



## Intelligent Machines And Digital Transformation As Applied To Business: Viewpoints Legal Requirements, And Financial Impacts

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### Abstract

Significant advances in technology innovation have enabled the conversion of numerous labour-intensive tasks and procedures that had been in existence for decades, when people were far beyond the limitations of their physiological capacities, stretching back to the industrial revolutions. Numerous advantages linked with cloud computing advantage Digital India. The immediate accessibility of scaled and elastic computing resources makes it easier to collaborate, empower women, and express creativity. Data security is enhanced and facilities administration costs are reduced with cloud computing. Considering recent advances in algorithm neural networks and automated making decisions, the velocity of development in this new era of artificial intelligence technology is astounding and presents new avenues for continued creativity. Artificial Intelligence (AI) has an opportunity to significantly impact a wide range of commercial sectors, include banking, medical care, manufacturing, retail, transportation, supply chain administration, and utilities. Cognitive techniques are being used to create advanced mathematical models that imitate behavioural habits and cognitive processes. These models help businesses increase revenue and consumer engagement, streamline operations, improve services, and, in general, generate new and relevant knowledge based on data. These methods of decision-making are based on insights related to character development, forecasting, and regulation. This necessitates the creation of a legislative framework that rules all digital transformations continually beyond national borders and allows for a proper, effectively controlled digital shift process. However, it is critical that the regulatory system does not stifle this digital revolution. This project will demonstrate how Artificial Intelligence (AI) and technological change will spread throughout various industries and be used everywhere as a result. However, in keeping with the recent developments, this phase of the implementation will have to be executed under standardised regulations.

**Keywords:** AI Technologies, Legal Framework, Services, Digital Transformation, Common Regulations, Cognitive Approaches, Cloud Computing, Physical Capacity, Industrial Revolution, Computing Resources, Human Behaviour, Advanced Analytical Models.

### 1. INTRODUCTION

#### 1.1 The Legal Industries Digital Transformation: Enhancing Legal Organizations

The new coronavirus known as COVID-19 is having an effect on a number of sectors including journeys, medical treatment, financial security, and political stability in countries all over the world. Limitations on movement have also had an impact on the legal sector, underscoring the importance of the sector's digital transformation.

Organizations who had previously made investments in technological solutions and communication tools during the previous few years found it easier to make the shift to the digital world. But when it comes to adopting new technologies, the legal sector usually lags behind general business. We think that after the immediate outbreak of the pandemic passes, life will be much altered. In his New York Times Op-ed, Tom Friedman claims that the coronavirus will create a new historical division known as Before-Corona (BC) and After-Corona (AC).

The question then becomes: How will COVID-19 affect the legal sector and what will it look like after COVID19? The coronavirus will cause the legal industry to undergo a digital transition, is the response.

#### • Transformation in Culture

The legal industry's digital transformation has been moving in the direction of broad technological adoption. The way legal activities are carried out will alter as legal culture changes.

Legal firms, for instance, are implementing document automation technologies these days in order to optimize important procedures like document redaction, reviewing documents, and form data collection. This is but one instance of the various spheres inside legal culture where digital change might occur in law firms.

#### • Cooperation and Interaction

Legal firms are also using technologies to facilitate effective communication and working remotely as a result of movement constraints. It is anticipated that more remote employment opportunities would become available to legal

firms. Legal companies are looking to incorporate technological advances and best practices that permit communications anytime and anywhere since clients want instantaneous and personalised digitally adept service.

- **Consolidation of Assistance**

According to The Balance, continuous changes to the Federal Rules of Civil Procedure are transforming the way that electronically stored information (ESI), such as emails, texts, handheld devices, and mixed media, is used in court cases. It includes all of the information required for effective casework.

Technology solutions that streamline casework efforts, enhance eDiscovery procedures, facilitate efficient access control, and make it easier to find what you're looking for are essential for law firms. Technology can make managing caseloads easier.

