



## THE GOOD, THE BAD, AND THE AI:

# A REVIEW INTO THE NECESSARY IMPROVEMENTS TO SAUDI ARABIA'S LEGISLATION FOR TRANSITION FROM OIL DEPENDENCE TOWARD ARTIFICIAL INTELLIGENCE WITHIN 'VISION 2030'

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**Abstract:** Research on Artificial Intelligence (AI) in the Middle East is rapidly growing, as is literature on the topic that keeps pace with government's applications of this technology. Saudi Arabia's *Vision 2030*, a state and economy transformation plan that places AI at the centre, is one example of this.

This paper will investigate whether Saudi Arabia's existing legal and policy framework is an appropriate backdrop for seamless transition away from oil dependence to AI, as intended through Vision 2030, by considering Saudi Arabia's *Personal Data Protection Law*, and the *Intellectual Property Law*. It will conclude with recommendations of legislation following insights gathered throughout the investigation, particularly around the ease of unfiltered training data access (needed to create generative AI software), and the issue of unethical application of such AI software.

It will argue that while Vision 2030 and its incorporation of AI is good for economic diversification, it is the risk of unlegislated AI practices that jeopardize the state's efforts such efforts, as Saudi Arabia's existing laws are currently inadequate to support a supposed AI-based economy. Unlegislated AI practices have the potential to foster distrust of the state, as unlegislated AI is the main cause for concern.

**Keywords:** Saudi Arabia, artificial intelligence ("AI"), policymaking, Vision 2030, data protection, intellectual property.

### Introduction

The study of AI is imperative, as it has the potential to revolutionize many aspects of civil society. Saudi Arabia is not the only country to utilize AI for state modernisation in the region, and will not be the last, and may even provide a framework for other oil-based economies looking to diversify. Specifically, studying AI within Saudi's Vision 2030 will contribute significantly to the field, as it is an area that remains underexplored, and requires further research as Vision 2030 continues to develop and evolve.

The research paper would fill many gaps and contribute to the existing literature on the topic of AI legislation in Saudi Arabia's Vision 2030. As the research topic is quite recent (with the transformative Vision 2030 plan constantly under development), it means that the literature on the topic is limited. For this reason, the investigation question will be able to fill gaps and answer considerably important questions that may contribute

significantly to discussions around the landscape of AI not just in Saudi Arabia, but the region.

Furthermore, a considerable part of the existing literature focuses on diagnosing the problems, without offering tangible solutions. The final part of the paper will delve into two existing pieces of AI-related legislation, and explore the potential for improvements – a topic only touched upon briefly by existing literature. In this way, not only will the paper fill a lot of the gaps existing in the literature field, but it will also offer practical solutions based on the conclusions arrived at. This investigation intends to be a direct contribution to the constantly evolving and highly important field of AI legislation.

### **Saudi Arabia, AI, and its need for regulation**

AI, or *Artificial Intelligence*, is the field of scientific engineering that aims to create intelligent computer programs related to human intelligence and has evolved to become an integral part of modern 21st-century technology (Ibm.com, 2024). AI has become increasingly accessible due to advancements in computing technology and has permeated all sectors, including in banking, healthcare, and private businesses. AI encompasses sub-fields such as machine learning, frequently mentioned in conjunction with AI, which refers specifically to the development of algorithms to learn over time to output the best responses, using vast quantities of input or “training” data (Ibid). AI models learn from data, which tend to reflect human biases. Thus, it is important to note that despite holding immense potential, bias can creep into algorithms; generative AI technologies should be approached with caution, and with a consideration of the associated (albeit unintended) unethical risks.

The Middle East can either join the AI revolution, or risk being left behind. AI applications could help oil states like Saudi Arabia break away from economic dependency on finite oil. In terms of the potential economic impact for the region, failing to utilise this technology is not an option. According to PwC, AI application in the Middle East is a source of excitement. The article notes that Saudi Arabia is expected to gain the most, with AI expected to contribute over \$135 billion in 2030 to the economy, equivalent to 12.4% of GDP (2018).

