

TOWARDS INCORPORATING THE SMART ELECTRONIC JUDGE IN THE JORDANIAN LEGISLATION

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Abstract


This study deals with the mechanism of establishing an organizational infrastructure that helps in implementing the smart electronic judge in the Hashemite Kingdom of Jordan. This is done by explaining what is the meaning of the presence of a smart judge compared to the human judge and the electronic judge, and what positive aspects it will provide that support the development of the work of judges in terms of: accuracy, speed, and addressing the negative aspects of the work. In light of the absence of Jordanian legislation supporting the implementation of the smart judge in Jordan, the study concluded the necessity of having a smart judge temporarily as an auxiliary or supportive judicial element for the human judge or mainly in litigation. The time has come to take advantage of the technological development of smart software and use it to implement a smart judge in Jordan. The study recommended having full technical and judicial supervision over the smart judge software technically, checking the inputs, comprehensive auditing, and that the smart judge program be supported by sequencing technology in narrating the events of the case and how to reach the results in the ruling. The smart judge's decisions need additional reasoning of a special nature.

Keywords:-Smart Judge; Supervising Human Judge; Smart Algorithms; Electronic Judge; Traditional Judge.

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1- Introduction:

The task of the judge in all systems and times is to achieve justice in society between litigants by relying on legal texts and their sources in the sequence stipulated by the law of his country. The judge works in an effort to achieve justice between the litigants, but achieving justice may improve with the development of society and its sciences; therefore, countries seek to develop their judiciary by facilitating work and speeding up its decision through the development of technology in society. Incorporating a smart electronic judge which works using Artificial Intelligence software is among these recent developments.

The (electronic) smart judge has an independent legal personality, and follows a robotic, not human, thought. Referring to the European legislator and granting eligibility to smart robots that run some businesses (including: the smart judge), we find that the rules of robots do not depend on the traditional legal rules contained in the laws.²

Human judges were once considered impossible to replace by machines and software, this presents a challenge of relinquishing some human decision-making power through Artificial Intelligence, as judicial Artificial Intelligence continues to improve. Artificial Intelligence can make compelling arguments for overtaking human judges in writing Judicial rulings, as it is considered more reliable and cost-effective than human judges.³

The main purpose of this research is to explain what is the meaning of having a smart judge compared to the human judge and the electronic judge? What positive aspects will be provided that support the development of the work of judges in terms of: accuracy, speed, and addressing the negative aspects of the work? In the light of the absence of Jordanian legislation supporting the implementation of the smart judge in Jordan, it is necessary to clarify the mechanism for establishing an organizational infrastructure that would help in implementing the smart electronic judge by the Hashemite Kingdom of Jordan.

2- The Electronic Judge and the Smart Electronic Judge:

Technological development helps in developing the work of the judge electronically. This has already started in the judicial work through the introduction of auxiliary application software in various departments in the judicial bodies through computer programs and applications, and this is already present in Jordan. The judge may use electronic programs to carry out his judicial work, for example: Sometimes the judge deals with requests and defenses through electronic methods, such as: e-mail, online screens, etc., and these applications are applied in many countries of the world to varying degrees. Courts that have used the Internet have proven positive and efficient in the judge's management of cases via the Internet and the speed of ending disputes. In addition, the electronic communication gave the litigants and their lawyers the option of not being physically present at court, as sometimes it requires the litigants to travel from one place to another to attend the sessions. However, distances were shortened with the presence of electronic communication, making litigation affordable, and achieving justice easier. As a result of the global pandemic, the judge has increased

² Prof. Khaled Hassan Ahmed Lotfy, *Artificial Intelligence and its Civil and Criminal Protection*, Dar Al Fikr Al Jamii, Egypt, Alexandria, 2021, p. 107-108.

³ Zichun Xu (2022) *Human Judges in the Era of Artificial Intelligence: Challenges and Opportunities*, *Applied Artificial Intelligence*, 36:1, DOI: 10.1080/08839514.2021.2013652

the use of electronic means in online hearings, and reduced face-to-face hearings. To facilitate litigation via the Internet, the judge developed his work by relying on specific applications to reach litigants. These applications were effective when closures and social restrictions were imposed during the existence of the Corona virus pandemic, and they helped litigants participate in communicating with the judge and completing litigation procedures.⁴

These applications helped judges and litigants complete the entire litigation process via the Internet, including: case submission, legal document submission, mediation, evidence exchange, court hearing, and enforcement. These applications achieved good results, saved judicial costs, and enhanced levels of litigants' satisfaction.⁵

Developments in this electronic field took place in Jordan during the exceptional circumstances of the Corona virus epidemic, as there was a shift from the traditional judicial system to the electronic system. Many of them were applied due to these abnormal circumstances, which forced judges towards digital transformation in some parts of litigation, and this matter was done based on activating the Defense Law No. (13) of 1992.⁶

The circumstances of the existence of an epidemic emphasized the reliance on electronic technologies by the Jordanian human judge in terms of litigation procedures through screens, how to submit requests, hand over regulations and respond to them electronically, manage case documents from the judge, method of communications, and other work that may lead to issuing the judgment electronically. All of this is carried out by the judge with electronic assistance in an incomplete or complete way, and this is what is described as the work of the electronic judge.

Therefore, what has been shown above identifies the judge's reliance on electronic means to carry out his work, and this work can be shortened by calling it: (electronic judge); nonetheless, these electronic actions did not reach the level of the smart judge, which has another concept. Although the smart judge is used through electronics supported by Artificial Intelligence technology, the way it works differs in terms of thinking and making independent decisions from the work of the electronic judge.

The judge which uses an electronic system and its regular applications in operations is the electronic judge, and this may develop by introducing Artificial Intelligence software into electronics and algorithms. As a result, we call this the smart judge and the smart electronic judge. The phrase "electronic judge" is not enough, because by the latter we mean a "human judge" who uses software, while in the case of a smart judge these software or robots are the ones that carry out litigation, that is: neutralizing the role of the human judge only for supervision, and judicial decisions are issued by robots or smart software mainly through special inputs and software. Therefore, we use the term "smart" here, and the term "electronic" was not satisfied because this is an advanced stage and with new mechanisms.

The nature of the work of the smart judge in the courts is as a full-job, that is: it performs all the work that the human judge does. Nonetheless, the smart judge may work partially, that is: it performs some auxiliary work for the human judge.

On the other hand, the "automated smart judge" works by self-learning and adjudicating specific cases independently, away from any human intervention. In these courts, judges use smart software applications to conduct the entire judicial process in a digital environment. However, "smart judicial applications" that provide expert legal advice, or conduct decision-making entirely based on big data analytics and without human intervention, are still limited.⁷

Some researchers indicated, through their research on electronic (non-smart) courts in Jordan, that there is a newly emerging global method called: "electronic judge" which will replace the human

⁴ The Chinese Intermediate People's Court has released the Nine Bo Mobile Micro Court App, which helps the judge complete online litigation.

