

# AI-Driven Investment Promotion: Empowering G20 Economies for Sustainable Growth

G20 Policy Area: Open Trade & Sustainable Investment

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## Abstract:

This paper delves into the emerging paradigm of AI-driven investment promotion strategies and their pivotal role in advancing sustainable growth agendas within G20 economies. Through an in-depth exploration of contemporary literature, case studies, and policy frameworks, it examines the transformative potential of AI technologies in optimising investment attraction efforts and fostering economic resilience. By synthesising empirical evidence and theoretical insights, the paper elucidates how AI-driven approaches empower G20 nations to navigate complex global challenges, enhance decision-making processes, and unlock new avenues for sustainable development.

Moreover, it scrutinises the policy implications and ethical considerations inherent in the adoption of AI technologies, emphasising the need for inclusive governance frameworks and stakeholder engagement mechanisms. By offering a thorough analysis of AI-driven investment promotion strategies, this paper aims to inform policymakers, practitioners, and researchers about the opportunities and challenges associated with harnessing AI for sustainable growth in G20 economies.

## The Challenge:

Investment Promotion Agencies (IPAs) play a critical role in attracting foreign direct investment (FDI) and promoting economic growth in G20 countries. However, despite their importance, IPAs encounter numerous challenges that can impede their

effectiveness. These challenges vary across different countries and regions but often revolve around issues such as regulatory complexity, competition for investment, resource constraints, and changing global dynamics.

One of the primary challenges confronting IPAs in G20 countries is the increasingly complex regulatory environment (Westerlund, 2018). Regulations related to investment, taxation, labour, and land ownership can be convoluted and constantly changing, making it difficult for IPAs to provide clear guidance to potential investors (Wang & Kim, 2019). Moreover, bureaucratic red tape and administrative hurdles can further exacerbate the problem, slowing down the investment process and deterring foreign investors (Buckley et al., 2020). In some cases, conflicting regulations between national and local governments can create additional challenges, requiring IPAs to navigate intricate legal frameworks to facilitate investment (Santos-Paulino & Squicciarini, 2017).

Resource constraints represent another obstacle for IPAs in G20 countries (Fisher et al., 2020). Many IPAs operate with limited budgets and staff, hindering their ability to effectively market their countries and provide personalised support to potential investors (Wei et al., 2019). Furthermore, the lack of adequate resources can impede the adoption of new technologies and data-driven approaches, which are becoming increasingly important in investment promotion activities (Griffith-Jones & Potts, 2016). Without sufficient funding and manpower, IPAs struggle to compete with more resourced counterparts in attracting investment and facilitating business expansion (Mascarenhas & Santos-Paulino, 2018). Moreover, changing global dynamics, such as geopolitical tensions, trade disputes, and economic uncertainties, further enforce this trend (Buckley & Ghauri, 2018). These uncertainties can create a volatile investment climate, causing investors to adopt a more cautious approach and delay investment decisions (Mascarenhas et al., 2019).

The focus of the G20, however, is to address the annual funding gap to achieve the Sustainable Development Goals 2030, which poses additional challenges in terms of investment promotion and attraction. One of the primary challenges to attracting sustainable investment is the complexity of regulatory frameworks and the uncertainty surrounding policy decisions (UNCTAD, 2020). Investors require clear and consistent regulatory environments to assess risks, make informed decisions, and deploy capital effectively. However, regulatory fragmentation, inconsistency, and frequent policy changes create uncertainty and deter investment in sustainable projects (EY, 2021). Moreover, conflicting regulatory requirements across jurisdictions can increase compliance costs and hinder cross-border investment flows (World Bank Group, 2019). Addressing these challenges requires policymakers to streamline regulations,

harmonise standards, and provide long-term policy certainty to create a conducive environment for sustainable investment.

Another significant challenge to attracting sustainable investment is the lack of market transparency and information asymmetry (IFC, 2018). Investors often struggle to access reliable data and information on sustainability performance, environmental risks, and social impacts, making it difficult to evaluate investment opportunities accurately (OECD, 2021). Furthermore, greenwashing and misleading sustainability claims can erode investor trust and undermine the credibility of sustainable investment initiatives (PRI, 2020). To address these challenges, governments and businesses must improve transparency and disclosure practices, standardise reporting frameworks, and enhance the availability of sustainability-related information (GRI, 2019). By providing investors with comprehensive and accurate data, stakeholders can foster trust, facilitate due diligence, and attract sustainable investment (S&P Global, 2020).

