Civic Infrastructure	**HRDF Professional Certification Support:** The program offers direct sponsorship or reimbursement for individuals obtaining recognized professional and technical certifications across key sectors. By equipping talent with in-demand, specialized skills, it strengthens workforce readiness, boosts employability, and supports the Kingdom's transition toward a high-skill, innovation-driven economy.
	"Absher" Platform: A government e-services platform that centralizes a wide range of identity, residency, passport, traffic, and civil services into a single digital interface. By streamlining bureaucratic processes and reducing administrative burden, Absher enhances government service delivery, improves access to public services, and supports a more agile, innovation-ready environment.

Key Insights

1

Growth in Government Effectiveness and Regulatory Quality

Saudi Arabia recorded a 41% relative increase in its Government Effectiveness percentile rank and a 15% relative increase in its Regulatory Quality percentile rank between 2020 and 2023, as measured by the Worldwide Governance Indicators (WGI). These improvements reflect efforts to modernize governance, improve service delivery, and strengthen the environment for RDI.

2

Evolving Business and Innovation-Related Policies

Saudi Arabia improved its ranking by 71% in "Entrepreneurship Policies and Culture" and by 20% in "Policy Stability for Doing Business." Complementing these gains, NECI scores also improved, with "Taxes and Bureaucracy" rising by around 31% and "Governmental Support and Policies" increasing by around 19%, signaling greater institutional responsiveness to innovation-driven economic needs.

3

Tangible Impact on Entrepreneurial Activity

Regulatory and policy reforms have translated into real behavioral shifts among the Saudi population, with all entrepreneurial activity phases showing strong upward trends between 2020 and 2025. The growth figures reflect relative changes in the reported rates: entrepreneurial intentions rose by 96%, (TEA) increased by approximately 88%, and (EBO) expanded by 360%, highlighting growing engagement with the Kingdom's innovation-driven economy.

4

Legislative Reforms Supporting Economic Growth

In the past 5 years Saudi Arabia implemented a series of targeted legal reforms across business, finance, IP, and labor domains to strengthen the foundation for a competitive and innovation-driven economy. These included new laws, reforms and amendments to reduce structural barriers, improve legal clarity, and foster a more agile and inclusive environment for growth.

5

Public Policy Instruments Empowering the Innovation Ecosystem

Saudi Arabia has introduced a diverse set of non-legislative public policy initiatives that complement legal reforms to directly support the growth of its knowledge-based economy. From SME support centers and digital investor platforms to IP enablement programs and labor market services, these instruments reduce friction, expand access to opportunity, and foster a more agile, opportunity-rich, and innovation-ready national environment.

4.4 Saudi Arabia’s RDI Performance: Innovation Networks

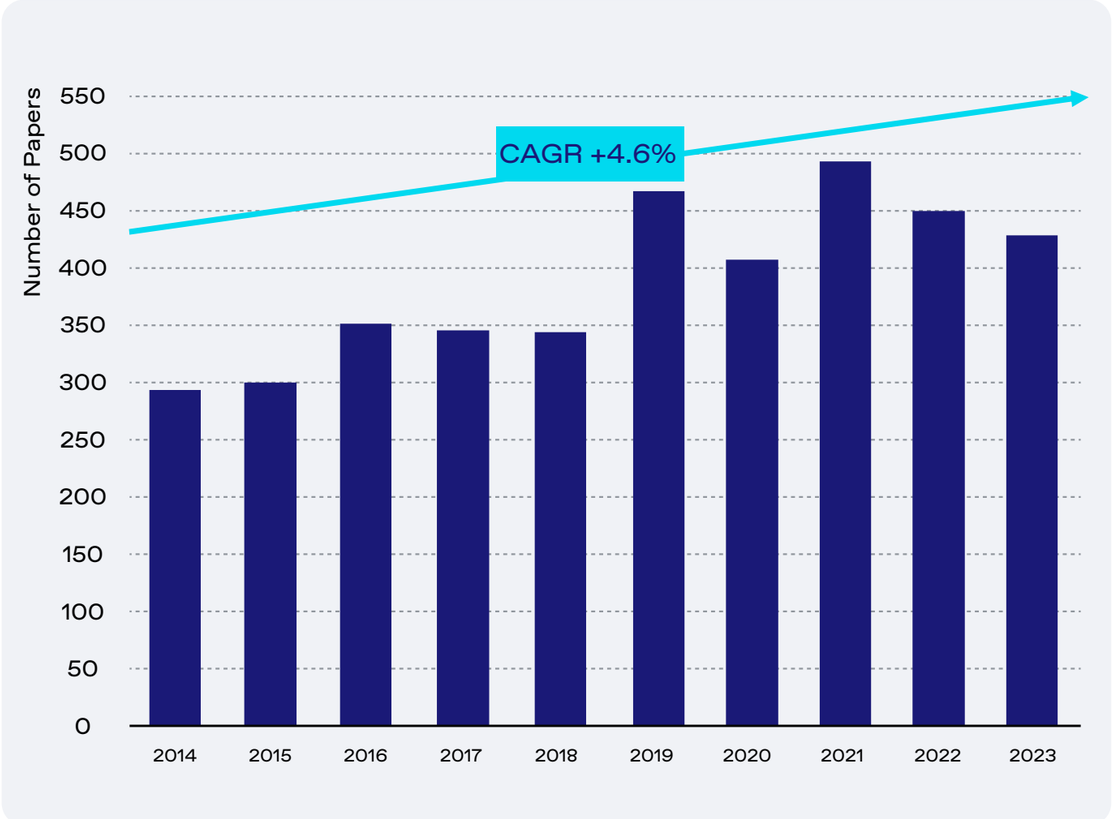


A thriving research, development, and innovation (RDI) ecosystem depends not only on funding, infrastructure, and talent, but also on the strength of collaboration across its institutions. Innovation networks play a pivotal role in forging these connections, enabling universities, research centers, companies, and government entities to work collectively on shared challenges, accelerate knowledge transfer, and convert research into real-world impact. Globally, such networks are recognized as vital drivers of economic resilience, scientific progress, and increased national competitiveness.

In Saudi Arabia, the value of innovation networks has been embraced as a strategic pillar in the transition toward a knowledge-based economy, anchored in enhanced collaboration among RDI actors. To scale this vision, the Kingdom is investing in initiatives that institutionalize cooperation, including the development of the National Innovation Districts Alliance, the establishment of technology transfer offices (TTOs), and the launch of national platforms to foster co-creation between innovators and government entities. These efforts collectively strengthen the connective infrastructure essential to driving innovation capacity.

This focus on institutional collaboration is now yielding measurable results. As illustrated in Figure 32, the number of scientific publications involving industry collaboration increased overall between 2014 and 2023, recording a compound annual growth rate (CAGR) of 4.6%. Moreover, 70% of these industry-collaborative research projects receive funding, surpassing the global average of 59.6%, a clear signal of the strong and growing interest in research within the Kingdom. This trend reflects Saudi Arabia’s increasing ability to align academic research with industrial needs, an essential foundation for sustainable, innovation-led development.