⁵ Shi, Changqing & Sourdin, Tania & Li, Bin. (2021). The Smart Court – A New Pathway to Justice in China?. *International Journal for Court Administration*. 12. 10.36745/ijca.367, p12.

⁶ On the 17th of March, a royal decree was issued approving the activation of the Defense Order Law based on a decision of the Jordanian Council of Ministers. Accordingly, several defense orders were issued through the broad authority of the executive authority to take whatever it deems appropriate in light of the outbreak of the Corona epidemic.

⁷ The China Story, Straton Papagiannas, Smart Courts: toward the digitisation and automation of justice, 2020.

judge. They also added that the human judge can be used in specific cases and details of the necessity of his presence.⁸

The researcher believes that the previous opinion was satisfied with naming it: “electronic judge”. This is what we explained previously, that there is a difference between the two names, because the software and algorithms of the smart programs are completely different from the regular software, and are highly developed from it. As for the second point, it pointed out to the smart judge indirectly by listing an example quoted in the state of Brazil. The Brazilian experience demonstrated the adoption of a program called: “Justice on Wheels” and the origin of this program, which was applied by one of the judges of the Supreme Court of Appeal. The computer is carried by the judge while he is mobile, and this program relies on Artificial Intelligence. Also, this software speeds up judgment in specific (uncomplicated) cases, and judges them immediately by presenting evidence and testimonies at the same crime scene.

Therefore, the term (smart electronic judge) is distinguished from the (electronic judge). The latter is a human judge who deals with litigation through electronic technologies by communicating with the attorneys of the plaintiff and the defendant with these electronic devices and software, for example: electronic notifications, electronic pleadings, electronic defenses and objections, electronic issuance of judgment and other similar work; however, the human element of the judge remains the primary and main one as it is in traditional litigation. As for the smart electronic judge in our research, it is a robot judge or specific software that represents the judge, so the role of the human judge is secondary.

3- The Smart Judge is one of the Applications of Artificial Intelligence:

3-1- Strong AI and Applied AI:

The presence of an electronic smart judge that represents one of the applications of Artificial Intelligence (which is the intended type here) supports the achievement of justice. There is a difference between the presence of (strong AI) and (applied AI). The first goal is to develop the ability to understand or learn the actions that the human element performs and to carry out the intellectual tasks that humans perform; it also does not need a physical shell in order to function properly, it may or may not be integrated into a “robot”. The second, which is the subject of our research, is the presence of an application of Artificial Intelligence represented by the presence of a smart judge. Its goal is to use an intelligent program to accomplish a specific task and solve its problems and repercussions, and to specialize in one field. These smart robots are able to analyze their environment and adapt to new situations by imitating human intelligence; therefore, the term smart robot is used in machines that have a physical shell, are independence, and capable of self-learning and thinking.⁹

The smart judge (the subject of our research) falls under the second item referred to in the above opinion, as the smart judge is one of the Artificial Intelligence applications, and it performs its work through its physical presence through a smart judge robot or smart software that represents a smart judge. It also plays a specific role which is to carry out the litigation process as a human judge, and its work may be limited to performing, for example, in the courts of first instance, commercial cases, or it may be more specific as needed. In all cases, it works independently and learns on its own through inputs and the issues that have been settled through it. It also thinks in a different way according to the merits of any judicial work it performs.

3-2- The Application of the Artificial Intelligence Judge is Based on Prediction:

What distinguishes the applications of intelligence for the smart judge is that Artificial Intelligence systems include the same components of human intelligence, such as: logical thinking, problem solving, planning, learning, behavior, interaction, language comprehension and formation. Some

⁸ Nadia Jamal Abu Talib and Sherine Abu Ghazaleh, *Electronic Courts*, Alan Publishers and Distributors, Jordan, Amman, 2018, pp. 64-65. [fuzzy]() Nadia Jamal Abu Talib and Prof. Sherine Abu Ghazaleh, *Electronic Courts*, Al-Aan publishers and distributors, Jordan, Amman, 2018, p. 61.

⁹ Christian Youssef, *Civil Responsibility for the Act of Artificial Intelligence*, Al-Halabi Human Rights Publications, Beirut, Lebanon, 2022, p. 27.



Artificial Intelligence systems even exceed human intelligence, at least in terms of processing speed and ability to store information.¹⁰

We have shown above that the smart judge is one of the applications of Artificial Intelligence, and one of the most important characteristics of this application is that the work of the smart judge will be based on predicting decisions and judgments according to the course of the cases before it. There were opinions that support this characteristic in the smart judge to develop judicial work, and there are those who were concerned.

The opinions supporting the idea of prediction indicate that automated judges (the smart judge) are more amenable to reform, for example: regarding an area outside the legal field, "AlphaGo Zero" from Google learns to play simply by playing games against itself after a while. In doing so, these programs exceeded the human speed of play and defeated the human hero. Likewise, this matter applies to the smart programs of the judge, as it does not need years of legal experience, and it may be able to learn and develop by itself in a short time.¹¹

From a practical experience of automatic learning of smart programs in the field of law and through a smart computer program that analyzes the smart judge's texts of judgments issued in cases of the European Court of Human Rights, article (13) (related to the right to obtain fair compensation) was tested whether it was violated or not. Cases with a violation and cases without a violation of the smart program were entered, and some cases were withheld in order to test the program later. The results were that 79% of the cases entered for the test gave a correct judgment of reality.¹²

In another experiment, the application of AI in judicial practice showed better accuracy than the prediction accuracy of human judges. For example: An algorithm developed by the Illinois Institute of Technology and the University of Texas South based on Supreme Court data predicted that these decisions exceeded 66% of the predictive accuracy of jurists.¹³

As a result, through the above experiments, we can say that we can rely on the inputs from the judicial precedents for the smart program to predict the outcome of the cases through the machine learning of this software.