Saudi Arabia’s ‘*Vision 2030*’ is a widespread plan to diversify the Saudi Kingdom’s economy, through modernising the state and reducing its dependence on oil. According to the Saudi government, a key enabler of the plan is the utilization of technology and AI (Middle East Political and Economical Institute, 2023). It is anticipated that Vision 2030 will transform the Saudi economic model by transforming the private enterprise into the primary driver of growth. Strategic goals called ‘*Vision Realization Programs*’ have been established to facilitate this cross-sector transformation: these goals range from modernisation initiatives covering improvements to quality of life, infrastructure, and education, to direct fiscal developments intended to boost the non-oil sector. An illustration of this application of AI is in the planning and development of the new Saudi city and economic area, *Neom*, which as planned hopes to “*integrate AI into all aspects of citizen life*” (Hassan, 2020).

The current biggest concern with AI is its lack of effective regulation, which in turn would protect citizens' rights against unethical application – without which erodes trust in the Saudi regime and political system.

Much of the data that exists for AI training is rife with biases, which perpetuate and amplify inequalities within society (Rizk, 2020). Such biases have already started to materialise in search engine results. ‘*Dear AI*’, a Saudi campaign to address gender bias and inequalities in AI technologies, has begun to work on tackling the issue of biased AI training data. Their recent report revealed that only 1% of prompts from a popular AI imaging software including keywords such as “*entrepreneur*”, “*inventor*,” and “*software engineer*” depicted women. When women in Saudi Arabia account for 20% of computer scientists and 45% of entrepreneurs, this shows that biases in neural networks are a huge problem that can only worsen (Fast Company Middle East, 2023). Biased data does not just operate on gender lines, it can further perpetuate harmful stereotypes around class and race, and other marginalised factors (Rizk, 2020).

While problems revolving around unethical AI are global, it becomes more prominent in the Middle East due to its “*weak institutions and nascent legislative machinery*” (Ibid). Thus, without proper regulation, software engines can turn into an echo chamber that serves to amplify prejudices that exist in society. There can only be

so many data-related campaigns such as 'Dear AI' that aim to highlight the biases in AI software data before legislation can be introduced to better regulate it. Such absence of protective legislation may cultivate frustration and distrust of the Saudi state and undermine the efforts of Vision 2030, particularly as the biases amplified in the data reflect existing biases in modern society. In a state with an already arguably dubious human rights record, the realities of unlegislated AI practices and data usage could create more cause for concern.

However, it is not enough that AI-related legal frameworks simply exist. They must be effectively regulated if Saudi Arabia truly hopes to become a global AI/tech hub as per Vision 2030 ideals.

In the Middle East, and particularly Saudi Arabia, acquiring data for AI is challenging due to a lack of frameworks supporting easy access to this data (Ibid). Developing AI technology requires large data sets, and accessing these sets is limited by those who can afford to purchase them from data/research institutions. What data does exist, can often be impacted by the asymmetries that exist in its ownership. In other words, data in the region is often found to be “politicized, filtered, incomplete or censored” (Ibid).

This is supported by the Open Data Barometer, which analyses global trends in data openness. According to the analysis, Saudi data is seldom open for viewing, rarely up to date, with methodology rarely published (Open Data Barometer, 2018). Out of thirty countries assessed, Saudi Arabia ranks poorly at 25% in terms of the overall prevalence of open data (Ibid).

Open data is typically the first step to creating AI technology. Currently, there are roadblocks to acquiring Saudi data faced by the AI sector – ranging from the affordability to the actual range of (unfiltered) data available. Creating legislation that protects and encourages free and fair data usage is one step toward a successful AI sector. Thus, it is clear to see that amendments to the openness of Saudi data must be made, for the Saudi AI sector to fully prosper under Vision 2030 plans.

The biggest and most overarching issue is that a lack of legislative frameworks revolving around ease of data access and unethical data jeopardises any progress that Saudi Arabia can hope to make, particularly within the context of AI and Vision 2030. Lack of effective regulation can cause frustrations not just with Saudi AI entrepreneurs who have difficulty acquiring unfiltered data, but with marginalised citizens who see the inequalities they face in society amplified by unregulated AI software, itself built using poor AI training data.