Financing gaps and investment barriers pose significant challenges to scaling up sustainable investment, particularly in emerging markets and developing economies (UNEP, 2021). Limited access to capital, high financing costs, and perceived investment risks often deter investors from funding sustainable projects, especially in sectors with long payback periods or uncertain revenue streams (WRI, 2017). Additionally, inadequate infrastructure, weak institutional capacity, and regulatory constraints can further exacerbate investment barriers and hinder the deployment of sustainable capital (ADB, 2020). Socio-political instability and governance risks present significant challenges to attracting sustainable investment in many regions (IMF, 2021). Political unrest, civil conflicts, and governance failures can disrupt business operations, undermine investor confidence, and increase project risks, particularly in fragile or conflict-affected contexts (IFC, 2020). Moreover, corruption, lack of transparency, and weak rule of law can create legal and reputational risks for investors, deterring sustainable investment and eroding trust in institutions (Transparency International, 2021).

As the G20 sets ambitious goals to drive sustainable investment and address pressing global challenges, questions arise regarding their ability to effectively achieve these ambitions. While the recommendations put forth by the G20 are commendable, their implementation faces significant hurdles, including varying political agendas, resource constraints, and geopolitical tensions among member states (OECD, 2020). Additionally, the scale and complexity of sustainability issues require innovative approaches and technological solutions to complement traditional policy measures (WBCSD, 2019). By leveraging AI-driven tools and technologies, the G20 can improve decision-making processes, enhance policy analysis, and optimise resource allocation (PwC, 2021).

It is expected that 45% of total economic gains by 2030 generated through AI technologies will come from product enhancements, stimulating customer demand with greater product variety, increased levels of personalisation and improved affordability and attractiveness over time (PwC, 2017). However, realising the full potential of AI requires overcoming challenges related to data privacy, ethical considerations, and digital divides (Economist Intelligence Unit, 2021). By addressing these challenges and embracing AI as a strategic enabler, the G20 can accelerate progress towards a more sustainable and inclusive future.

### **The Business Imperative:**

Integration of the digital technologies across the value chains of the Investment Promotion Authorities may disrupt the traditional operating models of the entities and create a better investor-centric environment, accelerating sustainable economic growth and driving progress toward the Sustainable Development Goals (SDGs).

Digitalization of processes and upscaling of the internal systems increases the efficiency of the activities performed by IPAs to carry out their mandates, improves productivity and optimises the organisational resources (UNCTAD, 2023). By leveraging AI-powered tools, like machine learning algorithms, the IPAs may identify how to close the gaps in the national and regional development by getting valuable insights on the infrastructure needs and further simulate various economic and investment scenarios through predictive analytical models to forecast the potential impacts of each investment opportunity on the local economy and future trends of economic variables (OECD, 2021).

Over the past 5 years, more and more technology-committed IPAs have been switching to the application of AI-based and data analyses-driven investor profiling to identify the investor's financial goals, investment size, investment drivers, time horizon, and risk tolerance. The digital pioneers, such as Costa Rican Investment Promotion Authority (CINDE) and Greater Phoenix Economic Council (GPEC) integrated predictive analysis to determine their investment strategies for the country promotion and identify the associated risks (FDI Intelligence, 2023). As CINDE published on its website, it has become a 100% digital organisation that automated its processes and integrated predictive models to select the prospects (Seth O'Farrell et al., CINDE, 2023). Being considered the most innovative IPA globally, Costa Rican IPA has more than 150 data points within each investor profile in its models and tracks more than 800,000 companies around the world, while also utilising AI to create talent development

strategies and materials for their staff to ensure that the agency maintains a highly skilled workforce ready to enhance the investor experience in the country (Marinela Urgellés, Pilar Madrigal et al., CINDE, 2023).

AI-driven technologies also help IPAs to do the investment promotion and facilitation activities on both the front-end and back-end. From the back-end, most of the Investment Promotion Authorities already use basic tools to perform their daily tasks and develop marketing materials, write speeches and texts, do research and structure data with Generative AI (GenAI) including ChatGPT (FDI Intelligence, 2023). From the front-end, the IPAs are customising the investor's digital experience based on its profile and request. The more digitally advanced ones integrate complex AI-solutions to tailor the marketing and communication efforts according to the investor's profile.

Approaching the promotion efforts in a proactive way, the IPAs first learn about the investor's profile through database tracking and further shape their value propositions according to the investor's motivation drivers, geography, sector, maturity and previous experience with an investment destination. Using this approach, IPAs provide the most relevant and useful information during the first contact with the investor, which in turn has a beneficial effect on the decision-making process. On top of it, some IPAs are integrating AI into digital outreach to customise relationship management and ensure that IPA targets the right profiles for the country.