Some have concerns about the existence of the prediction feature as one of the applied results of the smart judge software. They indicated that the judicial world witnessed predictive analytical developments in the field of AI during the smart judge's work, as there may be an impact of AI on the ruling. This raises the concerns of some senior judicial commentators, including: Chief Justice John G. Roberts Jr. (USA) who demonstrated that when smart machines, driven by AI, help with fact-finding in the courtroom, this puts great pressure on how the judiciary can adapt with the work of AI robots.¹⁴

The researcher believes that although there are some concerns about the application of the smart judge system, its results are impressive in predicting and analyzing previous laws and judicial rulings that are applied or similar to the dispute before it. This current and future predictive quality is credited in discrimination and litigation

¹⁰ Dilip V, Sarah A, Tanya T, Colin A, Ellen E, and Ho-Cheol, Beyond artificial intelligence: exploring artificial wisdom, *International Psychogeriatrics* (2020), 32:8, 993–1001 © International Psychogeriatric Association 2020,P996. (<http://creativecommons.org/licenses/by/4.0>)

¹¹ Caner Yeşil, Robot Judges & Judicial Actors of Artificial Intelligence, *ILSA e-MAGAZINE, ISTANBUL UNIVERSITY FACULTY OF LAW*,2022.<http://www.ilsaederji.com/en/robot-judges-judicial-actors-of-artificial-intelligence/>,

¹² Michel Vols , Martijn Wieling &Masha Medvedeva , Using machine learning to predict decisions of the European Court of Human Rights, <https://doi.org/10.1007/s10506-019-09255-y>, 237–266 (2020)Cite this article.

¹³ Zichun Xu (2022) Human Judges in the Era of Artificial Intelligence: Challenges and Opportunities, *Applied Artificial Intelligence*, 36:1, DOI: 10.1080/08839514.2021.2013652

¹⁴ T Sourdin, Judge v robot, Artificial intelligence and judicial decision-making, *Handbook for Judicial Officers*, 2021. https://www.judcom.nsw.gov.au/publications/benchbks/judicial_officers/judge_v_robot.html

development, because it exceeds the thinking of the human judge and the electronic judge in many cases due to this characteristic.

3-3- Manipulating the Inputs of the Artificial Intelligence of the Smart Judge in the Application:

As we have previously stated, the smart judge is one of the applications of AI that will develop the work of the judge and achieve fast and solid justice. However, these applications may be exposed to direct breaches, and these are easy to handle with electronic monitoring processes and approved software, as well as through the supervision of the human judge in general. Nevertheless, there are indirect breaches, and these are more dangerous and may lead to unwise decisions by the smart judge. Among these breaches of the application of the smart judge is the introduction of insufficient or misleading information and inputs intentionally or unintentionally. This problem is raised because the application of the smart judge relies mainly to start its independent work through the presence of inputs in its algorithms that are sufficient, complete, real, and developed with reality, which gives impressive results. The human judge, for example, rules according to the latest laws issued, so if the judge neglected a recently enforceable law and ruled by an old law, his judgment will be flawed and will get rejected by the Supreme Court. Likewise, the smart judge will rule and analyze the case according to the data of the old law, and its rule will also be flawed, not because of the AI application, but because of the wrong inputs that were provided to the application.

There are vulnerabilities in AI in the same way that there are vulnerabilities in Information Technology systems in general, as well as in humans. One particular feature of AI weaknesses is that it depends on input. On the other hand, humans are subject to manipulation in various ways. Manipulation of the judicial system exists in the form of corruption or other influence on the various parties in the court. There will always be attempts to manipulate the judicial system.

The introduction of AI really only changes the form that attempts to manipulate, so those who rely on AI applications (including the smart judge) must develop methods to counter attempts to introduce misleading information, or make it so difficult to breach that the risk of its occurrence becomes almost non-existent.¹⁵

4- The Positives of Having an AI Smart Judge:

The use of smart technologies represented by a smart judge will give us multiple advantages, since the personality of the smart judge will be in a way of thinking that differs from the traditional judiciary. The incorporation of a smart judge will benefit and develop the entire judicial process; therefore, we will show the most important positives.

4-1- The Fastest AI Judge:

There is no doubt when using electronic means to assist the traditional human judge that leads to a faster completion of cases by the judge. These electronic works, as we previously indicated, are of assistance to the judge to varying degrees. As for the smart judge, all of its work is electronic in a smart way according to special algorithms. Therefore, the work of the smart judge will be the solution in courts that witness delays in resolving cases due to their abundance. The comparison of the speed of resolution between the human judge and the smart judge may be far away, as cases that take months to resolve in the traditional judiciary can be resolved in weeks with the presence of the smart judge. Some describe the speed of the smart judge by just imagining that it is a responsible robotic judge. We will notice first that this robot will not only have access to legal symbols, regulations, and jurisprudence, but also to all images via: the Internet, health reports, social media accounts, and others. Secondly, we will note that the smart judge will not need: rest during holidays and feasts, and human excuses.

Moreover, the smart judge will carry out all the procedural stages so that it can finish the entire case in a trial, which speeds up the achievement of justice.¹⁶

¹⁵ Felix Wideroth, *The Robot as a Judge*, Uppsala Universitet, Department of Law, Stockholm Spring term 2020, p33-34 .

¹⁶ Caner Yeşil, *Robot Judges & Judicial Actors of Artificial Intelligence*, ILSA e-MAGAZINE, ISTANBUL UNIVERSITY FACULTY OF LAW, 2022. <http://www.ilsaederji.com/en/robot-judges-judicial-actors-of-artificial-intelligence/>,

4-2- The Most Fair AI Judge:

Artificial Intelligence technology, through which autonomous or self-regulating computer programs are used, have the ability to: think, self-regulate, learn, and make decisions independently to achieve justice.

It has other characteristics such as: independence, the ability to: perceive, analyze, evaluate, model: images, symbols, processes, and surrounding environments, make and implement special decisions. It also has the ability to adapt: its own behavior, self-education, communication between them, and communication with other AIs, learn from experience, accumulate it, and reproduce it (including human effort).¹⁷

The AI represented by the smart judge will be of real benefit to achieving successes in structuring large amounts of information, which may make achieving justice more efficient, even though advisory work and predictions are functions that are still subject to many concerns. However, when judges use the results of AI in their judgment, this is acceptable in judicial practice and achieves justice, provided that they present their reasons.¹⁸

On the other hand, justice is achieved through the unification of judicial rulings, and this is what the AI judge achieves.

Judges in general differ in orientations and interpretations. There will inevitably be some differences in ensuring unification and issuance of identical rulings, which will lead to issuance of different rulings in similar cases, that is: the issuance of non-uniform rulings. On the other hand, the implementation of AI can provide relatively simplified judicial inference and evaluation standards. It can also provide the judge with all similar cases, laws, regulations, and judicial interpretations, so that the judge can follow the rules of evidence and procedures accurately, which reduces judicial arbitrariness and enhances justice.¹⁹

We can add to the above opinion that dealt with the implementation of AI to assist the judge that the smart judge which works holistically can unify the software and algorithms entered for all smart judges; therefore, the results and judicial rulings will be similar or largely unified compared to: the traditional human judge, the electronic judge, and the human judge which is partially assisted by the AI applications.