## **1.2 Artificial Intelligence (AI)**

The concept of artificial intelligence, or AI, has been present in public conversation for many years. It is frequently portrayed in films about science fiction or arguments about how clever computers would take over the world and reduce humans to menial labourers in order to uphold the new AI order. Although this image presents machine learning in a somewhat caricatured manner, the truth is that artificial intelligence has already arrived in the current day, and many of us use technology on a daily basis. Artificial Intelligence (AI) technology is no longer only for futurists; rather, it has grown to be an essential component of many organisations' business strategies and a key strategic component in plans for several enterprises, governments, and the medical industry worldwide.

## **1.3 Financial Technologies**

Although there is no one definition for the term "fintech," it is most commonly used to refer to financial technologies that are made possible by technology and have applications in the areas of asset management, insurance, financing, lending, transactions and money transfers, and borrowing. Fintech refers to a variety of activities, including payments made with mobile apps, payments made with cryptocurrency, peer-to-peer financing and insurance, crowd funding via websites like Kickstarter, loan and insurance comparisons, and automated advice for asset management and investing. In developed countries, fintech is generally seen as a private-sector phenomenon involving transactions between individuals and businesses. If I somehow happened to depict monetary innovation in India utilizing a similar technique, I would be feeling the loss of a critical piece of the job the innovation has played in changing the country's instalment framework. This is especially obvious while considering the area of the economy where monetary innovation and improvement and incorporation meet. Thusly, I will take on a more far reaching point of view of monetary innovation in India by looking at it from two points.

## **1.4 Financial Protection: An Overview of OECD Legal Regulation**

The Organization for Economic Cooperation and Development (OECD) advocates policies that aim to raise living standards in the member nations and achieve the highest possible rates of job creation and economic expansion, all the while preserving financial stability and advancing the global economy. The degree of financial insecurity is a significant factor in determining an individual's well-being, and its mitigation is now costly in every OECD nation. For these explanations, OECD countries dedicate funding and other measures to reduce economic insecurity, particularly in circumstances of unemployment, illness, being widowed, and old age. The 1995 suggestion on enhancing the quality of government rule was the first of the OECD's worldwide guidelines on regulatory quality. Regulatory review, reporting on regulatory policies and the execution of changes, and the assessment, upkeep, and application of regulatory processes and targets are among the recommendations made by the OECD. Moreover, regulatory coherence is encouraged to prevent conflict or duplication.

Evaluating the effect of legal regulation on money security is necessary in order to address the issues surrounding financial insecurity. This study aims to investigate how legal regulations affect financial stability. After analysing the notion of financial security, the goal of this study is to evaluate the effect of legal regulation on financial security.

The following tasks are undertaken by this article in order to accomplish its goal:

- To analyse the theoretical aspects of the financial security.
- To highlight the OECD's financial security legislative regulation's specifics.
- To create models for evaluating financial security and determining how legal regulations affect financial security.
- To evaluate how legal regulations affect the financial security of OECD nations.

To begin addressing these tasks, this article examines the idea of financial stability. Then, it becomes clear how specific the OECD's financial security regulations are. Lastly, an evaluation is conducted on how legal regulations affect financial security in OECD nations.

## **1.5 The Public Law Branch of Financial Law**

In the majority of instances, the comprehension of financial law's publicity is inextricably linked to the branch's topic of discussion as a collection of relationships pertaining to funds that are financial (funds of funds). However, the law of finance has been given more and more of a sophisticated branch of law status in recent years, suggesting the use of both public and private law to regulate financial connections.

Therefore, primarily because of the nature of the topic at hand, financial law is categorized as public law. Publicity can be linked to the law since it primarily deals with the creation, distribution, and use of public monies. Nonetheless, the employment of private legal mechanisms to impact financial transactions is becoming more common due to inconsistencies between the subject and methods of regulation. When this occurs, it becomes necessary to look for novel traits that indicate that financial law has public. The studies that are now available are obviously concentrated on the same set of characteristics linked to legal and financial relationships. A few of them are out of date.