Unlike previous transformation plans, Vision 2030 is intricately linked to the Crown Prince, involving both his money and legacy. Since the Vision 2030 transformation plan is underpinned by a state-sponsored push toward technology development, critique directly applied to the Saudi government for failing to ensure legislation matches the pace of AI development could be more prevalent. Considering the plan’s focus on shifting the Saudi economic model from oil to AI, a failed transformation plan could prove detrimental to the sustainability of the Saudi regime (Kinninmont, 2017).

### **Saudi Arabia’s existing AI-related legislation, and critique**

Although AI-related technologies are a recent phenomenon, accompanying regulatory legislation is even more recent. The most notable is the General Data Protection Regulation (GDPR), put forward by the European Union in 2018, which details the way organisations and companies can use personal data (Wolford, 2018). As AI technologies often rely on large data sets for output, regulation in reference to data usage is incredibly important. It ensures that AI developers adhere to regulatory principles and that an individual’s privacy and data are handled by companies correctly, and if not, are met with appropriate legal consequences. It is important to note that the GDPR is not without any flaws – it has been critiqued in relation to ambiguity and implementation (Heine, 2021). Currently, the European Union is drafting the EU AI Act 2025, which is set to become the most far-reaching AI legislation to date (Feingold, 2023).

Despite most countries having general protection laws like the GDPR that could apply to AI application (intellectual property, data protection, consumer regulation, cybersecurity), it is often hard to find legislation globally – let alone in the Middle East – that *explicitly* covers AI. This includes regulations that protect against unethical use that perpetuates inequality or hold developers accountable for misuse of AI technologies. Currently, the most similar GDPR-style legislation across the Middle East region is the League of Arab States’ 2010 Convention on Combating Information Technology Offences (CCITO) (League of Arab States, 2010). According

to Rizk (2020), the convention offers only an “overview of general provisions on privacy and data protection”, but does not provide “explicit stipulations on legal protection and regulation of data and privacy (Ibid). Furthermore, it is not a timely legal support for the realities of modern-day AI – the technology has developed rapidly since 2010. Clearly, there is a need for the region to catch up and create an updated region-wide framework.

Thanks to a growing awareness of the legal realities of AI as well as the technicalities of the technology, there has been an emphasis on developing an appropriate legal landscape for the ethical integration of AI into society (Murray, Gaugeler and Batarfi, 2023). This is especially important in the context of Vision 2030, which as discussed, has intended to rely heavily on AI to achieve its goals.

More recent legislation within the scope of Vision 2030 is the Saudi Data and Artificial Intelligence Authority (SDAIA)’s Personal Data Protection Law (PDPL), which is Saudi Arabia’s most comprehensive data protection law, having become effective in March 2023 (Sultan, 2023). As mentioned, personal data law is incredibly important in the context of AI technology legislation; AI developers who use data must adhere to ensuring that an individual’s personal data is handled correctly and lawfully.

The most important advantage of the PDPL is its conciseness; it bears many similarities to the GDPR, which is a huge positive as the latter is the most concise of its kind. Overall, it is relevant to AI because it aligns with international standards on data privacy (Ibid). However, it is still not as all-encompassing in terms of data as the GDPR. For example, the PDPL does not explicitly reference anonymous or children’s data. Also unlike the GDPR, it does not provide the right to object to the processing of personal data, and the language used is often ambiguous (Ibid).

Linked to data, is intellectual property. With connections to the SDAIA, the drafted new Intellectual Property Law (IPL) is one of the first of its kind in the Middle East to include and refer to intellectual property created by AI (Murray, Gaugeler and Batarfi, 2023). Protections of intellectual property are important in the context of appropriately regulating AI, as they ensure intellectual property of an individual is protected against unauthorised use for training or creating outputs (in the same way personal data may be used).

The draft IPL works in conjunction with the SDAIA, as it seeks to support Saudi Arabia’s vision of integrating AI within Vision 2030. It states that AI-generated intellectual property that can be attributed to the original creator will be considered their own intellectual property under the law. Yet despite this, creation “devoid of significant human contribution” will not be protectable – therefore cannot be owned by anyone (Ibid).

However, what exactly qualifies as “significant” is left to interpretation, and thus is the biggest issue with the IPL. If the law is left to interpretation due to its ambiguity, its effectiveness can be disputed. The outcomes can depend on the discretion of the parties involved, which may result in the eroding of trust in the Saudi legal system. At a time when the pace of AI technologies vastly outruns the legal system’s ability to catch up, the new IPL does not help to close this gap.