4-3- The Most Transparent AI Judge:

One of the outputs of having a smart judge in smart courts is to help achieve the goals of judicial reform represented in improving credibility, transparency, and even independence from unwanted internal and external interference.²⁰

Transparency in the case of making decisions by the smart judge is achieved through understanding the actions of the smart judge, and to access the rationale for his decisions there is what is known as: the “black box”. We can refer to this box to know the operations carried out by the smart program and how to reach the results in specific cases. The transparency in smart litigation will support the confidence of litigants, and will give the public insight into the administration of justice by the courts. Therefore, it can be said that inference is based on the basis of judgments and transparency in court procedures in order to understand a specific result from the court. Humans cannot know the repositories of what another person thinks in their daily activities, and they cannot look at the nerve

¹⁷ Kirillova, E.A. *et al.* 2020. Artificial Intelligence as a New Category of Civil Law, *Journal of Advanced Research in Law and Economics*, Volume XI, Spring, 1(47): 91 – 98. DOI: [10.14505/jarle.v11.1\(47\).12](https://doi.org/10.14505/jarle.v11.1(47).12). Available from: <http://journals.aserspublishing.eu/jarle/index>, p97.

¹⁸ A. D. (Dory) Reiling, Courts and Artificial Intelligence, international journal for court administration, E-ISSN: 2156-7964, Reiling, A.D. (Dory) ., 2020. Courts and Artificial Intelligence. *International Journal for Court Administration*, 11(2), p.8. DOI: <http://doi.org/10.36745/ijca.343>

¹⁹ Shi, Changqing & Sourdin, Tania & Li, Bin. (2021). The Smart Court – A New Pathway to Justice in China?. *International Journal for Court Administration*. 12. 10.36745/ijca.367. p10.

²⁰ The China Story, Straton Papagiannas, Smart Courts: toward the digitisation and automation of justice, 2020.



cells. Therefore, the judge requires the reasons for his conclusions and decisions; the same requirements must be imposed at least reasonably on an AI judge in terms of transparency.²¹

As such, some believe that the decisions supported by AI have a lot of transparency in reality. Despite presenting the facts in the traditional courtroom, it is not possible to know what is in the mind of the judge, unlike the electronic smart judge, whose decisions can be audited at any time.²²

The researcher believes that among the opinions presented above and for evaluating the most transparent decisions, is it for the traditional judge or for the smart judge?

The answer: It will certainly be in favor of the smart judge. Since there are some mental, psychological, and other issues that are repressed within the feelings of the traditional judge when making judicial decisions. In comparison, the smart judge can know most of the reasons for making decisions, and even things that the smart judge did not disclose in its decision can refer to the data saved in the black box in some smart algorithms to understand the internal repercussions of the decision. Therefore, we can say that the smart judge's decisions are more transparent. Consequently, the researcher suggests choosing a smart judge that contains algorithms that possess the "black box" feature in the event that litigation in Jordan is approved by a smart judge due to the benefit of this feature in knowing the detailed dimensions of any decision taken by the smart judge; then we achieve greater transparency in litigation.

On the other hand, reviews of the work of the smart judge must take place. The question raised is whether the reviews take place within the judiciary (due to its independence) or is external scrutiny appropriate? An external audit may be more transparent, and this will generate more confidence than an internal audit.²³

4-4- The Assistance of the AI Judge to the Traditional Human Judge:

In short, AI applications assisting the human judge facilitate litigation procedures, and enable judges to focus on solving difficult problems and improving judicial efficiency.²⁴

The presence of smart software will help the human judge a lot. All the considered laws, judgments, and even jurisprudential opinions can be entered in the AI software. Therefore, the human judge who will use a smart judge will shorten the time and effort, and this smart software can serve as a guidance for the human judge, as he can use the software to expand the research with a part of the case to appeal to the detailed dimensions. The researcher suggests that if AI software is incorporated in the work of the judge, that they should be included as reference elements that can be referred to in accordance with the law. For example, there is an addition to paragraph (4) of Article (2) of the Civil Code Jordanian, which indicated that the judge has the right to be guided by what was approved by the judiciary (case law) and jurisprudence, provided that it does not contradict official sources.

There are many laws in Jordan that give the judge the authority to mitigate the sentence, so the question arises here: Can AI software help the human judge to study the case of the convict, and thus take a decision to release or mitigate the sentence? The law stipulates this authority for the judge, and the Jordanian law stipulates giving the authority to the judge. This included for example: what was stated in the Juvenile Law in paragraph (b) of Article (9) of the authority of the public prosecutor or the court to release a juvenile arrested for a criminal offense if the circumstances of the case or the state of the juvenile so require in return for a bail that guarantees his attendance in stages

²¹ Felix Wideroth, *The Robot as a Judge*, Uppsala Universitet, Department of Law, Stockholm Spring term 2020, p36 .

²² Gustavo Ariel, *Are artificial intelligence courts a discrimination risk*, An official EU website, 2021. <https://futurium.ec.europa.eu/en/european-ai-alliance/open-discussion/are-artificial-intelligence-courts-discrimination-risk>.

²³ A. D. (Dory) Reiling, *Courts and Artificial Intelligence*, international journal for court administration, E-ISSN: 2156-7964, Reiling, A.D. (Dory) ., 2020. *Courts and Artificial Intelligence. International Journal for Court Administration*, 11(2), p.8. DOI: <http://doi.org/10.36745/ijca.343>

²⁴ Aini, G. (2020) *A Summary of the Research on the Judicial Application of Artificial Intelligence. Chinese Studies*, 9, 14-28. doi: 10.4236/chnstd.2020.91002.

investigation or trial. In addition, what was stated in paragraph (a) of Article (32) of the same law, that the judge who executes the sentence has the power, after seeking the opinion of the Director of Juvenile Rehabilitation, to release any convict according to a set of conditions set out in the paragraph.²⁵

Likewise, what was stated in the Jordanian Penal Code, in paragraph (1) of Article (27), that the court may order that a person sentenced to imprisonment be granted special treatment based on the provisions contained in the Correction and Rehabilitation Centers Law. Also, in paragraph (2) of the same article, the law gives the judge the power to mitigate the sentence if the imprisonment period does not exceed three months and convert it to a fine.²⁶

Part of the Jordanian laws stipulated the replacement of the penalty, as stated in Article (17) of the Penal Code. If the perpetrator is a pregnant woman, and she is sentenced to death, then the penalty can be replaced by hard labor for life. There are many Jordanian laws that give the judge the right to rule between a higher and a lower limit. The choice of the judge for these two limits is only based on the merits of the case and its multiple factors.