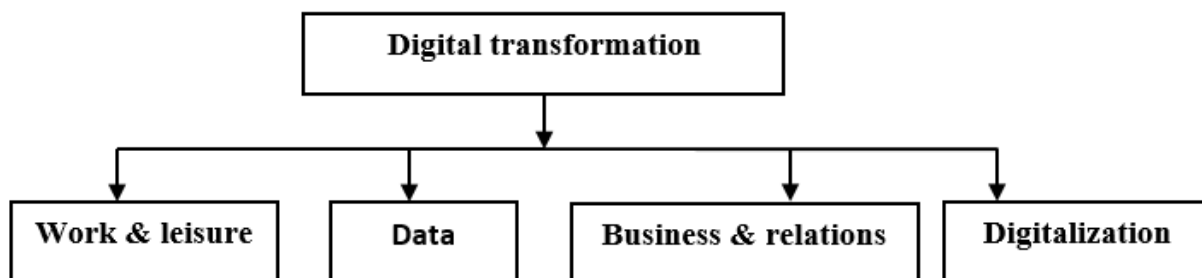
In both European and American scholarship, there is a definite trend that banking law, tax law, and budget law are seen as distinct systems with distinct subjects and techniques. It follows that their study outside of the financial law domain is not surprising. It's important to remember the unique aspects of the state's financial relationships, though. These are the connections that the financial legal system should view as essential.

**1.6 Legislation**

"Any regulation that is related to the digital world must be a stable process," as noted by Catellote himself. It must be a facilitator rather than an impediment to development, with assurances that the actions taken would benefit the industry, the international market, and local agreements with every EU nation. Thus, we are able to apply it to Spain and show that, in terms of digital transformation, various strategies and regulations—as well as the associated legal aspects—apply to different industries:

- Laws 39 and 40/2015, which address the digital transformation of the State's public entities and general administration.
- Organic law ensuring digital rights and safeguarding personal information.
- Law 7/2020, which aims to digitally revolutionise the banking system.
- Make plans for public organisations to go digitised.
- Spain's Digital Plan 2025.

AI will change business strategies and operational models; one of the first effects of its use will be a notable increase in productivity models. Estimates suggest that the commercial use of AI solutions to industry may account for 45% of predicted economic gains by 2030. The impact of the shift to digital technology on the business ecosystem is depicted in Figure 1.



**Fig. 1** Organisation digital transformation process. **Source:** *Own embellishment.*

Every one of these offers a fantastic chance to both enhance and monetarily profit from the consumer encounter with businesses. As such, the Intelligent Experience Industry is about to enter a new phase. The company benefited from this experience on a worldwide scale by communicating electronically with all of its partners in the digital company environment. The following Table 1 shows this global dimension.

**Table 1** Model of Digital Company. **Source:** *Own embellishment.*

<b>Business Models</b>		
Digital Enhancements		
Extension for Information-based Organisations		
Multi-Platform Corporations		
<b>Customer Experience</b>	<b>Operations</b>	<b>Employee Exp.</b>
Designing Experiences	Automation of core processes	Augmentation
Information regarding Customers	Integrated and Flexible Function	Future-Readying
Emotional Engagement	Data-Informed Jud mentation	Flex forcing
<b>Digital Platforms</b>		
Core		
Externally Facing		
Data		

However, interest in AI has resurfaced in the 21st century—this time, backed above all by corporations and investors as well as scholars. At this point, it is clear that Artificial Intelligence (AI) is not just one of the technological advancements that can learn for itself, but also a crucial part of the digital evolution and the so-called 4th revolution in technology. These

breakthroughs are credited to new developments in data processing, the readily accessibility of far greater power devices, and advances in Artificial Intelligence (AI). Figure 2 lists the several applications for artificial intelligence.