Figure 32. Number of Papers with Industry Collaboration



Source: RDI Authority by Clarivate

An analysis of Figure 33 shows that Saudi publications between 2014 and 2023 benefited significantly from robust international funding support. Leading contributors include UK Research & Innovation (UKRI), the U.S. Department of Health, and the U.S. National Institutes of Health (NIH), collectively funding over 40% of the top ten-supported publications. The inclusion of King Saud University (KSU) and KAUST also highlights the growing role of domestic institutions in funding research. This strong international engagement underscores Saudi Arabia's ability to attract global research investment and collaborate across borders. At the same time, it reveals a strategic opportunity to scale domestic funding to sustain and expand research agendas.

Building on the funding landscape, Figure 34 highlights the key industry partners driving collaborative research with Saudi-affiliated researchers during the period 2014 to 2023. National leader SABIC accounts for nearly 40% of the top ten collaborators, underscoring its pivotal role in the Kingdom's innovation ecosystem, while other Saudi firms such as SWCC and Aramco Services show more modest involvement. The majority of highly cited collaborations are led by international corporates like Pfizer, Huawei Technologies, and GlaxoSmithKline, particularly in sectors such as pharmaceuticals and ICT. These international partnerships not only enhance the global visibility of Saudi research but also demonstrate the impact of cross-border collaboration in generating high-impact scientific output.

Figure 33. Top 10 Funding Organizations & Number of Papers, Period 2014-2023

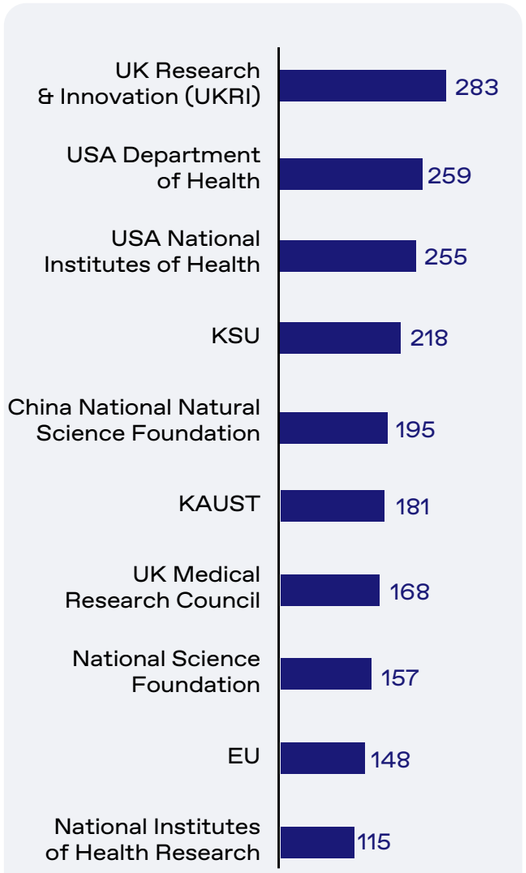
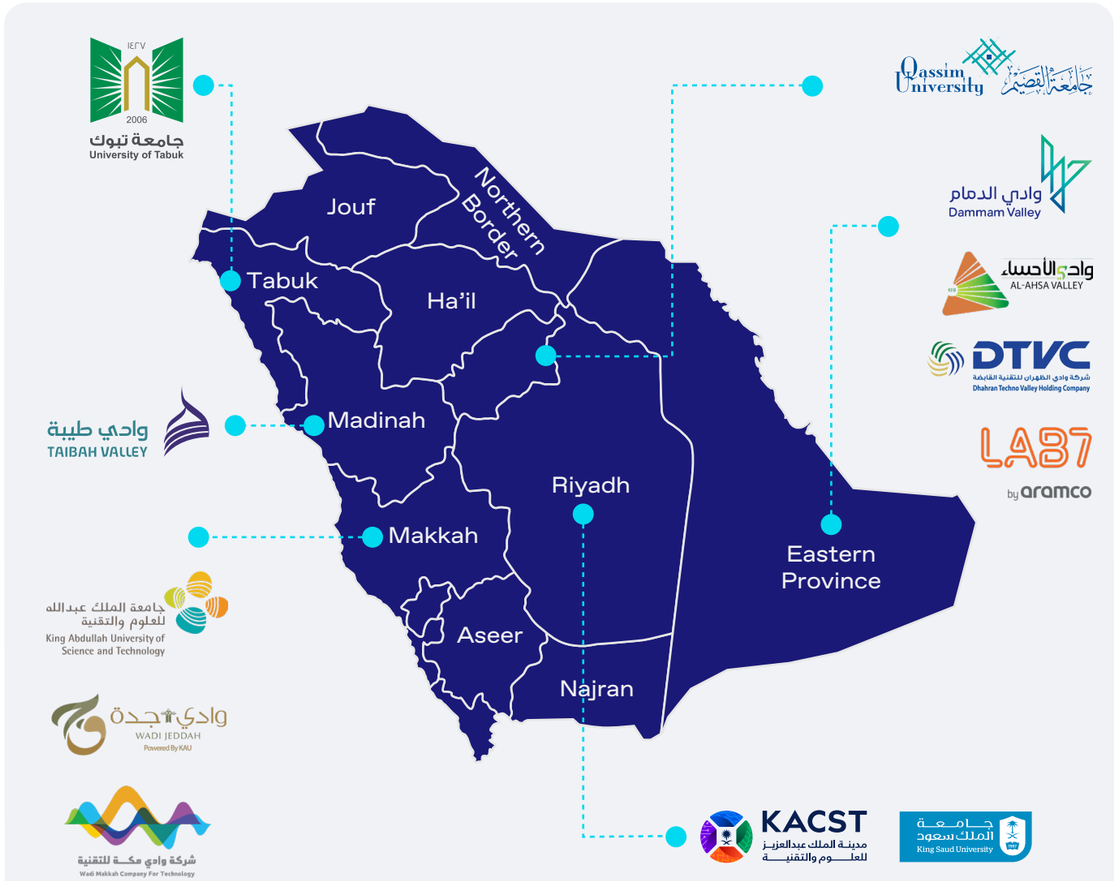


Figure 34. Top 10 Industry Collaborators, Period 2014-2023

Corporate	Number of Papers	CNCI*
SABIC	378	1.13
Pfizer	99	4.02
Huawei Technologies	77	4.19
GlaxoSmithKline (GSK)	69	13.51
SWCC	68	1.03
Centogene	61	1.42
AstraZeneca	61	6.15
Aramco Services	55	1.47
Intel Corporation	52	3.75
China National Petroleum	49	1.87

* CNCI = Category Normalised Citation Impact.
Source: RDI Authority by Clarivate

National Innovation Districts Alliance Members, 2024



Source: RDI

As Saudi Arabia deepens its global research engagement, there is growing momentum to reinforce domestic innovation capacity. A key enabler of this effort is the development of innovation districts, dynamic urban ecosystems that cluster research institutions, startups, technology firms, and support services within compact, well-connected environments. These districts foster collaboration across academia, industry, and government, enabling the rapid translation of ideas into commercial solutions and driving national innovation capacity.