As it turns out, there are authorities in the text of the law for the human judge to mitigate judgments for various circumstances and reasons, and the time has come to help the judge and take advantage of technological developments in the science of intelligence to achieve more justice. This can be done by studying smart software for each case separately and giving a detailed, familiar report to the human judge that helps him make his decision Judicial. Sometimes, the presented cases have dimensions that are not directly clear and need to be based on other illegal sciences. For example, the study of the psychological, social, and other conditions of the convict. The researcher believes that if sufficient information was entered in sociology or psychological sciences for the smart program, this will help the judge by entering information about the accused or the convicted person and his circumstances. The smart program will give a social and psychological report of the case presented to it through these auxiliary sciences. This opinion will be based on solid sciences that are not available to the traditional judge except through experience, even if this experience is limited to software which deal with the smallest details. With the existence of legal rules that the judge will rule on, and the help of other human sciences that will be provided by the smart program, the judge's decision, whether it is traditional with the help of artificial intelligence or smart, will be closer to achieving justice.

4-5- The Smart Judge Does not Need Experience:

The expertise of the human judge comes from two sources:

The first source: It is the judge's field experience that he acquires during his judicial work and the accumulated experience.

The second source: It is the expertise required by judges during the consideration of cases, such as: medical, engineering or other expertise, and this was regulated in Jordan.²⁷

Some believe that the experience of the traditional judge is different from the smart judge, as the latter possesses the advantages of data storage and algorithm, and can perform in-depth analysis on a sample based on big data. It can also obtain a more open legal vision, and can deduce facts based on learning and prediction elements. On the other hand, the human judge is limited by personal knowledge and experience, may ignore some important case information, and make a wrong decision. In addition, in complex or new cases, the individual experience of the judges is not sufficient to respond effectively. In contrast, the smart judge can issue more reliable and stable rulings, and avoid the risks of uncertainty that the human judge faces in normal cases that depend on judicial discretion, while the machine can predict the outcome of the case more effectively.²⁸

The researcher believes that the smart judge needs experience of a special kind, and this experience can be achieved easily. Compared to a traditional judge who needs many years of experience, the smart judge can reach high experience through the inputs to his smart program. The more these inputs

²⁵Jordanian Arbitration Law No. (32) of 2014 and its amendments

²⁶ Jordanian Penal Code No. (16) of 1960 and its amendments.

²⁷ System of Experience before Regular Courts No. (35) of 2018.

²⁸ Zichun Xu (2022) Human Judges in the Era of Artificial Intelligence: Challenges and Opportunities, Applied Artificial Intelligence, 36:1, DOI: [10.1080/08839514.2021.2013652](https://doi.org/10.1080/08839514.2021.2013652)

are expanded from cases, rulings, jurisprudence, recent legislation and its interpretations, the experience of the smart judge can be increased. This is consistent with the above opinion; however, we must admit that the smart judge also needs years of experience that may be much less than the human judge. The reason is that smart programs are not traditional electronic programs, as they have the ability to predict and think and constantly develop themselves with the cases before him; therefore, the more cases are brought before the smart judge, the more its experience increases. As for the expertise to assist the judge in specific cases referred to in System No. (35), the smart judge can reduce a lot of effort by relying on human experts through the introduction of software that deals with medical or engineering expertise and others.

5- The Negatives of Having an AI Smart Judge and Responding to Them:

Having a smart judge can create many negatives, so we will look into the negatives of having a smart judge and try to respond to them. There are those who respond positively to those who respond negatively to the presence of an AI judge. This indicates that legal scholars are always representatives of the future. Therefore, the negatives must be addressed to make judicial intelligence serve justice.²⁹ Among the most important negative aspects of the work of the smart judge are as follows:

5-1- The Smart Judge Lacks Human Nature:

A question may arise: Does the smart judge lack human nature? To answer the question of whether ordinary or smart computers lack humanity, the fact that the human judge who possesses human feelings is considered negative for the smart judge system. Nevertheless, some see the opposite, as the judge may be human and lacks humanity by issuing judicial decisions courtesy of the one with great influence or famous lawyers; he might also quickly resolve the issue without going into necessary details, or procrastinate the case, which may be inhuman in of itself. As such, justice can be achieved better when the feelings of judges cannot be manipulated, and when litigants are sometimes judged without courtesies. In case of the rich against the poor, the powerful against the weak; the poor and the weak usually avoid judicial battles with the powerful, and accept unfair settlements. So, the integration of AI in the judicial system has the ability to change that. AI (represented by the smart judge) can erase some invisible barriers that prevent people who are discriminated against from obtaining justice. As a result, we can say that the humanity of the human judge may be compromised for various reasons. Penetrations of humanity do not exist in smart litigation, so this smart litigation may be more humane than traditional litigation.³⁰

5-2- The Smart Judge is not Considered a Human Element:

The shift from the human element (the judge) to the electronic element (the smart judge) will lead to the creation of a new, non-human environment. This software (the smart judge) may deviate from the authority of human laws, and refuse to implement human orders.³¹

Some argue that a human judge may not delegate rulings or administrative tasks to an AI assistant, and judges should remain under the full control of the human element. Furthermore, AI is in principle incapable of adequately engaging in legal reasoning, evaluative rulings, or discretionary rulings. These tasks cannot be performed by computer programs because they work through inputs and outputs, which makes matching between AI and litigation difficult. On the other hand, AI is not immune from the bias of its creators, so it cannot always be trusted to be fair and impartial.³²

²⁹ Herbert A. Simon University Professor at the School of Computer Science at Carnegie Mellon & Head of J.P. Morgan AI Research.

³⁰ Gustavo Ariel, Are artificial intelligence courts a discrimination risk, An official EU website, 2021. <https://futurium.ec.europa.eu/en/european-ai-alliance/open-discussion/are-artificial-intelligence-courts-discrimination-risk>.

³¹ Khaled Mamdouh Ibrahim, Legal Regulation of Artificial Intelligence, University Thought House, Arab Republic of Egypt, Alexandria, 2022, p. 110

³² Samuel Maireg Biresaw, Abhijit Umesh Saste, The Impacts of Artificial Intelligence on Research in the Legal Profession, *International Journal of Law and Society*. Volume 5, Issue 1, March 2022, pp. 53-65. doi: 10.11648/j.ijls.20220501.17, p61.