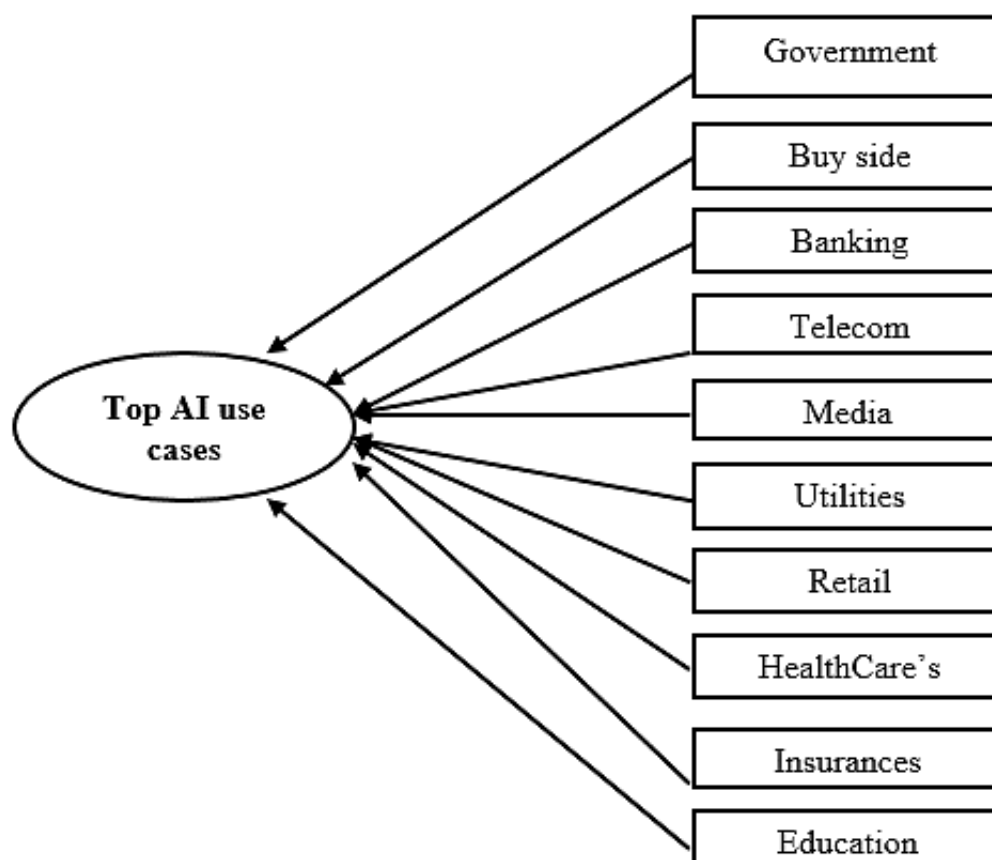


Fig. 2 Outstanding AI use cases. Source: Own embellishment.

## 2. LITERATURE REVIEW

(Ciuriak, D., 2018) New company structures and the facilitation of long-standing trade and business practices have both been made possible by the evolution of technology. All forms of trade are experiencing digital disruption: digital and physical versions of goods and services compete with one another, as do online distribution and facilitation operations and traditional distribution models for businesses. Regulations pertaining to net neutrality, online market accessibility, localization of data and freedom of cross-border data flows, confidentiality, and competitive circumstances are only a few of the challenges being brought up as the rise of digital technology alters commercial practices worldwide.

(Pousttchi, K., 2019) The foundation of technological change is the deployment of digital technologies and methodologies, which have both direct and indirect effects on new goods and services as well as organisational and monetary circumstances. Three models can be used to differentiate its impact: the value creation model, the value proposition model, and the customer engagement model. The study offers a general framework for investigating possible causal links between the use of computer technologies and their effects on an organisation in all three dimensions.