One IPA that has championed the utilisation of AI in its investment promotion activities is Invest Estonia. Its AI-solutions were included into the list of 100 most promising AI-related solutions for the benefit of humanity by the International Research Centre on Artificial Intelligence (IRCAI) under the auspices of UNESCO (IRCAI, 2023). Invest Estonia has focused its efforts on the provision of the most relevant and accurate information to the investors on "why and how" to invest into the country (Invest Estonia, 2023). By integrating a few non-human agents with natural language processing (NLP) and salesforce automation skill sets and training on large datasets in the Invest Estonia platform, the IPA was able to hand over the customer queries to the chatbots that advise on the countries' value proposition, detail where, how and into which sectors the investors may invest and ask the investor how they want to proceed with the development of an investment plan (Invest Estonia, 2022).

Beyond that, IPAs may benefit from the expansion and digitalization of the facilitation and aftercare services. One best practice would be to excel investor experience with obtaining the licences and opening a bank account. By adopting 24/7 virtual assistants, IPAs may also support the investors with their queries on the market intelligence and advisory services (James Zhan, Jacopo Dettoni et al, 2023). Given the fact, that there are so many uncertainties for newly onboarded investors across multiple dimensions, such

as compliance with regulatory frameworks, stakeholders management, talent sourcing and the local supply chain integration, the IPAs may help to streamline the investor's operations, removing their bottlenecks by synchronising and aligning stakeholders' systems and knowledge centres and leading the investors towards a necessary service on the integrated platform (OECD, 2022).

In general, AI integration in the processes of investment promotion and attraction leads to a variety of use cases:

### **1. Market Analysis:**

AI technologies play a crucial role in market analysis, providing investors with valuable insights into market trends, asset performance, and investment opportunities. Machine learning algorithms analyse vast amounts of data from diverse sources, including financial statements, news articles, social media, and market indicators, to identify patterns, detect anomalies, and predict market movements (Lo, 2020). For example, NLP algorithms analyse news sentiment to gauge market sentiment and investor sentiment, providing valuable inputs for investment decision-making (Chen et al., 2021). Moreover, AI-powered predictive analytics models forecast asset prices, assess risk exposure, and optimise investment strategies, enabling investors to make more informed and timely decisions (Hong et al., 2019).

### **2. Investor Behavior Analysis:**

Understanding investor behaviour is critical for investment professionals to tailor products, services and communications effectively. AI-driven behavioural analytics tools analyse investor interactions, preferences and sentiment to identify patterns and predict future behaviour (López-Martínez et al., 2020). For example, sentiment analysis algorithms monitor social media conversations and online forums to assess investor sentiment towards specific assets or sectors, enabling investment professionals to adjust their strategies accordingly (Golbeck et al., 2020). Moreover, AI-powered recommendation systems leverage machine learning algorithms to personalise investment recommendations based on individual preferences, risk tolerance and investment goals, enhancing investor engagement and satisfaction (Tang et al., 2021).

### **3. Portfolio Management:**

AI technologies are transforming portfolio management practices, enabling investors to optimise asset allocation, diversify portfolios, and minimise risk exposure. Machine learning algorithms analyse historical market data, macroeconomic indicators, and asset correlations to construct efficient portfolios that maximise returns while minimising volatility (Heaton et al., 2017). For example, AI-driven portfolio optimisation models consider factors such as expected returns, risk constraints, and liquidity requirements to generate optimal investment portfolios tailored to individual investor preferences (Kim et al., 2019). Moreover, AI-powered robo-advisors automate portfolio management tasks, rebalancing portfolios, and adjusting asset allocations in real-time based on market conditions and investor preferences (Ardia et al., 2020).

#### **4. Risk Assessment:**

AI technologies enhance risk assessment processes by identifying, quantifying, and mitigating various types of risks, including market risk, credit risk and operational risk. Machine learning algorithms analyse historical data, market trends, and macroeconomic indicators to assess the likelihood and impact of adverse events on investment portfolios (Tseng et al., 2018). For example, AI-driven risk models use advanced statistical techniques to estimate Value at Risk (VaR), Conditional Value at Risk (CVaR), and other risk measures, providing investors with insights into potential losses under different scenarios (McNeil et al., 2015). Moreover, AI-powered anomaly detection systems identify unusual patterns or outliers in market data, alerting investors to potential risks or opportunities that may require further investigation (Müller et al., 2021).

#### **The Role of the G20:**

The Group of Twenty (G20) stands as a critical international forum, bringing together major economies to collaboratively address global economic challenges and promote international financial stability (G20, 2020). At the heart of its comprehensive agenda lies a steadfast commitment to achieving the Sustainable Development Goals (SDGs) through the strategic promotion of investments. The G20's dedication to sustainable development encompasses a wide array of economic, social and environmental considerations. This commitment is encapsulated in various communiqués and action plans, notably the G20 Riyadh Summit Leaders' Declaration (G20, 2020). This foundational document outlines the G20's acknowledgment of the interconnectedness of economic, social and environmental factors in achieving sustainable development.

The G20 recognizes the critical role of investment in driving sustainable growth and, by extension, the attainment of SDGs.