Also, there are some who added that judicial AI also has specific limits, as it is not easy for a smart judge to achieve absolute objectivity and accuracy in facing complex and difficult cases as it is in a human judge. AI may be able to enhance formal justice; however, it is difficult to achieve objective justice. Consequently, it is necessary not only to take a rational view of the challenges posed by judicial AI, but the same people who have this opinion responded to this negative point that they raised by accepting the fact that the era of AI is coming, and actively promoting the transformation and upgrading of the role and function of judges to respond to the new demand of assigning the role of judges in the era of AI is imperative. The researcher believes that in order to respond to these negative opinions, it is necessary to have the human element represented by the judge, as there are a lot of businesses that have become managed with smart software after the massive technological development. For example, the work of planes, trains, and smart cars; in addition, many of them have achieved great successes.³³

Some believe that providing self-driving vehicles that lack the human element with all information, and including it in their software, can, through this smart programming, enable self-driving. Based on the above opinion, there is no human element in business that we did not expect and for a short period that it will be managed without human elements. Therefore, the smart judge can be programmed to take the place of the human judge in all his work, and it may be more accurately after entering the required software.³⁴

Smart software has demonstrated a tremendous ability to benefit from what is included in its software, as well as to develop it. This software is designed to be able to deal with all situations and make decisions in accordance with the reaction of the parties. This confirms that this software has an independent and perceptive will, and can make decisions without the intervention of the programmer or the executor (the human element).³⁵

On the other hand, some raise the issue of the difficulty of the task of the smart judge for judgments that require more than one judge, that is: when the case requires consideration by more than one judge (such as the decisions of the Courts of Appeal that require the presence of three judges). So, the question is raised: Does this mean that we must also have more than one AI system so that smart judges software meet to issue one decision as judges do now?

To answer: We show at the outset that the reasons for the existence of a system of procedures require consideration of the case by more than one judge combined in order to reassure the litigants that the process is taking place correctly. The difference in opinion and viewpoints may be very healthy because it leads to constructive discussions and more legal certainty in the outcome, and thus the judicial decision is issued by the majority.³⁶

To respond to the above opinion, which indicated that there is difficulty in the case of cases in which more than one judge is required to be present together, such as: the decisions of the Courts of Appeal and Cassation. We know that the numerical increase of judges in Jordanian courts came to protect judicial decisions to achieve justice and to be assured of the accuracy of rulings. As such, the researcher suggests to the Jordanian legislator if he adopts litigation through a smart judge, that the cases that need a single judge will be acceptable, based on the existing smart software; however, if more than one judge is required, then the matter is a kind of difficulty, as the above opinion indicated. However, we can solve this negativity by adopting specialized algorithms for this purpose, if any, that is: more than one smart judge contributes an opinion separate from others, and then a smart program organizes the meeting of these opinions and issues a majority or total judgment. Also, in the absence of specialized smart software that deals with this aforementioned matter (the judicial

³³ Zichun Xu (2022) Human Judges in the Era of Artificial Intelligence: Challenges and Opportunities, *Applied Artificial Intelligence*, 36:1, DOI: 10.1080/08839514.2021.2013652

³⁴ Abdullah Ali Al-Qartasi Al-Nuaimi, *Artificial Intelligence and Criminal Responsibility*, Dar Al-Nahda Al-Arabiya, Emirates-Cairo, 2021, p. 14
Nasr Aboul Fotouh, Fareed Hassan, *Smart Contracts (Essence and Rulings)*, Dar Al-Nahda Al-Ilmiya, Emirates, 2022, p. 106.³⁵

³⁶ Felix Wideroth, *The Robot as a Judge*, Uppsala Universitet, Department of Law, Stockholm Spring term 2020, p44.

decision requires the presence of more than one judge), it is sufficient to apply the single smart judge in the Jordanian courts and to continue the traditional human litigation of cases referred to courts that hear the case with more than one judge.

5-3- The Smart Judge does not Take Moral Considerations into Account:

AI is incompetent in terms of the power of judgment, especially in cases where the judge's work requires relying on evidence for objectivity to understand the psychological and moral matters of the litigants, and to know the facts through experience of the facts of the case to treat them. For example: in divorce cases, the judge issues a judgment of divorce after determining that the relationship between the spouses has broken down through objective evidence from statements including language and behavior between the spouses during the trial. However, no matter how advanced the technology is, AI cannot possess human nature, and this nature is the origin of feelings and emotions, and it is completely different from the intelligence that AI can simulate. A smart judge will not be able to issue a flexible judgment like a human judge because it relies on textual expressions in general and abstract legal articles.³⁷

The researcher believes that what is considered a negative matter is the non-interference of the psychological and physical matters and the language of expression of the litigants with which the judge supports his ruling, as mentioned in the previous example of seeing the expressions of the spouses and their eyes to adopt the judge's conviction that the relationship between the two parties has ended in order to support it with legal texts and rule the case. This is a positive matter for the smart judge, for it abolishes any prejudice of the judge to sentiments and being affected by the nature of the judicial ruling intended to be issued, rather, a ruling will be issued away from moral influences; therefore, it will achieve greater justice by not having any bias of the judge of any kind that affects his decisions. In particular, Article (97) of the Jordanian Constitution and its amendments stipulated that: "Judges are independent and have no authority over them except the law".³⁸

On the other hand, some believe that the human judge does more than just adjudicate the dispute, as he plays a major role in managing cases and settling civil disputes, including the educational role. The supporters of the view that judges can be replaced by AI miss the point related to what the judges contribute in a community, which extends beyond the trial.³⁹

The researcher believes that the contribution of the human judge to society can be continued through the presence of a supervisory human judge who can carry out these tasks, especially since the profession of the human judge in smart litigation is brief through: management, supervision, and follow-up of the case only. This matter will achieve good results and outputs, as there are no stacked cases, and no pressure in the judge's work, which leads to sound and fast judicial rulings.

5-4- The Smart Judge Undermines the Independence of The Judiciary:

There are concerns raised because the smart judge's work mechanism is through inputs into its software, and this work is done by software engineers. Therefore, these inputs may have an impact and bias in specific aspects for whatever reason, and as such, this bias in inputs will lead judges to not become independent by influencing judicial rulings.

Some believe that in order to respond to this negativity, many companies have effectively provided major legal technologies for their services to smart courts, competing for market share in all countries, and those companies have pledged that justice will not be improperly affected by legal technology companies. As a result, there was a call to play a more effective leadership role by standardizing the technical standards of a group of companies working in smart litigation software.⁴⁰

³⁷ Aini, G. (2020) A Summary of the Research on the Judicial Application of Artificial Intelligence. *Chinese Studies*, 9, 14-28. doi: 10.4236/chnstd.2020.91002.

³⁸ Published in the Official Gazette in Issue 1093 issued on 8/1/1952.

³⁹ T Sourdin, Judge v robot, Artificial intelligence and judicial decision-making, Handbook for Judicial Officers, 2021. https://www.judcom.nsw.gov.au/publications/benchbks/judicial_officers/judge_v_robot.html.