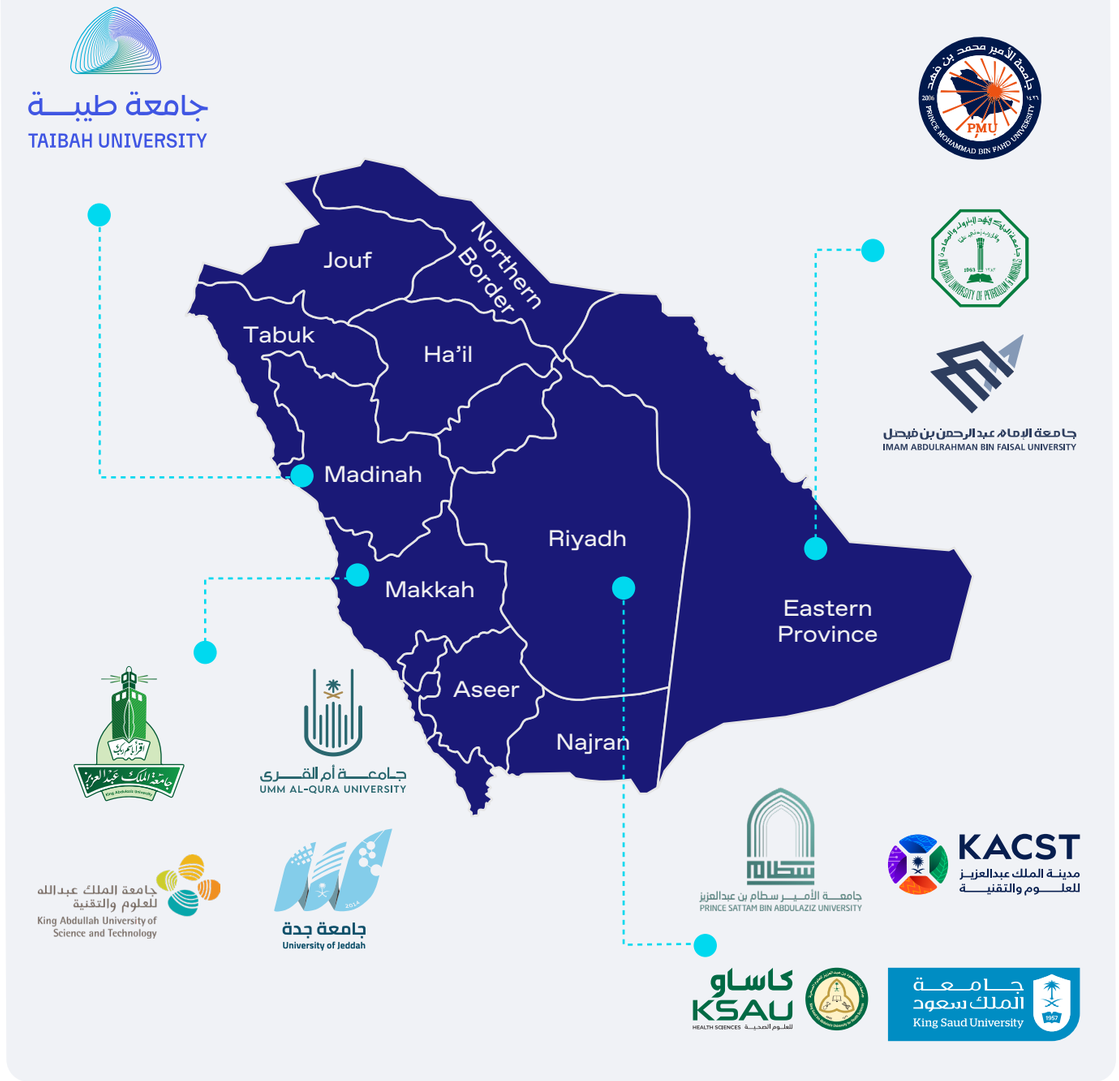
In line with global trends, Saudi Arabia is prioritizing the development of innovation districts as a strategic pillar of its transformation toward a knowledge-based economy. Spearheaded by the Research, Development and Innovation Authority (RDI), the Kingdom is building a network of National Innovation Districts Alliance members to empower local innovation hubs while attracting talent and investment. Currently, Saudi Arabia hosts 12 alliance members, 9 of which hold full IASP (International Association of Science Parks and Areas of Innovation) membership, a mark of adherence to global best practices, peer engagement, and international visibility.

12
Members of National Innovation Districts Alliance

9
Innovation districts with IASP membership

While innovation districts create the physical and institutional foundations for collaboration, their success relies on mechanisms that convert research into real-world impact. Technology Transfer Offices (TTOs) are central to this effort, acting as key intermediaries between academia, research institutions, and the private sector. They manage intellectual property, facilitate licensing, and help researchers engage with industry to commercialize innovations. To scale this capability across the country, the Research, Development and Innovation Authority (RDI) has led national efforts by publishing Saudi Arabia's guide for TTOs and supporting their establishment and activation. Today, 12 TTOs are operational across leading institutions, forming a growing network that promotes collaboration, accelerates knowledge transfer, and transforms scientific advances into drivers of economic diversification—advancing the Kingdom's position within the global knowledge economy.

Technology Transfer Offices in Saudi Arabia, 2024



Source: RDI

As Saudi Arabia scales its innovation infrastructure—from physical hubs like innovation districts to institutional enablers such as Technology Transfer Offices—it is also embracing new models of collaboration across the innovation ecosystem. Among the most impactful are co-creation initiatives, or open innovation calls, which invite students, entrepreneurs, researchers, and other solution providers to directly tackle real-world challenges identified by entities. These initiatives promote demand-driven innovation, ensuring that national needs and priorities are addressed through agile, creative, and high-impact solutions.

To institutionalize and scale this approach, the Kingdom has launched the Co-Creation Directory, a centralized platform managed under the national e-participation portal by the Digital Government Authority. The platform curates government-led innovation challenges, hackathons, and ideation contests, creating structured pathways for experimentation and scalable implementation, crowdsourced problem-solving, and potential public-private collaboration. Notably, many of the participating entities are not only seeking innovative solutions to pressing needs but are also using these calls to cultivate a broader culture of innovation. As of 2024, the directory has featured over 250 innovation challenges, with total reward incentives exceeding SAR 2 million, underscoring the government's commitment to leveraging innovation as a strategic enabler of national development.

This initiative not only enhances the responsiveness and openness of public sector institutions but also expands the pathways through which innovation can directly improve public services, strengthen institutional agility, and encourage broader engagement in the design and delivery of solutions. Below is a sample of innovation challenges and hackathons posted on the Co-Creation Directory.