A cornerstone of the G20's strategy is the promotion of infrastructure investment. Infrastructure projects are recognized as catalysts for economic development and solutions to societal challenges (G20, 2019). The G20's endorsement of the "G20 Principles for Quality Infrastructure Investment" solidifies its commitment to guiding investment in infrastructure projects that are not only economically viable but also sustainable and inclusive. Through initiatives that mobilise resources for sustainable infrastructure projects, the G20 actively contributes to SDGs related to poverty alleviation, health and well-being, and clean energy.

The G20's endeavours in fostering investment for sustainable development extend to addressing global challenges, notably climate change. Collaborative efforts with the OECD are evident in the development of frameworks for responsible business conduct and investment in the context of climate-related issues (OECD, 2011). The G20's commitment to transitioning towards a low-carbon economy is reflected in its endorsement of initiatives promoting green finance and sustainable business practices (G20, 2020). This aligns seamlessly with UNCTAD's emphasis on leveraging investment for environmentally sustainable development, highlighting the interconnectedness of economic strategies and environmental goals (UNCTAD, 2021).

While the G20's initiatives are commendable, challenges persist in translating its agenda into tangible outcomes. A central challenge lies in balancing the interests of diverse member states with varying levels of economic development. Achieving harmony between promoting investment and enabling inclusivity remains a delicate task. Additionally, the G20's ability to achieve sustainable development goals through investment promotion is contingent upon overcoming geopolitical tensions and fostering a cooperative international environment. Current global dynamics, marked by trade disputes and political conflicts, pose obstacles to collaborative efforts (Brown & White, 2023). UNCTAD underscores the importance of a rules-based international economic system to facilitate investment flows and mitigate risks, emphasising the need for the G20 to play a central role in promoting dialogue and cooperation on the global stage (UNCTAD, 2021).

Addressing the Sustainable Development Goals (SDGs) necessitates a critical examination of the funding landscape, highlighting the persistent gap between the financial resources required and those currently available. The SDG funding gap represents a substantial challenge in translating aspirations into tangible outcomes. As elucidated by UNCTAD's "World Investment Report 2021," despite the recognition of the pivotal role of investment in achieving SDGs, there exists a substantial shortfall in



funding required to meet these ambitious global targets (UNCTAD, 2021). The G20's role gains even more significance in this context, as it serves as a crucial arena to discuss and implement strategies to bridge this funding gap. The intricacies of attracting Foreign Direct Investment (FDI) align seamlessly with this challenge, as the G20's initiatives not only seek to promote investment but also to mobilise the necessary financial resources to fill the existing funding gap. In examining the G20's agenda through this lens, we discern a concerted effort not only to drive FDI for sustainable projects but also to address the overarching challenge of securing adequate funding for the realisation of the SDGs. Acknowledging and addressing this funding gap is paramount for the G20's effectiveness in fostering sustainable development and attracting the necessary investments to bridge the financial divide.

Artificial Intelligence (AI) plays a significant role in shaping the landscape of Foreign Direct Investment (FDI), offering transformative capabilities that enhance decision-making processes and optimise investment strategies. Academic literature underscores the potential of AI in attracting and facilitating FDI. Research by Sun et al. (2020) emphasises the role of AI-driven predictive analytics in assessing investment risks, enabling more informed decision-making for both investors and host countries. AI's capacity to analyse vast datasets and identify investment opportunities is highlighted in studies such as those by Ahmad et al. (2019) and Cervellera et al. (2020), showcasing how machine learning algorithms contribute to more efficient and accurate investment predictions.

AI's role in market intelligence and trend analysis is underscored by academic studies like that of Bouri et al. (2021), emphasising how AI-powered algorithms provide valuable insights for investors seeking to understand market dynamics and make informed FDI decisions. Additionally, the application of NLP and sentiment analysis in investment sentiment prediction, as explored by Li et al. (2018), contributes to a deeper understanding of market conditions, aiding investors in assessing potential FDI destinations. Moreover, AI's influence on business operations and supply chain management, discussed in works such as that by Lacus et al. (2019), can significantly impact the attractiveness of a region for FDI. The optimization of production processes and logistics through AI-driven technologies enhances the efficiency and competitiveness of businesses, factors that are pivotal in FDI decision-making.

However, with the global AI market predicted to reach US\$305.90 billion by the end of 2024, and with the United States estimated to own almost 35% of that market alone (US\$106.50 billion in 2024) (Statista Market Insights, 2023), it's imperative to ensure G20 economies adopt policies for more equitable distribution of the Artificial Intelligence market pie with Low Income Countries (LICs) who do not have adequate means nor

resources to compete effectively. The International Monetary Fund developed an AI Preparedness Index that measures readiness in areas such as digital infrastructure, human-capital and labour-market policies, innovation and economic integration, and regulation and ethics. The findings reveal that wealthier economies, including advanced and some emerging market economies, tend to be better equipped for AI adoption than low-income countries (International Monetary Fund, 2024). This has significant implications on FDI as well, as IPAs in Low-Income Countries would not be able to compete with the likes of USA, Germany and other economic powerhouses.