### **AI legislation suggestions, and final considerations**

AI policymaking itself has unique challenges that must be addressed prior to drafting legislation. Primarily, the challenge of ensuring that new policy suggestions complement existing legislative frameworks, while also accommodating the constantly changing AI sphere.

This could require reviewing and identifying where existing legislation could already be compatible with new (AI) challenges, and where new legislation is necessary. For example, while the PDPL and IPL offer good foundations for AI legislation, there is still a need for stronger AI regulation, especially considering the serious integration of AI within Vision 2030 plans. The PDPL must consider protections for anonymous or children’s data, to better align the legislation to GDPR standards.

Furthermore, the IPL should consider eliminating ambiguity: the current legislation refers to protections of intellectual property containing “‘significant’ human contribution” (Ibid). A more concise guideline, perhaps providing criteria into what is meant by ‘significance’, may help with ambiguity concerns.

For the review to succeed, it would require legislators to be familiar with AI and its technicalities, to ensure that legislation is thorough. Engaging with Saudi academics, legal advisors, and even computer scientists to regularly review legislation would ensure that it is flexible enough to accommodate changes in the technology sphere.

In terms of new legislation, Saudi Arabia must get ahead of the AI curve by introducing *stronger* frameworks than what currently exists.

Legislation should be introduced to ensure that training data used in AI models are subject to regulation. Currently, there are no legislative standards in Saudi Arabia pertaining to the quality of data used in AI systems. As a recommendation, data used in AI software should be subject to quality regulation – achievable through regular review, validating the methodology, and ensuring datasets are transparent and diverse enough to be representative of society. Saudi Arabia may look toward the EU’s AI Act 2025 for guidelines on training data regulation.

Furthermore, requiring people to constantly oversee data outcomes is vital, to ensure that the outcome of any potentially poor-quality data does not produce unintended consequences in its real-world application, such as perpetuating biases. Taking such steps would be a conscious effort in reducing bias in AI data, and ensuring that legislation matches the pace of AI innovations.

In the future, Saudi Arabia may want to consider aligning legislation regionally, and within wider international standards.

Harmonising law across the region would ensure cross-border data transfer is seamless, much like EU law. It would ensure the region has strong and effective data legislation, instead of isolated country-by-country policies, particularly in terms of legislation enforcement. Harmonising AI legislation regionally could also strengthen the Middle East’s economy, attracting both domestic and international tech businesses to the region. Considering the general economic limitations of the typical oil state, the potential for new revenue streams (particularly for the Gulf countries) is substantial.

EU laws pertaining to AI, namely the GDPR and the drafted AI Act, are robust benchmarks for Saudi Arabia to steer future legislation toward. Likewise, Saudi Arabia should be aware of developments within the sphere of global AI legislation, and ensure the country does not delay any opportunity to ensure harmful outcomes of AI are minimised.

## **Concluding thoughts**

Saudi Arabia stands at a unique point in Middle Eastern history. It is at the cusp of fully embracing technological advancement, clinging onto oil revenue to maintain its oil-based economic status for as long as physically possible. Initiatives such as Vision 2030, which has a focus on AI and technology, are underway, all with the purpose of diversifying the economy away from oil.

As much as it would do for economic diversification, AI carries many ethical implications, namely around the quality and access of data, and subsequent application of the technology. Issues relating to data protection and intellectual law can also arise from poor AI legislation. Overall, a lack of effective legislation to protect citizens’ rights against potential unethical AI application can diminish trust in the Saudi regime and political system.

As AI is developing at a rapid pace, protective legislation should be also, however, this is seldom the case anywhere in the world. It is the lack of robust AI legislation that greatly jeopardizes the state’s efforts of economic diversification within Vision 2030, holding the potential to foster distrust of the state and frustrations with the Saudi political system.

In conclusion, it is clear to see that Saudi Arabia’s incorporation of Artificial Intelligence in its Vision 2030 plan holds potential of diversifying the oil-based economy away from oil reliance, provided that the Saudi state invests in the necessary protective AI legislation to support it. The next ten years will be critical to the sustainability of the Saudi state.

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