(Basu, A., 2023) Small and Medium-Sized Businesses (SMEs) have played a major role in India's output and employment growth over the previous fifty years, and they are now a vital part of the country's infrastructure for manufacturing and services. According to studies, SMEs' productivity, profitability, and growth can all be enhanced by Digitalization, digitalization, and Digital Transformation (DDT). This study looks at the level of DDT usage among a sample of Indian SMEs that are listed and how it affects their expansion. This study estimates the amount of DDT using a text-mining technique as opposed to standard ways of questioning SMEs.

(Werth, O., 2020) Nearly every aspect of society is impacted by digital transformation, which has implications for established businesses. We investigate the driving forces behind the financial services industry's digital revolution through qualitative research. Porter's Five Forces and a PEST-model serve as the foundational framework that guides our analysis. Our study and interviews indicate that the financial services sector is facing comparable challenges today, with the banking sector presumably more affected than the insurance sector in terms of social dynamics and customer bargaining power.

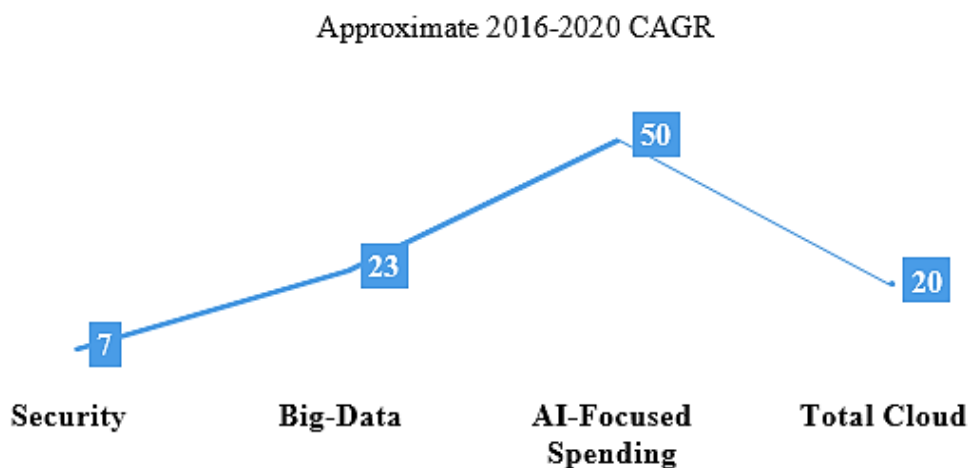
## 3. MATERIALS AND METHOD

The aforementioned AI methodologies identify many fields of study and algorithmic models for learning. All of them, though, share the usage of cognitive technologies, which open the door to a radical shift in how humans communicate

with robots. We might think of AI systems' "senses" as being similar to human beings' five major sense (sight, hearing, smell, taste, and touch), which allow them to perceive, hear, retain information, evaluate and act.