The strategic direction set by the New Delhi G20 Leaders' Declaration and New Delhi GPAI Declaration, the Framework for Systems of Digital Public Infrastructure, the Global Digital Public Infrastructure Repository (GDPIR), and the voluntary initiative One Future Alliance (OFA) are important steps to make deployment of emerging technologies and AI for common good. These initiatives would help promote digital public infrastructure growth, particularly in LICs with emerging technologies. The G20's Data Gaps Initiative 3 (DGI-3) would aid the developing nations to model their AI models with easily accessible open data sets and future G20 presidencies should continue in these efforts (Arvind Gupta, 2024). These initiatives will allow IPAs globally to leverage the power of AI technologies to effectively promote investment opportunities within their economies, and such efforts should be furthered by future G20 presidencies.

### Examples of G20 efforts:

1. **Saudi Arabian Presidency:** During the Saudi Arabian presidency, the G20 focused on mitigating the economic impact of the COVID-19 pandemic and promoting global health responses. Key recommendations included the G20 Action Plan in Response to COVID-19, which aimed to coordinate international efforts to support economies, stabilise financial markets, and safeguard jobs and businesses. The G20 also launched the Debt Service Suspension Initiative (DSSI) to provide temporary debt relief to low-income countries, allowing them to redirect resources towards critical healthcare and economic recovery efforts.

2. **Italian Presidency:** The Italian presidency placed a strong emphasis on fostering inclusive and sustainable economic growth, alongside addressing global health security, climate change and digital transformation. Policy recommendations included initiatives to stimulate economic recovery, support small and medium-sized

enterprises (SMEs) and promote investment in sustainable infrastructure. Additionally, the G20 reaffirmed its commitment to climate finance and green investment, aiming to accelerate the transition to a low-carbon economy while creating new opportunities for investment and job creation.

3. **Indonesian Presidency:** Under the Indonesian presidency, the G20 continued its focus on advancing inclusive economic development and resilience to global challenges. Policy recommendations included measures to promote investment in human capital, enhance access to finance for SMEs and strengthen social protection systems. The G20 also emphasised the importance of sustainable infrastructure investment, digital connectivity and innovation-driven growth to support long-term economic recovery and resilience.

#### **Recommendations:**

**Elevate Artificial Intelligence as an investment opportunity:** First and foremost, Artificial Intelligence itself presents a lucrative opportunity for nations to drive inward FDI. With potential to drive billions of dollars' worth of FDI into AI infrastructure and software, G20 nations should be at the forefront of developing frameworks enabling AI investment. As an idea of the size of investment AI can drive, Facebook invested more than \$1 billion in their 1.25 million-square-foot Prineville Data Center, with additional plans to expand this facility further. In New York, JPMorgan Chase acquired 60 acres of land with the intention to construct a \$490 million data centre. With this massive potential, countries should be looking into how they can incentivize inward investment through key drivers.

- In 2022, India attracted 122 foreign direct investment projects in the artificial intelligence sector, with global corporations including ABB, Accenture, Deloitte, IBM and Microsoft making investment commitments in the nation (Investment Monitor, 2023). Microsoft revealed plans to set up a new data centre region in Hyderabad, planning two sites in Mekaguda and Chadenvelly. Additionally, the Irish-American firm Accenture disclosed its plan to establish a state-of-the-art technology centre in Tamil Nadu. India's recent efforts in incorporating data centres under the Essential Services Maintenance Act (ESMA), creating Data Centre Facilitation Units (DCFU), creating Data Centre Economic Zones and creating a special category code for data centres under the National Building Code of India are all part of the nation's objective to drive FDI in the AI sector.

- Ranked 2<sup>nd</sup> in the number of inward greenfield AI-related FDI in 2022, Germany's high data-protection standards, highest standards applied to the construction and operation of data centres, being one of the world's largest employers in the field of data centres, offering a dual vocational training system and great potential for skilled professionals, and very good weather conditions and low threat levels from external influences (natural catastrophes, terror, power failures) have made it a highly appealing destination for data centre investment. As such, it was able to attract 70 new AI-related projects in 2022 alone, with Google's parent company Alphabet announcing a EUR 1 billion investment in cloud infrastructure in 2023 (Germany Trade & Invest, 2023).
- With demand for data centres on the rise in the MENA region and fueled by fierce competition from economies including Saudi Arabia and Egypt, the United Arab Emirates has come out on top with more than 35 greenfield AI-related FDI projects in 2022 (Investment Monitor, 2023). The country currently holds 46% of the regional market share (Knight Frank, 2023) and is now looking to itself to invest in AI elsewhere, with recent announcements including an MoU with Kazakhstan's Ministry of Digital Development to explore investment in data centres and AI projects in the Central Asian economy (The National, 2024) as well as an MoU with Ministry of Investment, Trade and Industry (MITI) of Malaysia on the expansion of data centres in Malaysia, among other digital infrastructure initiatives (Middle East Briefing, 2024).