Entity	Description
Ministry of National Guard	The Ministry's Health Affairs division launched an innovation hackathon to address key healthcare challenges: seasonal disease impact, vaccine response, and home-based physical therapy.
Ministry of Environment, Water and Agriculture	A hackathon to source innovative solutions in four key areas: water source management, usage efficiency, treatment and reuse, and infrastructure optimization.
Saudi Data & AI Authority	A hackathon to source AI-driven solutions for boosting productivity, enhancing efficiency, and reducing resource waste across public and private sectors.
Emirate of Aseer Province	A hackathon to scout for innovative solutions to combat malicious lawsuits using artificial intelligence and advanced technologies.
Emirate of the Eastern Province	A hackathon that invites participants to develop innovative solutions for municipal services, aiming to enhance quality of life and advance the municipal sector and Saudi cities.
The Digital Government Authority	GovJam is an open innovation call to co-create better government services by sourcing challenges from public sector agencies and developing targeted innovative solutions.
Small and Medium Enterprises General Authority	An open innovation call to digitize the customer experience in the real estate sector, including finding properties, evaluating options, and conducting inspections, to support the sector's development.
Ministry of Education	An open innovation call aimed at developing solutions in manufacturing, clean energy, and logistics within Oxagon, a region of NEOM.
Saudi Red Crescent Authority	A hackathon inviting innovators to enhance pilgrim services in health, safety, transport, crowd management, and digital engagement, advancing Saudi Arabia's Hajj and Umrah experience.

Source: eparticipation.my.gov.sa/co-creation/

Key Insights

1 Growth in Joint Research with Industry Partners

Saudi Arabia is demonstrating measurable gains in research collaboration, with industry-linked publications growing at a CAGR of 4.6% between 2014 and 2023. Notably, 70% of these collaborations receive funding, outperforming the global average of 59.6%, underscoring rising private sector interest in R&D.

2 Global Partnerships Boost Research Visibility and Impact

International industry collaborators have emerged as key players in Saudi Arabia's research evolution. Companies such as GlaxoSmithKline, Huawei Technologies, and Pfizer have partnered with Saudi institutions to produce widely cited work, particularly in pharmaceuticals and digital technologies. These linkages demonstrate the Kingdom's success in aligning its research agenda with global scientific priorities, paving the way for impactful innovation and enhanced competitiveness on the world stage.

3 National Innovation Districts Strengthening Local Ecosystems

Through RDI's National Innovation Districts Alliance, Saudi Arabia is establishing a network of local innovation hubs, with 12 members and 9 holding IASP membership. These districts strengthen local ecosystems, support collaboration, and enhance global visibility, reflected in Riyadh and Dhahran's inclusion in WIPO's 2024 Top 100 Science and Technology Clusters.

4 Strengthening Academia–Industry Linkages through TTOs

The Kingdom has scaled a national network of 12 Technology Transfer Offices across leading institutions, enabling smoother pathways from research to market. These offices play a pivotal role in managing IP, supporting licensing, and fostering academia–industry collaboration.

5 Advancing Open Innovation and Knowledge Flow

The launch of a centralized Co-Creation Directory has institutionalized open innovation in Saudi Arabia, enabling public entities to crowdsource solutions through over 250 innovation challenges. By connecting problem owners with solution providers, the platform fosters cross-sector collaboration, expands innovation networks, and accelerates the flow of knowledge—positioning co-creation as a strategic lever for national innovation.

4.5 Saudi Arabia's RDI Performance: Private Sector Enablement

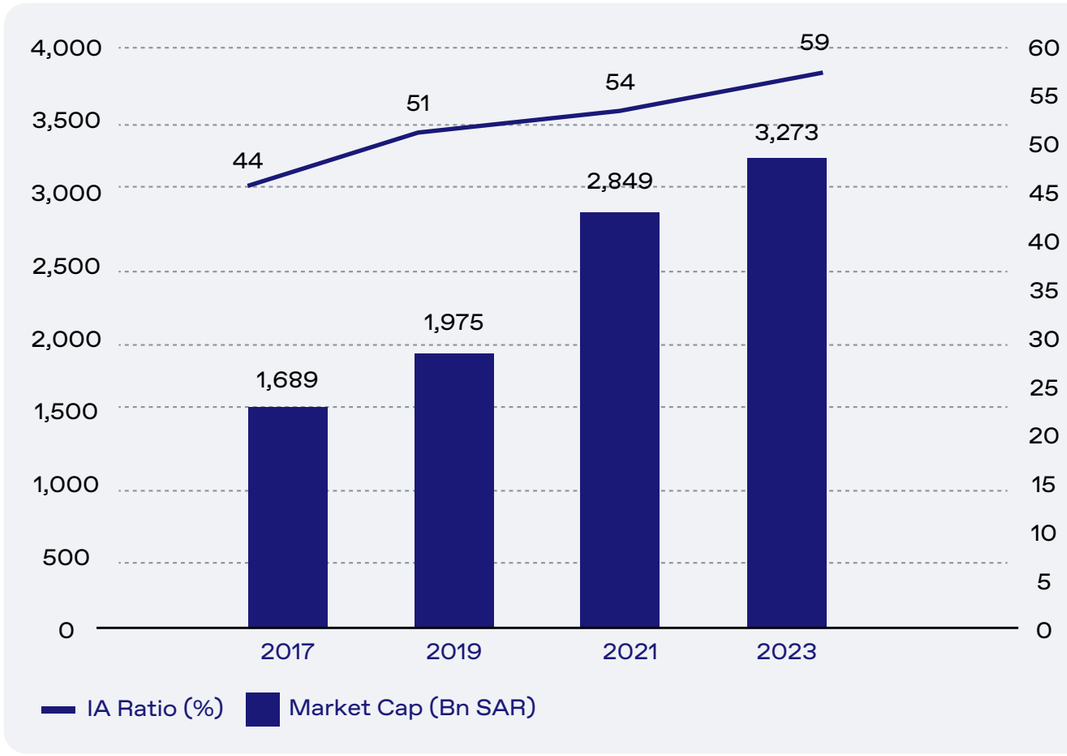


The private sector is a key engine of research, development, and innovation (RDI), turning knowledge into commercial value through investments in intellectual property, talent, data, and proprietary technologies. These intangible assets increasingly define both corporate competitiveness and national innovation strength. As firms take on a larger role in Saudi Arabia's knowledge economy, their ability to innovate depends not only on funding and IP protection, but also on talent, academic collaboration, and regulatory flexibility. Strengthening the private sector's role unlocks synergies across the RDI ecosystem, from research commercialization to high-tech job creation.

In Saudi Arabia, private sector enablement is essential to strengthening the national innovation ecosystem. National strategies prioritize empowering firms to create, protect, and scale intangible assets. By 2023, total market capitalization on the Saudi Exchange Main Market reached SAR 11.3 trillion, with intangible assets representing around 74% of market value when Saudi Aramco is included.

Figure 35 focuses on listed companies excluding Saudi Aramco, where market capitalization nearly doubled from SAR 1.7 trillion in 2017 to SAR 3.3 trillion in 2023. Over the same period, the intangible asset ratio increased from 44% to 59%, highlighting growing investment in intangible assets across the listed private sector. The shift is especially pronounced in knowledge-intensive sectors such as software, healthcare, and transportation, reflecting their reliance on innovation and IP to drive diversification and competitiveness.

Figure 35. Market Capitalization and Intangible Asset Ratio, excluding Saudi Aramco



Source: SAIP

Saudi Arabia's capital markets are demonstrating notable progress in the accumulation of intangible assets, with certain sectors and companies emerging as leaders. Figure 36 shows that this trend is anchored by the energy sector, where intangible assets reached approximately SAR 6.5 trillion in 2023, while knowledge- and service-oriented sectors such as software, media, healthcare, derive more than 85% of their market value from intangibles. Figure 37 reinforces this pattern at the company level, with Aramco accounting for the dominant share, while leading firms in banking, utilities, telecommunications, and mining also hold sizeable intangible positions exceeding SAR 100 billion. To sustain and amplify this momentum, Saudi Arabia is advancing national policies that strengthen IP protection and investing in knowledge spillover mechanisms, such as Technology Transfer Offices (TTOs), to connect firms with academic and research institutions and support the diffusion of innovation across sectors.