⁴⁰ Shi, Changqing & Sourdin, Tania & Li, Bin. (2021). The Smart Court – A New Pathway to Justice in China?. *International Journal for Court Administration*. 12. 10.36745/ijca.367. p17.

Therefore, the researcher believes that the aforementioned reservation must be taken into account. So, we suggest the existence of full technical and judicial supervision over the smart judge's software. The smart judge's software must be checked by specialized Jordanian technicians. As for the second examination, it must be done by the judges by supervising the legal, judicial, and jurisprudential inputs to the program. As for the third examination, it must be for the supervising human judge whose duties are to follow up all the decisions of the smart judge and their sequence by requesting summaries of the merits of the case and giving a summary of the events and steps of previous litigation; consequently, even the process of judicial supervision will be part of his audit duties.

5-5- The Difficulty of Society Accepting the Rulings of the Smart Judge:

The issue of acceptance of the smart judge is an important issue by the users, that is: the litigants in any case who will submit to his judgment. There will be many questions that include the extent to which it is safe to resort to a smart judge, the amount of legal certainty that this judiciary must provide in order to justify the adoption of the smart judge, and the trust among everyone that it makes correct decisions in a large percentage free from bias and other considerations compared to the human judge. Despite this, there will be some cases that will not judge justly. As a result, the issue of user acceptance of the smart judge is still low, but there is an increase in its acceptance. It is expected that with the spread of AI in many aspects of life, confidence in smart judge applications will increase; for example: in the field of health care, there is an increase in resorting to tools and procedures based on AI. However, it is uncertain when will we reach this conviction to reach a claim for judgment by an AI judge instead of a human, or at least to demand a complementary opinion or an assistant from AI.⁴¹

The researcher believes that although the decisions of the smart judge cannot fully achieve justice, this matter is present in the traditional judiciary. Indeed, the smart judiciary outperforms it with a higher rate of success. As for citizens' acceptance of accepting litigation from an intelligent judge, the researcher supports that the issue depends on the widespread use of AI applications and time. The gradual or optional spread of the smart judge application in Jordan, or special courts for it, and the successes that will be achieved before the eyes of litigants and citizens. Therefore, this will increase confidence in resorting to it and demanding the establishment of courts mainly by smart judges according to AI software.

6- The Special Nature of the Smart Judge's Reasoning:

The reasoning of judicial rulings was organized within the formal statements according to Article (160) of the Jordanian Code of Civil Procedure, and lack of reasoning may expose the judge's ruling to cassation by the higher courts. As such, the traditional judge must state the factual reasons (statement of facts and evidence) and legal reasons (the legal principles on which the judgment was based). The legal requirements for reasoning judgments are to ensure the adequacy of the clear reasons for the judgment, and also to ensure the rationality of these reasons, so that these evidences based on the judgment lead to its conclusion.⁴²

The European Court of Human Rights has ruled in some cases that the courts must specify the reasons for their rulings to a greater degree and issue the ruling in writing, as well as stating information about the time and place of notification of the ruling. They also include the parties and representatives, and contain the reasoning supporting the ruling, the claims of the parties, the objections and the facts on which they were based. The reasoning which supports the ruling must be explained, which has been proven in the case, and the courts' reasoning for their rulings is often brief.⁴³

Of course, the reasoning for the decisions of the smart electronic judge is necessary, by explaining how it reaches its results. Therefore, the smart judge software that will be adopted in Jordan must ensure

⁴¹ Felix Wideroth, *The Robot as a Judge*, Uppsala Universitet, Department of Law, StockholmSpring term 2020, p47.

⁴² Awad Ahmed Al-Zoubi, *Al-Wajeez in the Jordanian Civil Procedure Code*, Jordan, 2020, pp. 449-451.

⁴³ Felix Wideroth, *The Robot as a Judge*, Uppsala Universitet, Department of Law, StockholmSpring term 2020, p27 .

its ability to state the required reasoning as if it were a traditional judge. The researcher believes that similar reasoning in the traditional judiciary may be needed for an additional special type of reasoning in smart judgment (causation of a special nature), in addition to the basic principles referred to. If there is a smart judge, the electronic system must first be programmed to show the reasons for the ruling, but in the smart judiciary there are other matters that must be clarified that do not exist in traditional litigation, including the acceptance of the parties to resort to litigation before a smart judge, as well as an indication of the electronic programs that used the intelligence system and an indication of the nature of the data entered into the smart programs, and other things that give the character of transparency to the judgments. So, it became necessary to state the reasoning for the actions of the smart litigation as stated in the Jordanian Code of Civil Procedure.

The researcher suggests to the Jordanian legislator, in the event that he adopts AI in litigation, that the smart judge program through which the work is carried out be supported by the sequencing technology in listing the events of the case and how to reach the results in the ruling according to this sequence, as the traditional judge does when he issues his judicial ruling; therefore, we have electronic judicial rulings from a smart judge similar to traditional rulings.

7- Regulatory Proposals for the Smart Electronic Judge in Jordan:

7-1- Creating the Appropriate Environment Before Introducing Smart Judge Techniques:

Given that smart litigation is a modern technological science, and there is concern about its success in Jordan, we suggest that introducing this type of litigation gradually begins with creating a suitable environment in litigation to accept the presence of a smart electronic judge. As such, we suggest forming a committee in the Jordanian Court of Cassation under the supervision of the Ministry of Justice which seeks the help of experts in the field of AI, whether they are local or international, to study the introduction of smart programs that help the human judge in his work. This step will be an experiment for the judiciary to benefit from AI programs in sorting cases, and give: summaries, case law, legal solutions, translation, and sometimes experience, as well as automating laws and others. In addition, we suggest trying to circulate what this committee that emanates from the highest judicial body reaches for the results in Jordan to publish them officially to the judiciary, and after that the Jordanian judicial body will be ready to incorporate AI into the world of judiciary. This step will also be a catalyst for the development of an electronic court that will be run from an electronic judge, and then the next steps will be to successively generalize this experience with smart litigation to all courts.

7-2- Qualifying Judges Who Supervise Smart Judges:

The basis of the work of the Judicial Institute in Jordan is to develop assistance programs in the qualification of elements such as: delegations, or employees of the Ministry of Justice, or professors of lawyers, or the first in law faculties, and others. Among the work of the institute is to qualify holders of a law degree to obtain a Judicial Institute diploma, and they will be qualified to practice the judiciary.⁴⁴

Therefore, while we are in the process of qualifying judges who monitor the work of the smart judge, we suggest introducing a qualification program at the Jordanian Judicial Institute that trains practicing judges, or in the process of training to obtain a diploma from the Judicial Institute for Smart Litigation. Thus, ensuring the presence of judges specialized in artificial intelligence, because litigation through the smart electronic judge needs a judge who supervises the input and output, as well as the legal authority that gives him the right to intervene in the presence and other emerging matters in this field.