**Develop AI-driven investor databases:** Establishing AI-driven investor databases is crucial for enhancing the efficiency and effectiveness of investment promotion efforts. By leveraging AI technologies, IPAs can collect, analyse and manage vast amounts of investor data to identify potential leads, tailor investment opportunities and streamline outreach strategies. These databases should integrate advanced machine learning algorithms to continuously refine investor profiles, predict investment preferences and prioritise engagement efforts. Furthermore, AI-based investor databases enable IPAs to conduct real-time monitoring of investor behaviour, track market trends and assess the impact of promotional campaigns. By investing in the development of AI-driven investor databases, IPAs can strengthen their capacity to attract foreign investment, foster economic growth and achieve sustainable development goals.

- The United Nations Conference on Trade and Development (UNCTAD) leverages predictive analytics through its AI-driven investor database to anticipate global investment trends and identify potential investors. By analysing historical FDI flows, economic indicators and sector-specific data, UNCTAD's database can forecast investment patterns and highlight emerging opportunities for IPAs

worldwide. UNCTAD's predictive analytics identifies growing interest in renewable energy projects, prompting IPAs in countries with renewable energy potential to tailor their investment propositions accordingly. This proactive approach enables IPAs to target investors likely to be interested in specific sectors or projects, enhancing their effectiveness in attracting FDI.

- The Singapore Economic Development Board (EDB) employs AI-driven investor databases to deliver personalised investment recommendations to potential investors. By utilising machine learning algorithms, EDB's database analyses investor profiles, past investment behaviour and market trends to tailor investment opportunities to individual preferences. EDB's AI-based system matches technology investors with Singaporean startups in the artificial intelligence sector based on their past investment history and industry interests. It enhances investor engagement and increases the likelihood of successful investment outcomes, ultimately contributing to Singapore's economic growth and innovation ecosystem.
- Japan External Trade Organisation (JETRO) utilises AI-powered investor databases to monitor real-time market dynamics and identify investment opportunities in Japan. By aggregating data from various sources, including social media platforms, news outlets and industry reports, JETRO's database continuously tracks investor sentiment and market trends. JETRO's AI system detects increased interest in Japanese biotechnology startups following a breakthrough discovery, prompting the organisation to proactively reach out to potential investors in the healthcare sector. This real-time monitoring capability allows JETRO to stay ahead of market developments and tailor its investment promotion efforts to capitalise on emerging opportunities, driving FDI inflows and economic growth in Japan.

**AI-powered FDI opportunity identification by IPAs:** This approach involves leveraging AI algorithms and machine learning techniques to analyse vast amounts of data from various sources, including market reports, industry trends, economic indicators and global investment patterns. By processing and interpreting this data, AI systems can identify emerging trends, market gaps, and investment hotspots across different sectors and regions. This enables IPAs and economic development organisations to target their efforts more effectively, prioritise sectors with high growth potential and tailor their investment attraction strategies to attract foreign investors. AI-driven FDI opportunity identification enhances decision-making processes by providing actionable

insights and enabling IPAs to stay ahead of market trends, ultimately leading to more successful investment promotion efforts and economic development outcomes.

- Singapore Economic Development Board (EDB): The Singapore EDB utilises AI-driven analytics to identify potential investment opportunities in key sectors such as advanced manufacturing, technology and biomedicine. By analysing large volumes of data from global sources, including trade databases, market reports and industry trends, Singapore EDB's AI system can pinpoint emerging trends and investment prospects. For instance, if the AI detects increasing demand for semiconductor technology in the Asia-Pacific region, the EDB may prioritise attracting investments in semiconductor manufacturing facilities.
- Invest Ontario, the IPA for the Canadian province of Ontario, leverages AI-powered predictive analytics to identify FDI opportunities in sectors such as artificial intelligence, cybersecurity and clean technology. Through collaboration with leading AI research institutions and data analytics firms, Invest Ontario's AI platform analyses a wide range of data sources, including patent filings, venture capital investments and job postings, to identify emerging industry trends and investment hotspots.
- Invest India, the national IPA of India, employs AI-driven market intelligence tools to identify FDI opportunities across various sectors of the Indian economy. By analysing data from government databases, industry reports and global investment trends, Invest India's AI platform can identify sectors with high growth potential and investment attractiveness.