Figure 36.Intangible Assets by Sector, SAR Billion, 2023

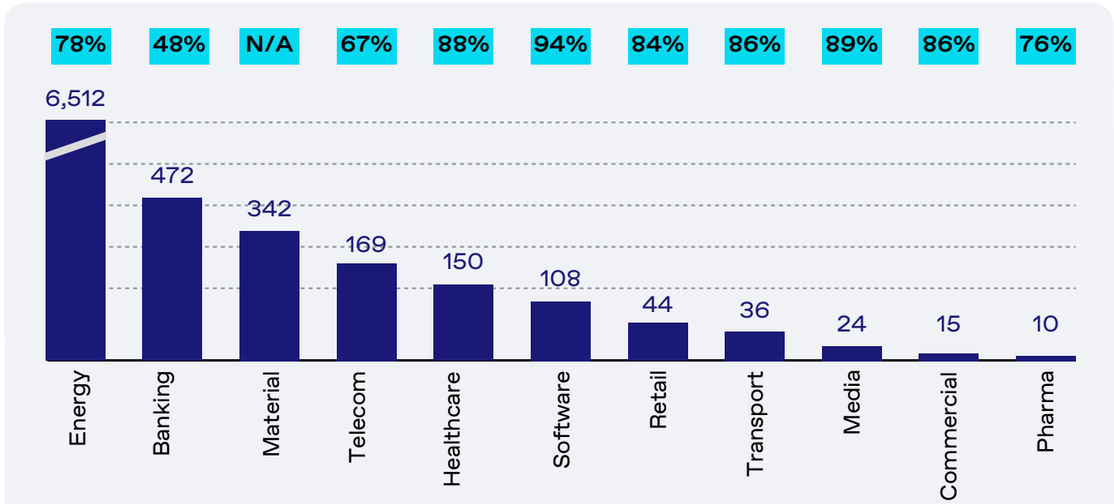
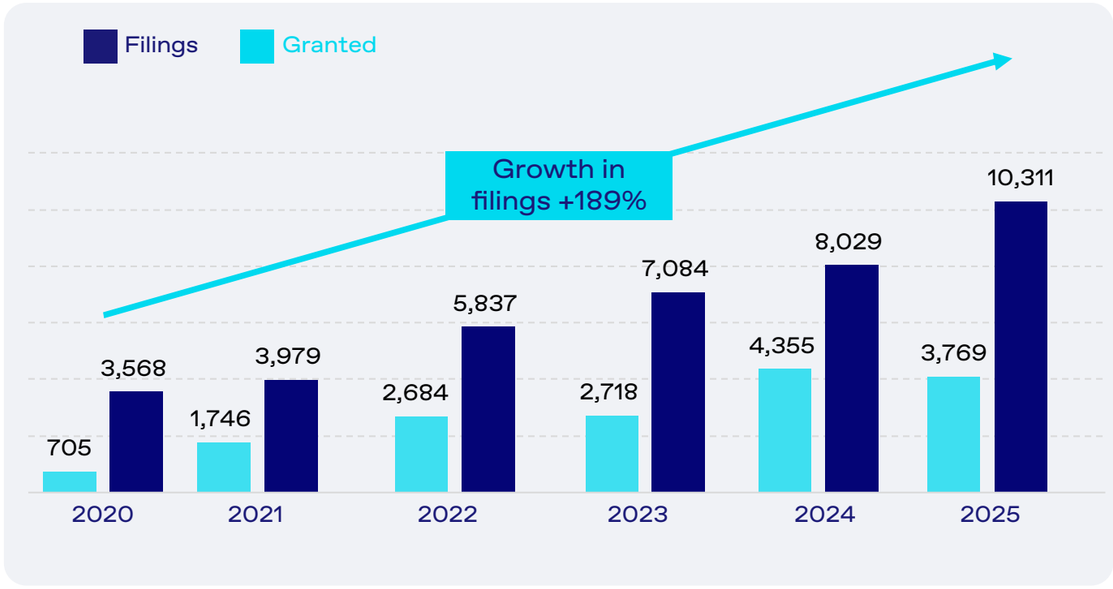


Figure 37. Intangible Assets by Company, SAR Billion, 2023

Company	Sector	Intangible Assets
1) Aramco	Energy	6,459
2) Al Rajhi Bank	Banks	241
3) ACWA Power	Utilities	169
4) STC	Telecom	128
5) Ma'aden	Materials	123
6) Saudi National Bank	Banks	96
7) Dr.Sulaiman Al Habib Group	Healthcare	93
8) SABIC	Materials	75
9) Elm	Software	61
10) SABIC Agri Nutrients	Materials	47

Source: SAIP

Figure 38. Patents Filed and Granted



Patents are a key instrument in the knowledge economy, enabling innovators and firms to protect and commercialize ideas while strengthening long-term competitiveness. As shown in Figure 38, patent activity in Saudi Arabia expanded significantly between 2020 and 2025, with filings rising from 3,568 to 10,311, an increase of approximately 189%, while granted patents increased from 705 to 3,769. This surge reflects growing engagement with the IP system and improving capacity to meet standards of novelty, utility, and patentability. Importantly, the sharp rise in granted patents suggests stronger filing quality, supported by SAIP's dedicated guides, online resources, and advisory services that help applicants strengthen the technical merit and clarity of their submissions.

In 2025, Saudi Arabia accounted for the largest share of patent filings at 49%, highlighting the growing role of domestic applicants in the Kingdom's patent activity. At the institutional level, Aramco remained the country's top contributor, accounting for 13% of all filings, followed by Halliburton Energy Services and Schlumberger Technology at 3% each. International filings continued to contribute to the ecosystem, with the United States and China representing 17% and 6% of total filings, respectively, reflecting sustained global interest in Saudi Arabia's IP system.

Top Filing Institutions, 2025

أرامكو السعودية saudi aramco	13%
HALLIBURTON	3%
Schlumberger	3%

Top Filing Countries, 2025

	49%
	17%
	6%

Source: SAIP

Trademarks are a foundational element of intangible assets, protecting brand identity and enabling firms to differentiate in competitive markets. While not a direct measure of innovation, trademarks support broader innovation ecosystems by facilitating commercialization, trust-building, and the expansion of market presence, especially for emerging ventures and knowledge-driven firms.

Saudi Arabia has taken significant steps to enhance its trademark system, improving registration processes and service accessibility. As shown in Figure 39, trademark filings rose from 30,184 in 2020 to 64,273 in 2025, an increase of around 113%. Registered trademarks also grew steadily, reaching 42,424 in 2025, with a registration rate of around 66%. This reflects both improved filing quality and a maturing institutional framework for IP management.