7-3- Supervision of a Human Judge over the Smart Judge:

Despite the development of AI software and its coverage of all businesses due to the technological leaps in this field; nevertheless, we suggest that there be a human judge who supervises what the smart electronic judge does as a kind of oversight of any illogical judicial acts for whatever reason. Therefore, we suggest that Jordanian law be regulated through twinning between the smart judge And

⁴⁴ Jordan Judicial Institute website, <https://jij.gov.jo/ar-category-28>

the traditional judge, taking into account most of the work carried out by AI through the smart judge, and the role of the human judge is only with: necessary or emergency intervention and supervision. On the other hand, there may be a question of who is responsible if the electronic judge takes an improper or biased decision, especially since it ultimately represents smart software. To solve this problem, the researcher believes that the presence of a judge supervising the smart litigation process is essential, and we suggest its presence as a mandatory text in the law intended to be legislated. Also, the researcher adds another condition that the one who supervises data entry operations for the smart program is the supervising judge himself, or looks at the data entered before starting supervision, such as laws and other inputs, to give the necessary advice in case he finds a deficiency in entering this data. This is to ensure that there are no biased or incomplete data, so the solution to this problem will be the responsibility of the supervising judge because he viewed the entered information, and exercised the power of continuous supervision of all decisions issued by the smart judge. Consequently, the supervising judge will need: authority to intervene, modify some wrong procedures, or transfer some trial procedures in presence, and reverse the information he reached in presence by entering the data of the smart program again.

Human control is necessary at all stages.

First of all, human users need to define what the AI should do and how to measure and evaluate it. There needs to be continuous testing to ensure that the AI is doing its job as it should. The system needs to be designed in such a way that it can be modified easily and efficiently, and constant auditing is necessary.⁴⁵

7-4- Smart Case Management and Alternative Solutions:

The Jordanian Code of Procedure established a case management system for early control of cases and expediting litigation. Among the administration's work is offering alternative means of resolving the dispute in a soft justice manner to reach conciliation or mediation, or to offer a settlement of the dispute, that is: an amicable solution outside the scope of the courts and their repercussions.⁴⁶

Similar to this principle, the researcher suggests that the smart judge software, in addition to resolving judicial disputes and giving judgments in them, include alternative means that the smart judge performs through suggestions that are presented to the litigants at the beginning of the case for negotiation and compromise solutions. If the parties to the dispute agree to that, this agreement is established, and it is considered an agreement concluded before the court, and its ruling is issued according to the agreement reached, and it becomes binding on both parties. This matter is regulated in Jordanian law under a name of (Smart Case Management) for example.

7-5- Invalidity of Judges, Judges' Refusal And Removal (For the Smart Judge):

Most legislations, including: the Jordanian Code of Civil Procedure stipulate the incompetence of judges and judges' refusal and disqualification. Article (132) of this law clarified the reasons for the incompetence of the human judge, and Article (133) clarified the invalidity of the judgment in the event of non-compliance with Article (132). Article (134) clarified less severe reasons in which the human judge may be dismissed, and Article (135) also indicated that the judge withdraws from the case for reasons he reveals to the president of the court, and the question that arises here: What is the legal mechanism for applying these articles to the smart judge?

The answer: it will certainly be: these materials do not fit without the addition because of the difficulty of applying it to the smart judge, based on Article (132) with its paragraphs (1-7), which showed the reasons for the incompetence of the traditional human judge, and ranged in the presence of kinship, the existence of a rivalry between the judge with one of the parties, or the fact that the judge is: an agent, a representative, or a relative of the fourth degree or less to one of the parties to the case. in addition to the existence of an interest for the judge, or the presence of the judge's

⁴⁵ A. D. (Dory) Reiling, Courts and Artificial Intelligence, international journal for court administration, E-ISSN: 2156-7964, Reiling, A.D. (Dory) ., 2020. Courts and Artificial Intelligence. *International Journal for Court Administration*, 11(2), p.8. DOI: <http://doi.org/10.36745/ijca.343>

⁴⁶ Awad Ahmed Al-Zoubi, Al-Wajeez in the Jordanian Civil Procedure Code, Jordan, 2020, p. 399.

kinship to one of the panel or defense judges, or the judge's knowledge of the case previously, or the judge filed a lawsuit against one of the parties who requested the judge's refusal. It turns out that all the reasons for the human judge's response do not apply to the intelligent judge, because it is a non-human electronic element. So, the researcher suggests adding a proposal to apply Article (132) to the human judge supervising the smart judge, if any, in the Jordanian courts when applying the smart judge software, since this human judge is aware of the inputs and outputs of the smart judge, and may turn a blind eye to matters determined in favor of one of the parties due to the existence of the reasons mentioned in the above article. The same provision in Article (133) is applied in the event that the supervising human judge does not comply with Article (132), and Article (134) applies to the reasons for the judge's response and Article (135) the reasons for the judge's refusal to the supervising human judge exclusively, if any.⁴⁷⁴⁸⁴⁹⁵⁰⁵¹⁵²⁵³

8. Conclusion

After completing the study entitled: "Efforts Towards Incorporating the Smart Electronic Judge in the Jordanian Legislation", we concluded that it is necessary to introduce the smart judge gradually to achieve: speed, accuracy, and the development of justice with the presence of the smart judge. Moreover, the training of supervisory judges in specialized courses at the Jordanian Judicial Institute is one of the necessary matters, and that the Jordanian law organizes the harmony between the smart judge and the traditional judge. We also suggested the existence of a legal regulation under the name: (Smart Case Management) as an alternative means that the smart judge performs before entering litigation, and we suggested the application of Article (132) that clarified the reasons for the incompetence of the traditional human judge, the human judge supervising the smart judge, if any. The study concluded that the provisions of the smart judge are more positive because it is far from bias and moral influences, and that the introduction of the smart judiciary in Jordan will lead to an increase in demands for its expansion and adoption in most Jordanian courts. Also, that addressing the issue of the presence of the smart judge in Jordan may raise the question of who bears responsibility in the event of error from these robots or smart software, and this problem needs to be dealt with separately by future research.

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- [2] *Jordanian Civil Procedure Law No. (24) of 1988 and its amendments*
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⁴⁷ Paragraph (1) of Article (132) of the Jordanian Procedure Code.

⁴⁸ Paragraph (2) of Article (132) of the Jordanian Procedure Code.


⁴⁹ Paragraph (3) of Article (132) of the Jordanian Procedure Code.

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