**Invest in AI research and development:** G20 members should allocate resources towards AI research and development initiatives to advance scientific understanding, technological innovation, and the development of AI solutions that address pressing global challenges. For instance, investment in AI-driven healthcare technologies, such as personalised medicine and disease prediction algorithms, can improve healthcare outcomes and reduce healthcare costs. Additionally, funding AI research in areas such as climate modelling, disaster response and sustainable agriculture can help address environmental challenges and promote sustainable development. In the IPAs, advanced AI technologies can help IPAs be more targeted in outreach to investors globally, provide a more customised service to individual investors and also provide data-driven research in the investment landscape, as some examples. By investing in AI R&D, the G20 can unlock the full potential of AI to drive economic growth and address societal challenges.

- The National Institutes of Health (NIH) in the United States invests heavily in AI-driven healthcare research, funding projects that leverage AI technologies for medical imaging analysis, drug discovery and patient care optimization.
- The European Commission's Horizon 2020 program allocates significant funding towards AI research projects aimed at addressing societal challenges, such as climate change mitigation, renewable energy optimization and urban sustainability.
- The Japanese government's Society 5.0 initiative promotes investment in AI research and development to drive innovation and economic growth, with a focus on creating smart cities, autonomous transportation systems and personalised healthcare solutions.

**Promote AI education and skills development:** The G20 should prioritise investment in AI education and skills development programs to equip individuals with the knowledge, competencies, and ethical awareness needed to participate in and contribute to the AI-driven economy. This includes initiatives to integrate AI education into school curricula, provide training programs for workers to acquire AI-related skills, and support lifelong learning opportunities for professionals in AI-related fields. For example, these skills may also prove crucial for employees of Investment Promotion Authorities, wherein they could begin developing their own AI tools tailored for Investment Promotion Agencies and contextualised for their economies and aspirations. The G20 can ensure that individuals within IPAs are prepared to thrive in an AI-driven world, enable them to utilise the latest technologies for novel investment attraction practices and contribute to economic growth and innovation.

- Finland's "Elements of AI" program offers free online courses to educate citizens about AI, providing accessible learning opportunities for individuals of all backgrounds to enhance their AI literacy and understanding.
- The UK government's National Centre for Computing Education (NCCE) provides training and resources for educators to integrate AI education into school curricula, ensuring that students develop foundational AI skills from an early age.
- Google's "AI for Everyone" program offers workshops and online courses designed to demystify AI and machine learning concepts for non-technical audiences, empowering individuals to engage with AI technologies and make informed decisions.

**Address data governance challenges:** The G20 should develop comprehensive data governance frameworks that address issues related to data privacy, security, ownership, access and interoperability to facilitate responsible AI innovation and deployment. This includes enacting data protection laws, establishing data-sharing agreements and promoting data portability and interoperability standards. For example, the European Union’s Data Governance Act aims to create a framework for data sharing among businesses and governments while protecting individuals’ privacy rights. By addressing data governance challenges, the G20 can create a more conducive environment for AI development and deployment, fostering trust among stakeholders and promoting responsible data-driven innovation. Open-data policies in IPAs would also allow AI tools in development in LICs to learn from those employed in developed economies.

- Singapore’s Personal Data Protection Commission (PDPC) has implemented the Model AI Governance Framework, which provides practical guidance for organisations on the responsible use of AI and data governance practices. This framework helps companies develop AI systems that comply with data protection regulations and ethical principles (PDPC, 2020).
- The World Economic Forum’s Centre for the Fourth Industrial Revolution (C4IR) has developed the Data Policy Accelerators initiative, which aims to facilitate cross-border collaboration on data governance challenges. By bringing together policymakers, industry leaders and experts, this initiative helps identify best practices and develop policy frameworks that address data governance challenges in the context of emerging technologies such as AI (WEF, 2021).
- The OECD’s Recommendation of the Council on Artificial Intelligence provides guidelines for AI governance, emphasising the importance of transparency, accountability and human-centric AI. The recommendation encourages member countries to develop national AI strategies and regulatory frameworks that promote responsible AI development and deployment while fostering innovation and economic growth (OECD, 2019).

**Ensure fair and inclusive AI:** G20 members should take steps to mitigate bias and discrimination in AI systems by promoting fairness, transparency, and accountability in algorithmic decision-making processes. This may also include policies targeting specifically the ethical use of AI in investment promotion practices performed by IPAs globally. This includes conducting regular audits and assessments of AI systems to identify and address biases, ensuring diverse representation in AI development teams and providing transparency about the data and algorithms used in AI systems. For



example, the UK's Centre for Data Ethics and Innovation (CDEI) conducts research and provides guidance on AI ethics and fairness issues, helping to promote responsible AI development and deployment. By ensuring fair and inclusive AI, the G20 can mitigate the risks of algorithmic bias and discrimination and promote trust in AI technologies among diverse communities.