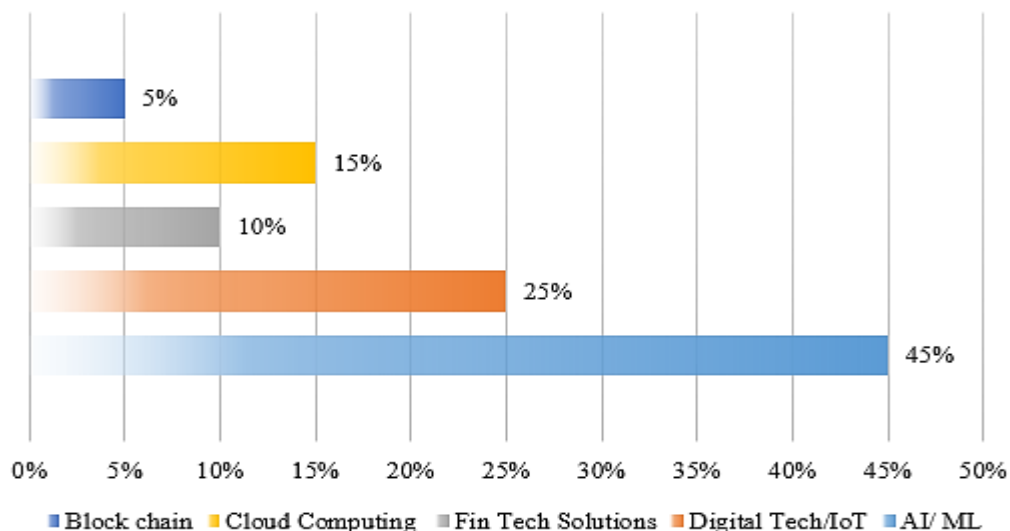
**3.1 Analyse and Act**

The capacity of AI-based models and apps to convert unprocessed data into useful knowledge is one of its primary characteristics. This is among the motives behind businesses implementing AI-based solutions to streamline decision-making processes. Thus, AI solutions handle predictive and prescriptive features in addition to the describing and diagnostic roles fulfilled by conventional analytical instruments. That is, they offer a course of action in addition to explaining what has occurred and making predictions about what might occur. Furthermore, these solutions can be implemented through the development of cloud or hybrid approaches as well as internal on premise capabilities. According to estimates from research firm Gartner, the overall market for data science platforms is expected to increase at a 15% Compound Annual Growth Rate (CAGR) from \$2 billion in 2016 to \$5 billion in 2021. The development potential of several AI-related technologies is displayed in Figure 3.



**Fig. 3** Growth of the AI market in comparison to other rapidly expanding technology areas. **Source:** *Own embellishment.*

Figure 4 shows how machine learning will rank among the most popular technologies for the ensuing ten years (2020–2030).



**Fig. 4** 2020–2030: The technologies that will have the biggest impact. **Source:** *Own embellishment.*

**4. RESULT**

The goal of this part is to draw attention to the findings of the study of literature with regard to the significance of artificial intelligence and digital transformation for business.

Without a question, intelligent technology has become a reality in both the business world and people's everyday lives. Internationally authorities—including the EU, which has previously been mentioned—are being forced to confront the associated legal difficulties as a result of the challenge's global reach. This fact makes it possible to have a realistic conversation about the problems that arise and the areas that might need global legal regulation in order to support the development of global and organised alternatives, as traditional means of regulating are not totally relevant in all cases.

The amount of commercial activity that artificial intelligence will and now produces makes this regulatory requirement even more imperative. The scale of this global phenomena into terms of numbers, management consultant McKinsey forecasts that the growing rate of digitalization might result in two more trillions euros in turnover for enterprises in Europe over the next 10 years. According to the same estimation, this influence will affect 1.8% of Spain's GDP overall by 2023. Figure 5 illustrates the growth in Spanish sales through e-commerce.