Domestic actors now account for 65% of all filings, reflecting growing awareness of brand protection as a strategic asset. At the same time, international interest remains visible, with China and the U.S. representing 6% and 5% of filings, respectively. Leading applicants in 2025 included national initiatives such as Qiddiya, alongside global companies such as Toyota and POP MART, illustrating how brand protection is increasingly central to both economic competitiveness and innovation-led growth.

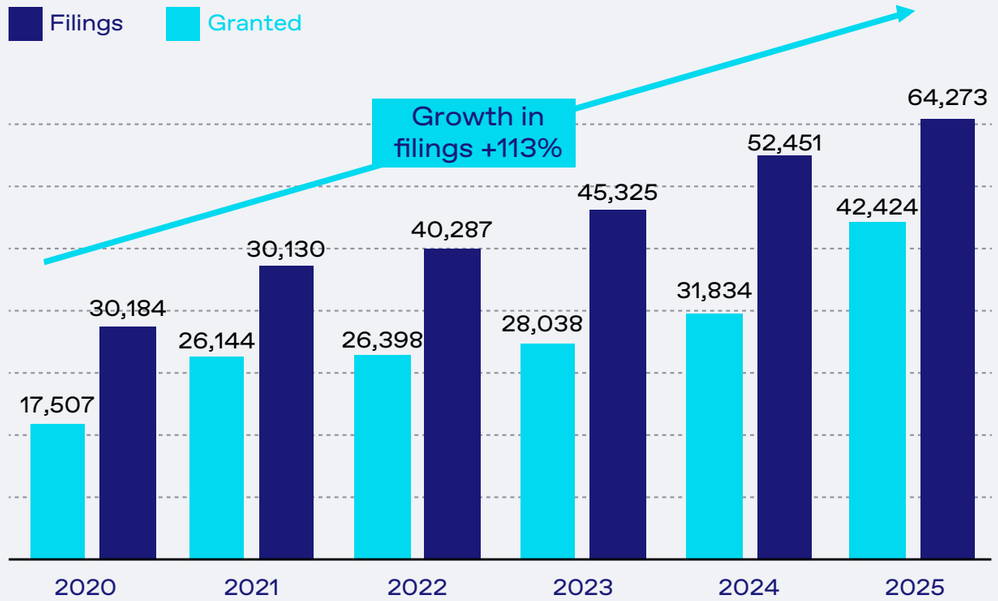
Top Filing Institutions, 2025

القدية	2%
TOYOTA	0.4%
POP MART	0.3%

Top Filing Countries, 2025

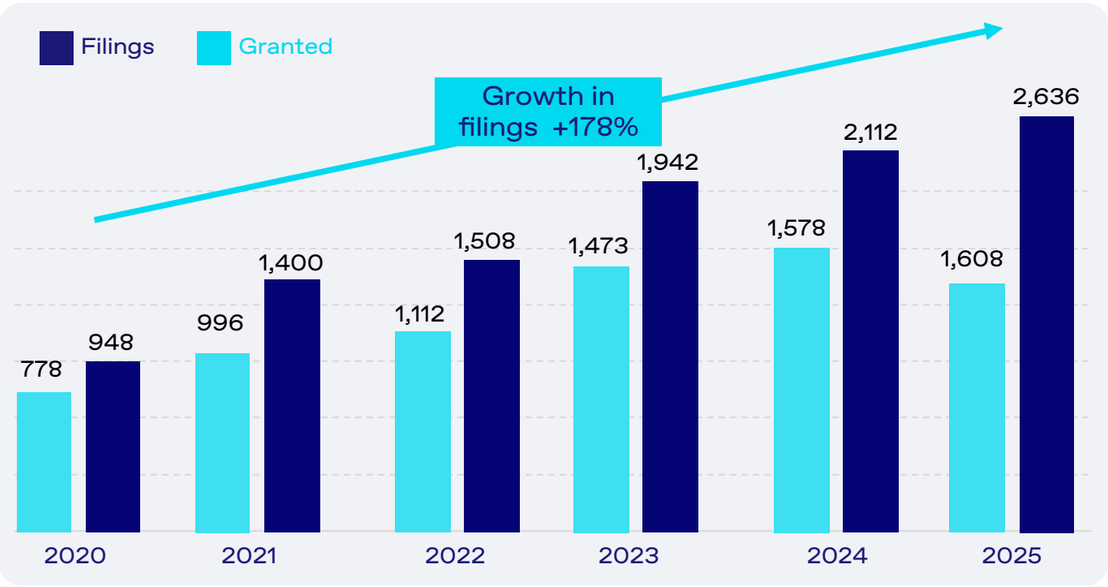
	65%
	6%
	5%

Figure 39. Trademarks Filed and Granted



Source: SAIP

Figure 40. Industrial Designs Filed and Granted



Industrial designs are an essential form of intellectual property that protect the visual features of products, such as form, texture, and ornamentation, playing a vital role in turning creative ideas into marketable outcomes. As product design becomes a key source of competitive differentiation, design protection is increasingly aligned with innovation strategies and consumer-focused value creation.

Saudi Arabia has seen remarkable progress in this domain. As illustrated in Figure 40, industrial design filings surged by 178% between 2020 and 2025, rising from 948 to 2,636. Granted designs reached 1,608 in 2025, representing a registration rate of around 61%, and reflecting growing awareness of design protection among both local and international applicants. The sustained increase in filings signals a maturing understanding of design protection among stakeholders and is further evidenced by the increasingly diverse applicant base.

In 2025, 48% of filings came from local applicants and 52% from international ones, showing a balanced mix of domestic engagement and global interest. Top recipients included Huawei Technologies, Alfanar, and Scania, underscoring continued trust in the Kingdom's IP framework. As Saudi Arabia continues to build its innovation ecosystem, industrial designs are becoming a strategic tool for protecting product distinctiveness and advancing knowledge economy goals.

Source: SAIP

Top Filing Institutions, 2025

HUAWEI	15%
alfanar PROJECTS	1%
SCANIA	1%

Top Filing Countries, 2025

	48%
	21%
	5%

Key Insights

1

Intangible Assets Reshape Market Capitalization

Saudi Arabia's capital market has seen strong expansion, reaching SAR 11.3 trillion in 2023. Alongside this growth, intangible assets have become a major source of market value, representing around 74% of total market capitalization when Saudi Aramco is included. Excluding Aramco, listed firms' intangible asset ratio rose from 44% in 2017 to 59% in 2023, a 34% increase. This trend highlights growing private sector investment in IP, talent, and knowledge-based capabilities, signaling a structural shift toward innovation-led growth.

2

Market Leaders Position Intangibles as Core Strategic Assets

With the strong growth of intangible assets in Saudi Arabia's capital markets, the energy sector leads the frontier with SAR 6.5 trillion in 2023, led by Aramco's overall market dominance. While energy dominates in volume, sectors such as software at 94%, media at 89%, healthcare at 88%, and transportation at 86% report the highest intangible asset -to-market ratios—signaling a broader shift toward knowledge-based value creation.

3

Patent Filings Accelerate with Rising Quality

Patent filings in Saudi Arabia nearly tripled between 2020 and 2025, rising from 3,568 to 10,311, while granted patents increased more than fivefold from 705 to 3,769. This sharp increase reflects stronger engagement with the IP system, improved filing quality supported by SAIP's services, and growing trust among domestic innovators and international filers.