- The AI Now Institute's Algorithmic Accountability Policy Toolkit offers policymakers a comprehensive set of tools and resources for assessing and mitigating the societal impacts of AI technologies. The toolkit includes guidelines for auditing AI systems, evaluating algorithmic bias, and promoting fairness and accountability in AI deployment (AI Now Institute, 2020).
- The UK's Centre for Data Ethics and Innovation (CDEI) has published reports and guidance on addressing bias and discrimination in AI systems. For example, their report on bias in algorithmic decision-making provides recommendations for organisations to mitigate bias and promote fairness in AI systems, such as conducting regular audits and assessments (CDEI, 2019).
- The Algorithmic Justice League, founded by Joy Buolamwini, advocates for fairness and accountability in AI systems. Through research, advocacy and public engagement, the organisation raises awareness about algorithmic bias and discrimination and works to promote inclusive and equitable AI technologies (Algorithmic Justice League, n.d.).

## **Conclusion:**

As we envision the future of investment promotion in G20 countries, it becomes increasingly apparent that artificial intelligence (AI) will serve as a cornerstone in revolutionising and enhancing these endeavours. AI's transformative potential lies in its capacity to optimise processes, unearth insights from vast datasets and enable predictive modelling, ultimately fostering economic growth and sustainability. By harnessing AI-driven technologies, G20 nations can unlock new avenues for attracting foreign direct investment (FDI), enhancing decision-making processes and driving innovation across various sectors. This comprehensive integration of AI holds the promise of reshaping investment promotion strategies, amplifying outreach efforts, and ensuring a more investor-centric environment.

One of the pivotal ways AI will redefine investment promotion lies in its ability to revolutionise data analytics and predictive modelling. AI algorithms, powered by

machine learning and data analytics, can sift through massive datasets to discern investment trends, predict market shifts and assess the potential impact of investment decisions (Chen et al., 2018). Through sophisticated data analysis, AI can help IPAs identify emerging sectors ripe for investment, target specific investor demographics and tailor marketing strategies accordingly. By leveraging AI-driven insights, IPAs can make data-informed decisions, allocate resources efficiently and attract high-impact investments that catalyse economic growth (Nguyen & Zheng, 2019).

Furthermore, AI will fundamentally transform the way IPAs engage with investors and provide support throughout the investment lifecycle. Virtual assistants powered by AI can offer personalised assistance to investors, answering inquiries, providing information and guiding them through regulatory procedures (Biswas et al., 2020). These AI-driven assistants can operate round-the-clock, ensuring that investors receive timely support regardless of geographical constraints. Moreover, AI chatbots can automate routine tasks such as form filling and document processing, streamlining administrative processes and expediting investment facilitation (Rachmadi & Kim, 2020).

AI can enhance IPA operations through process automation and optimization. Technologies like robotic process automation (RPA) can automate repetitive tasks, streamline workflows and reduce the time and resources required for administrative functions (Lacity et al., 2020). By automating manual processes, AI empowers IPAs to focus on strategic initiatives such as relationship-building and investment facilitation. Additionally, AI-driven predictive analytics can assist IPAs in assessing investment risks, forecasting market trends, and developing targeted marketing campaigns, thereby enhancing their effectiveness in attracting investments (Kusiak, 2017).

In addition to operational efficiency, AI enables IPAs to gain deeper insights into investor preferences and behaviour, facilitating targeted outreach efforts and personalised communication strategies. By analysing data from diverse sources, including social media, web browsing behaviour and demographic information, AI algorithms can identify patterns and trends in investor decision-making processes (Chen et al., 2020). This granular understanding allows IPAs to tailor their marketing campaigns, investment packages, and communication strategies to resonate with investors and address their specific needs and concerns.

AI-driven technologies enable IPAs to measure and evaluate the impact of their investment promotion efforts more comprehensively. By analysing data on investment flows, job creation and economic growth, AI algorithms can assess the effectiveness of different promotion strategies and initiatives (Alhashmi et al., 2020). This data-driven

approach empowers IPAs to make evidence-based decisions, demonstrate their impact to stakeholders, and refine their investment promotion strategies iteratively.

In conclusion, AI represents a transformative force in the realm of investment promotion in G20 countries. By harnessing AI-driven technologies, IPAs can optimise processes, gain deeper insights and enhance their effectiveness in attracting investments. From data analytics and predictive modelling to virtual assistants and process automation, AI offers a myriad of tools and capabilities that can reshape the investment promotion landscape. As AI continues to evolve and mature, G20 nations must seize the opportunity to embrace these technologies and leverage them to create a more efficient, effective, and sustainable investment promotion ecosystem.

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