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Protecting Moroccan Cyberconsumers in the Field of Digital Products: Reform Perspectives in Light of Comparative Law

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Abstract

Digital products, being intangible and constantly evolving, pose a challenge to traditional consumer protection tools. Based on Moroccan Law No. 31-08 and the Code of Obligations and Contracts, this article demonstrates that the lack of a distinct legal classification and the inadequacy of warranty and evidentiary rules undermine effective remedies, particularly regarding update-related failures and software obsolescence. By contrast, the EU framework, built on Directives 2019/770 and 2019/771 and the modernisation of product liability, provides benchmarks for reform. The article suggests avenues for Moroccan law, focusing on clearer categories, conformity over time, update obligations, and the facilitation of evidence for consumers.

Keywords: cyber consumer, digital products, conformity, updates, evidence.

Introduction

The digital economy has profoundly redefined the nature of the products made available to consumers. Indeed, whilst the consumer relationship was traditionally organised around tangible, stable and easily comprehensible goods, it is now increasingly centred on intangible, evolving and interconnected products, whose utility value depends as much on code and a software environment as on a physical medium. Today, mobile apps, downloadable software, subscriptions to digital services, cloud computing platforms, online video games and connected devices incorporating updatable operating systems make up a significant part of everyday consumption. However, this shift is not merely technical; it is reshaping consumers' legitimate expectations by shifting the sources of failure towards issues of compatibility, software obsolescence and updates, thereby further accentuating the information asymmetry in an environment where proof of malfunction often relies on evidence held by the service provider.

The significance of this topic lies precisely in the interplay between these observations. On the one hand, in practical terms, the protection of online consumers loses some of its effectiveness when the law struggles to classify digital products, to assess ongoing compliance, or to ensure that remedies are genuinely accessible in the face of the technical complexity of the services provided. On the other hand, from a theoretical perspective, the emergence of hybrid products and continuous digital services is challenging traditional categories of consumer law, particularly the distinction between sale and service provision, the one-off nature of delivery, and traditional mechanisms of warranty and liability.

Consequently, the challenge is not to apply frameworks designed for tangible goods to a dynamic contractual object, but to assess the capacity of positive law to address a service whose conformity and security are, at times, established after the contract is concluded, in line with updates, patches and functional modifications.

It is from this perspective that this study examines the protection of Moroccan online consumers in relation to digital products, based on the framework established by Law No. 31-08 enacting consumer protection measures and the general rules of the Dahir forming the Code of Obligations and Contracts, in order to identify its limitations in light of the technical specificities inherent to the digital sphere. By contrast, the European experience reveals a trend towards clarification and adaptation, through the introduction of legal categories dedicated to digital content, digital services and goods incorporating digital elements, as well as through the modernisation of compliance, evidence and liability mechanisms. At this stage, the central question then becomes: does Moroccan law provide effective protection for online consumers in the face of the specific characteristics of digital products, and what reforms might be envisaged in light of the European approach?

Consequently, this paper will be structured in two complementary parts, first highlighting the shortcomings of Moroccan law in addressing the specific characteristics of digital products (I), before examining, in a second part, the prospects for reform that may be identified in light of the European experience (II).

I. The shortcomings of Moroccan law in relation to the specific characteristics of digital products

As a result of the digitisation of trade, consumer relations now take place in a technical environment that significantly alters traditional legal frameworks. However, whilst traditional protection mechanisms were designed for relatively stable and easily comprehensible transactions, their application to digital products raises, in practice, new questions. It is therefore necessary to revisit, at an early stage, the points of friction revealed by the application of positive law to these services.

1. The lack of an independent legal classification for digital products

In an approach centred on digital products, the effectiveness of cyber-consumer protection depends first and foremost on a methodological prerequisite, namely the ability of positive law to identify the very subject matter of the consumer relationship. In other words, before discussing conformity, warranty or liability, it is first necessary to determine whether we are dealing with a good, a service, a licence to use, or an autonomous digital service whose logic of access and development cannot easily be captured by traditional categories. It is at this level that the first difficulty crystallises, not so much because Moroccan law ignores digital consumption, but because it does not, at this stage, have a sufficiently refined legal classification of the digital product, even though this classification determines the applicable regime, the scope of the trader’s obligations and, ultimately, the effectiveness of the consumer’s remedies.