4

Trademark Uptake Reflects Expanding Brand Protection Culture

Trademarks in Saudi Arabia are gaining traction, with filings rising by around 113% between 2020 and 2025, from 30,184 to 64,273. The 2025 registration rate of about 66% signals improved quality and institutional readiness. With domestic applicants accounting for 65% of filings and international interest remaining visible, led by China and the U.S., trademarks are emerging as a tool for brand competitiveness and broader participation in the knowledge economy.

5

Growth in Design Filings Marks New Phase of IP Engagement

The sharp growth in industrial design filings, up by 178% between 2020 and 2025, reflects heightened interest in protecting design innovation. Backed by a sustained registration rate and balanced participation from local and global filers, this trend positions design rights as a key pillar of Saudi Arabia's innovation ecosystem.

05. The Way Forward for Saudi Arabia’s RDI Excellence



Saudi Arabia’s commitment to advancing research, development, and innovation is paving the way for long-term competitiveness and impact. To sustain this progress, the following recommendations offer actionable pathways to strengthen the five national RDI pillars, Human Capital, Funding Mechanisms, Policy & Regulations, Innovation Networks, and Private Sector Enablement. Together, these measures aim to amplify collaboration, accelerate the translation of knowledge into value, and position the Kingdom as a leading innovation-driven economy.

Human Capital

- Integrate innovation skills early in the education journey, embedding creativity, problem-solving, and interdisciplinary collaboration from the foundational years. Tailor curricula to reflect evolving private sector demands, especially in high-impact fields, ensuring the next generation enters the workforce ready to contribute to a knowledge-driven economy.
- Accelerate workforce transformation by scaling targeted upskilling programs in fields like AI, biotechnology, and advanced manufacturing. These efforts should build on national priorities and equip Saudis with specialized competencies, ultimately raising productivity and participation rates across high-value industries.

Funding Mechanisms

- Broaden access to tailored financial instruments, such as convertible loans, revenue-based financing, and IP-backed lending, to complement traditional equity and loan financing. This would help create a more diverse capital landscape, particularly for innovation-intensive firms navigating risk-averse lending environments.
- Enable wider adoption of alternative funding models by supporting fractional ownership VC structures and regulated crowdfunding platforms. These approaches expand the pool of early-stage investors, reduce entry barriers for high-risk ventures, and deepen societal engagement in the innovation economy.

Policy & Regulations

- Expand regulatory sandbox frameworks across high-impact domains, enabling innovators to test new ideas under guided oversight. This can accelerate learning cycles, inform adaptive policymaking, and build regulatory confidence in managing emerging technologies.
- Strengthen participatory policy tools by enhancing platforms like eParticipation to enable two-way dialogue with innovators, researchers, and entrepreneurs across sectors. This will improve how regulatory challenges are surfaced and resolved, whether in health, water, energy, or technology, and ensure policy design remains responsive to real-world needs throughout the innovation landscape.

Innovation Networks

- Integrate Technology Transfer Offices (TTOs) into thematic co-investment frameworks to accelerate research commercialization. Aligning TTO efforts with mission-driven investment agendas can strengthen industry partnerships, enhance IP valorization, and ensure public research outputs are matched with market-driven demand in priority sectors.
- Expand global RDI connectivity by establishing a Saudi Innovation Attaché Network in key international markets. These attachés would facilitate cross-border research collaboration, accelerate technology scouting, and attract global investment into national RDI initiatives, strengthening Saudi Arabia's integration into the global innovation landscape.

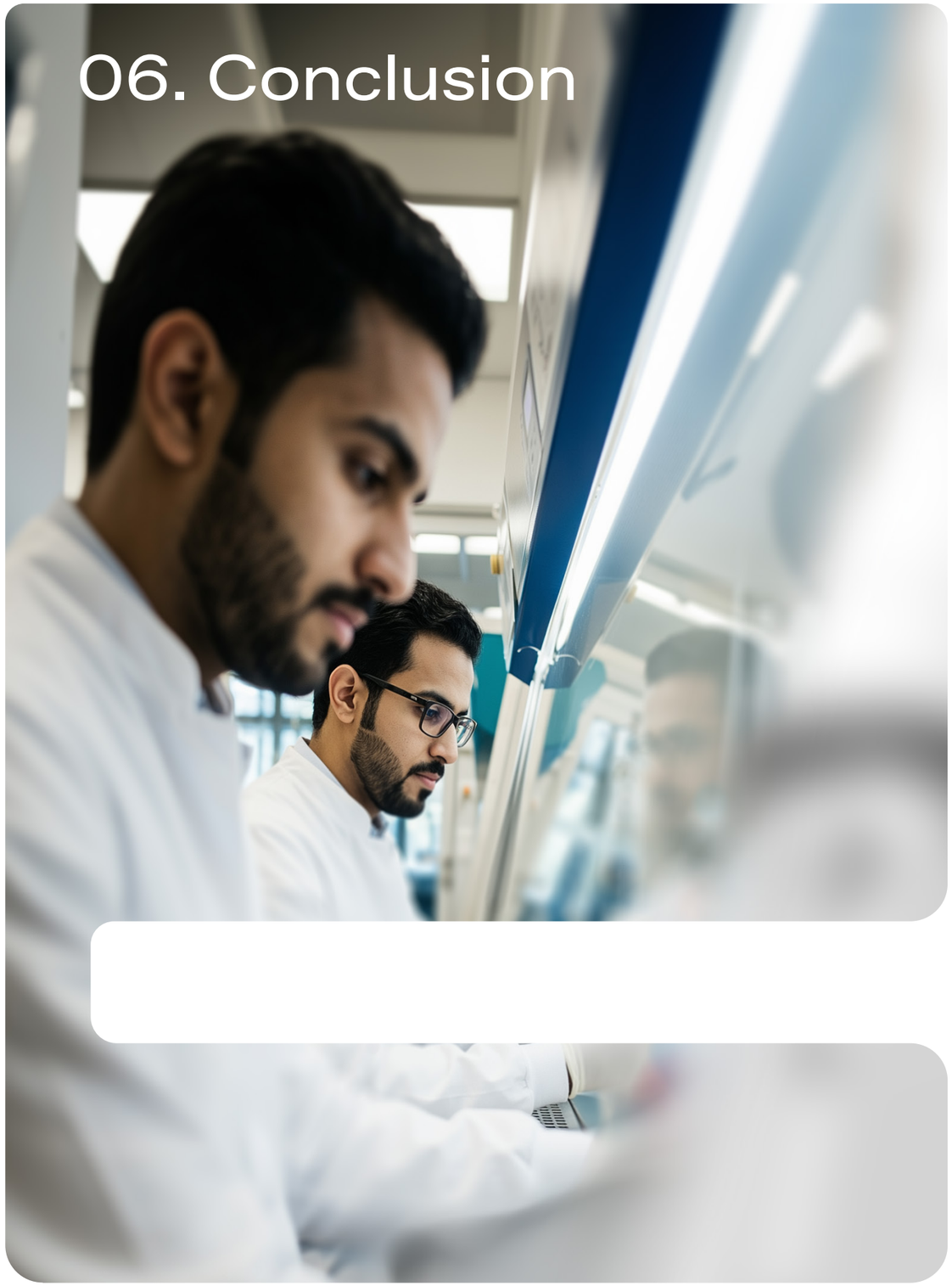
Private Sector Enablement

- International filing through the PCT or Madrid Protocol should be encouraged selectively based on the IP's commercial potential and target markets, while prioritizing local registration in Saudi Arabia as the first step.
- Offer incentives for innovators and firms successfully commercializing intellectual property, such as priority access to government procurement, fast-tracked regulatory review, or preferential treatment in public funding programs. Encouraging IP monetization across sectors will stimulate greater investment in R&D, elevate the value of intangible assets, and accelerate the transformation of research into impact.