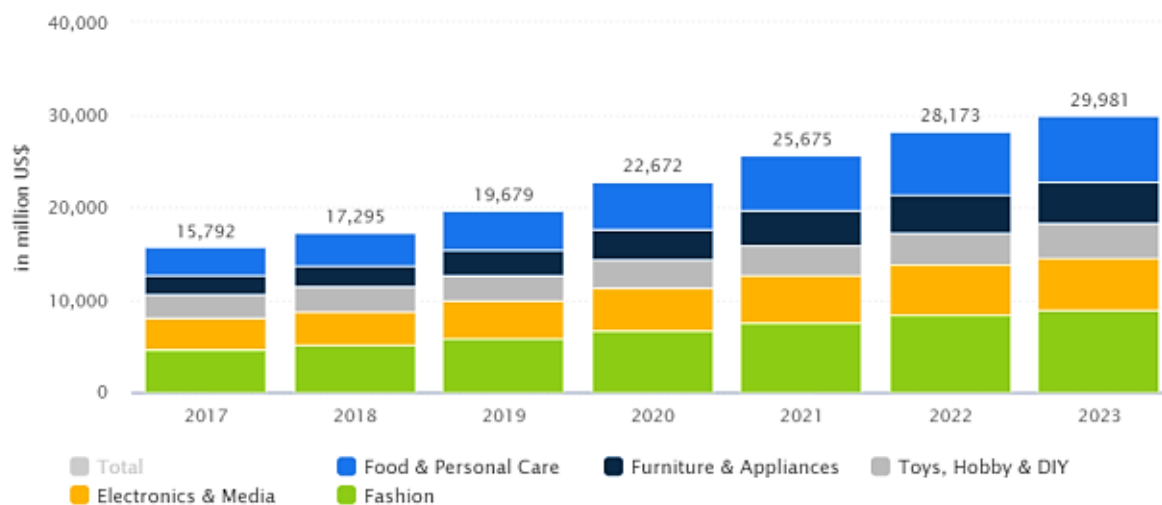


Fig. 5 Spain's online sales will rise in 2020. Source: Own embellishment.

The importance of the upcoming digitization is evident in the Spanish Digital Agenda, which includes the unalienable goal of SMEs capturing 25% of the growth in internet-based businesses by 2023 (they presently only account for 10%). For a more precise evaluation of the impact of digital transitions, two organisational elements are involved:

- An effect that was external to the company. From this perspective, the customer experience has improved, and the customer-company relationship has changed throughout, starting with the initial business transaction and ending with the actual post-sale service.
- An impact that dealt with the company's internal affairs. The way that organisations are structured and run is directly impacted by this effect. All organisations now have a new dimension as a result of the effects on financial goals, new labour and leadership connections, and hierarchical structures. One important feature of this new dimension is that it's a must rather than a choice. Stated differently, it will be exceedingly difficult for organisations that are unable to adjust to this new climate for survival.

Investment and the value of a company's shares are subject to risk due to the ongoing decline in their profitability. The use of AI has been recognised as a new producing element that helps mitigate this risk, with potential to enhance profitability rates by an average of 38 percentage points. This implies that the gross value added (GVA) of the economy will have increased by \$14 trillion by 2035. Several sectors could be most affected (Figure 6, below USD 300B):

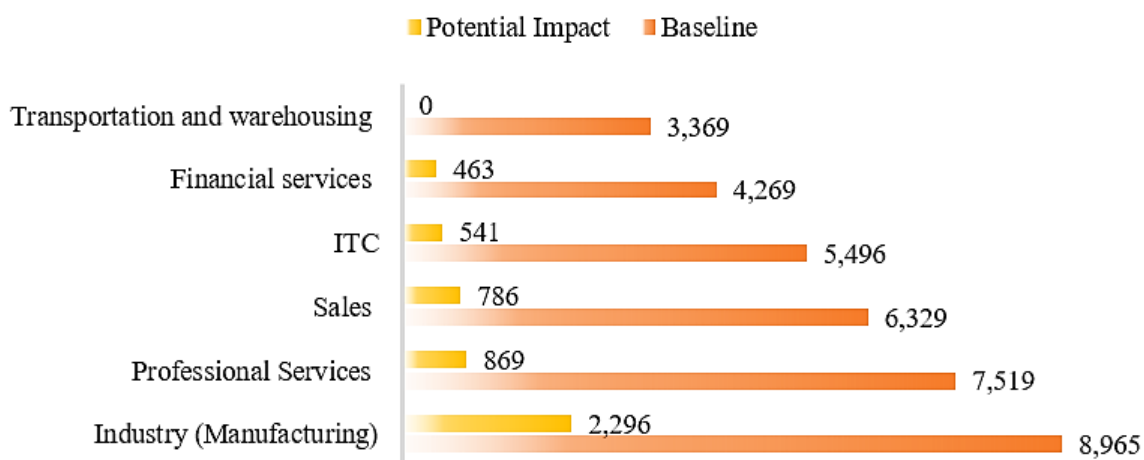


Fig. 6 Baseline GVA (US\$B) with the potential impact of AI added in 2035. Source: Own embellishment.