Innovation is becoming a defining feature of Saudi Arabia's economic transformation. As the Kingdom advances toward its national RDI goals, the next phase will require deeper alignment across the five RDI pillars. Developing skilled talent is essential, but its impact is magnified when paired with accessible funding that empowers innovators to experiment, build, and grow. These efforts depend on agile, responsive regulation that lowers entry barriers and supports continuous learning. Stronger innovation networks will amplify collaboration, both within the Kingdom and globally, while active private sector engagement ensures ideas are scaled and translated into real-world value.

Together, these elements form an integrated ecosystem, one that turns RDI into opportunity, and opportunity into progress. By reinforcing coordination across all pillars, Saudi Arabia can unlock the full potential of its innovation economy and position itself as a global leader in knowledge-driven development.

06. Conclusion

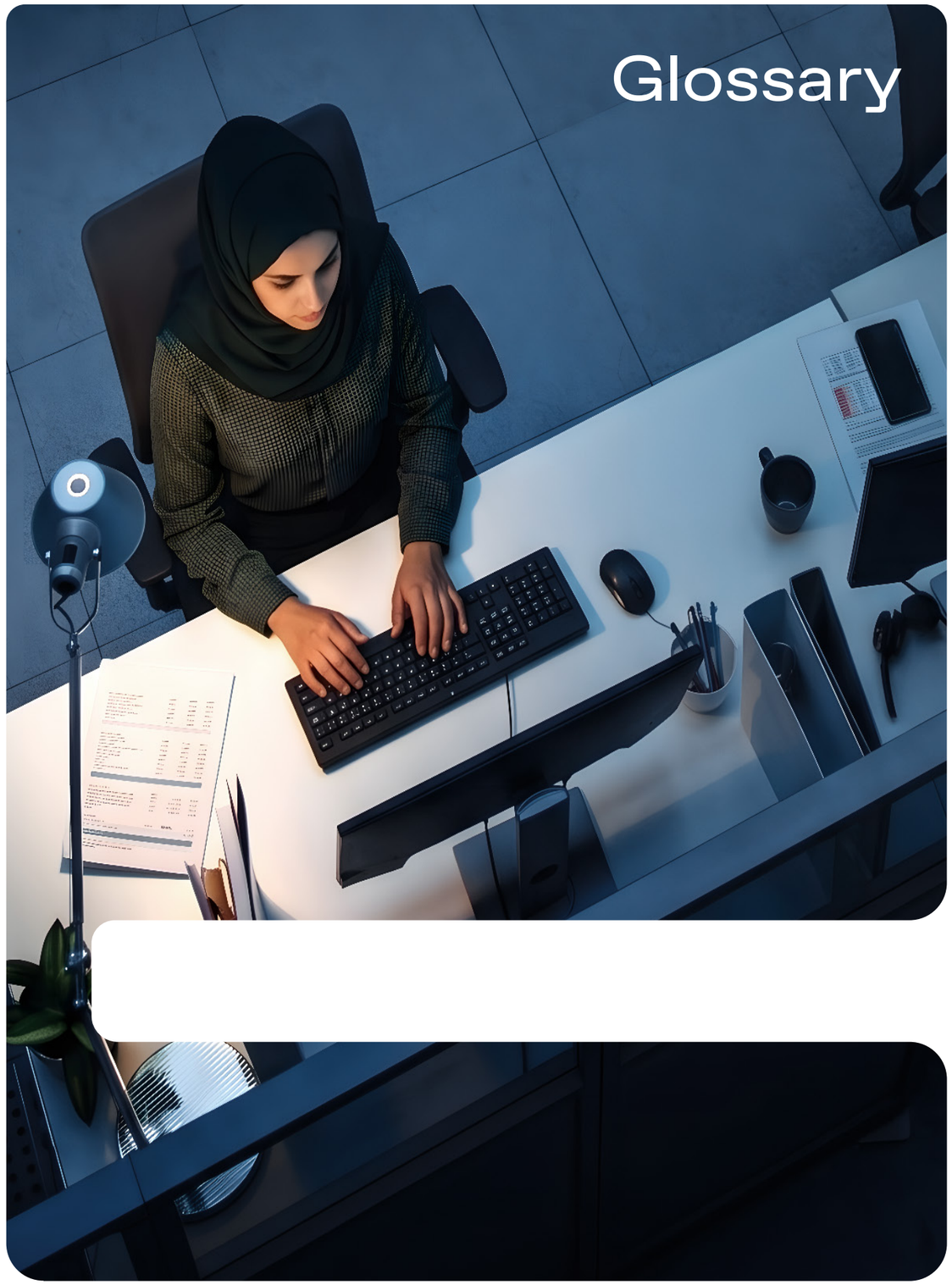


Conclusion

Saudi Arabia's research, development, and innovation (RDI) landscape has undergone a profound transformation in recent years. As examined throughout this report, major strides have been made across every RDI pillar, from expanding talent pipelines and modernizing funding mechanisms to enhancing regulatory flexibility, strengthening innovation networks, and increasing private sector engagement. These advances reflect not only ambition, but measurable momentum toward a more innovative, knowledge-driven economy.

The Kingdom has built a strong institutional foundation, embraced global best practices, and activated national programs that are already delivering visible results. Its expanding talent base, growing support for commercialization, and increasing participation in international R&D partnerships signal a system with both maturity and forward energy. The progress achieved so far is a powerful indicator of what is possible.

Looking ahead, continued coordination across the five RDI pillars, Human Capital, Funding Mechanisms, Policy & Regulations, Innovation Networks, and Private Sector Enablement, will be key to unlocking even greater value. With the right enablers in place and a clear vision for the future, Saudi Arabia is well positioned to lead as a global hub of innovation, translating knowledge into impact and ambition into enduring national prosperity.



Glossary

Acronym	Expanded Form	Acronym	Expanded Form
BERD	Business Enterprise Expenditure on Research and Development	**PE**	Private Equity
CAGR	Compound Annual Growth Rate	**QS**	Quacquarelli Symonds (University Rankings)
GERD	Gross Domestic Expenditure on Research and Development	**R&D**	Research and Development
GII	Global Innovation Index	**RDI**	Research, Development and Innovation
ICT	Information and Communication Technology	**STEM**	Science, Technology, Engineering, and Mathematics
IP	Intellectual Property	**VC**	Venture Capital
KAUST	King Abdullah University of Science and Technology	**WIPO**	World Intellectual Property Organization
KFUPM	King Fahd University of Petroleum and Minerals	**OECD**	Organization for Economic Co-operation and Development

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