The information under review logically supports the need to promote the use of these technologies in the business sector; nevertheless, as this paper previously stated, their use needs to be supplemented by laws that uphold safety and not infringing of rights principles. Therefore, the AI Regulation proposal that was previously discussed in this paper (and

which may still be modified) sets penalties for administration for noncompliant companies that use AI, up to 30 million euros or 6% of their yearly global turnover worldwide.

## 5. CONCLUSION AND DISCUSSION

By utilizing digital technologies, legal departments and organizations can set themselves apart in the highly competitive legal market. A contemporary digital legal workspace is being created by technology, which is changing the way we communicate. Even if a lot of businesses have already used technological solutions, more law firms intend to adjust to the digital transformation that will occur after COVID-19 in order to efficiently manage their business operations.

The purpose of this essay was to show that the digital revolution is more than just a slogan. Almost 70% of companies see the benefits of digital transformation for their organizational structures and the need to launch digitalization-related projects. The phrase "digital transformation" is used to characterize a broad spectrum of businesses and organizations with different objectives, demands, sizes, and industries. All of them, nonetheless, have in common that new disruptive innovations are frequently used to develop new business models.

The results, which were obtained using regression panel analysis methods, show that financial security is significantly affected statistically by both state capacity for preventing corruption and legal control in the economic sphere. This demonstrates the significance of legal control in the economic sphere and the avoidance of corruption for both financial stability and the growth of an economy that is environmentally friendly. Striking the right equilibrium between all of the involved parties (investors, creditors, entrepreneurs/managers, and employees) as well as when assessing the potential financial consequences of laws and regulations is crucial when establishing and enforcing them as well.

The results, which demonstrate how regulation by law affects financial security, make it possible to forecast how financial security will vary in response to adjustments to the degree of legal control. For this reason, while developing financial security assurance plans, OECD countries need to consider the degree of financial security in their nation as well as the existing specifics of the legislative framework. Enhancing legal framework in the economic sector and enhancing programmes aimed at preventing corruption are crucial for improving the state of financial security.

Financial law therefore still has a connection to the general population sector, but it now has whole new features. But this publicity is by no means the same as the media coverage that was considered a century ago.

When governments stays out of the private financial sector, government operations typically shift in the setting of globalisation, common economic processes, and aggravated economic concerns. Only a governmental phenomenon undergoing radical transformations can be considered legal regulation. The tight interaction of all the ways and means that make up the regulation technique is necessary for the effective control of the interpersonal relationships system, as opposed to their separate actions.

Two common, fundamental components of management in each field of endeavour and at any stage of financial activity are planned and control over funds, which apply to all structural components of the financial system. State and municipal financial bodies as well as commercial businesses might use these strategies. It should be noted that democratic (market) methods of regulating financial relations work best when combined with the core strategy of financial and legal regulation, known as the authoritative order.

The panel presented the Artificial Intelligence Act, a proposal designed to accomplish this goal, in April 2021. It establishes norms for handling data, forbids the use of AI in specific circumstances, and regulates how AI is applied. Thus, circumstances where one must decide between legal requirements and business outcomes will inevitably occur. It is clear from the material in this paper that citizens' fundamental rights ought to always come first, regardless of artificial intelligence. Under these conditions, an appropriate amount of risk must be taken into account for the further development of these technologies, as stated in the rule that the European Union established:

- **Inappropriate risk:** In these situations, it is appropriate to outright forbid AI-related systems that pose an obvious risk to people's safety and rights.
- **Highly a risk:** In such circumstances, it is necessary to analyse the possibility of a security risk and a violation of rights. Prior to receiving marketing authorization, all such AI-linked technologies that are deemed possibly high-risk will need to meet stringent regulatory standards.
- **Limited risk:** It is advised that providers of these so-called limited-risk systems be subject to regulations containing clear standards for transparency to ensure that clients are informed of their compliance.
- **Minimal or no risk:** Under these circumstances, the need for a regulator would be unnecessary because there would be little to no risk to the security and legal rights of this set of systems.

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