Indeed, Law No. 31-08 enacting consumer protection measures [1] does not propose a separate normative category allowing for the isolation of digital content or digital services and confines itself to referring, in deliberately broad terms, to products and services, without making any distinction based on the tangible or intangible nature of the service, nor on the product’s technical dependence on a software environment and updates. Such a lack of differentiation can be explained by the historical circumstances surrounding the adoption of the text, which took place at a time when the Moroccan consumer market was still predominantly structured around tangible goods and traditional services, and when the systematisation of business models based on access, subscription and dematerialisation had not yet reached its current level of maturity. However, whilst this situation is understandable in its context, it has now become problematic given that the service in dispute relies exclusively on a digital medium or a composite technical architecture [2].

Consequently, the absence of legal categories specific to digital products creates a twofold vulnerability. On the one hand, it undermines the classification of the contract, which oscillates between a sale, a provision of services, a licence to use or a sui generis contract, at the cost of legal uncertainty that is detrimental to the consumer. On the other hand, it undermines the implementation of protective mechanisms, which remain designed for stable objects, whereas digital non-conformity must necessarily be assessed over time and in light of specific expectations regarding functionality, compatibility and security. Indeed, a digital product is not only intangible, but it is also frequently evolving, dependent on patches, security updates, interoperability conditions, or even remote hosting [3]. Furthermore, non-performance in the context of these digital services does not always manifest itself as an inherent defect at the time of delivery, but rather as a subsequent functional deterioration attributable to a lack of maintenance, software obsolescence or a unilateral modification of the operating environment. This is indeed a situation of legal uncertainty regarding how to apply the

definitions and concepts of traditional liability to products of the digital economy [4].

By way of illustration, the difficulty in classification is particularly acute in the case of a Moroccan consumer who purchases, online and for a fee, downloadable video editing software, with access accompanied by a right of use presented as unlimited but governed by general terms and conditions that may change at the publisher's discretion. A few months after installation, an update made necessary for technical reasons results in the imposition of a new version that proves incompatible with the user's operating system, rendering the software, in practice, unusable. Such a situation immediately places the consumer in a position of legal uncertainty: should they invoke the warranty against hidden defects governed by Articles 549 et seq. of the Dahir forming the Code of Obligations and Contracts, even though the malfunction stems less from a defect inherent in the product at the time of delivery than from a subsequent software update and a compatibility requirement? Can they, on the contrary, rely on the rules governing breach of contract, in particular those relating to termination for non-performance provided for in Articles 259 et seq. of the same Code, by arguing that the trader has failed to ensure the promised functionality, or has not taken the necessary measures to maintain the service in accordance with the expected use? As the law currently stands, the answer remains uncertain, as software does not fully fall within the category of tangible goods subject to traditional warranty principles, nor within that of a conventional service whose performance could be easily assessed in terms of an instantaneous and stable service. This uncertainty, far from being purely theoretical, undermines the effectiveness of cyberconsumers rights and highlights the need for a conceptual framework specific to digital products.

Indeed, this difficulty relates to debates that have already arisen in European law and on which case law has already ruled, accepting that the supply of downloadable software in return for payment, accompanied by an unlimited right of use, could be likened to a sale under Directive 2009/24/EC, thereby establishing the principle that the absence of a physical medium does not, in itself, prevent the digital product from being regarded as an autonomous legal object [5]. However, such a clear body of case law has not yet emerged in Moroccan law, which creates legal uncertainty for the parties, particularly when it comes to determining the regime of liability, warranty or evidence applicable to a digital service.

2. The unsuitability of traditional warranty and evidentiary mechanisms

The second structural limitation stems from the inadequacy of traditional warranty and evidence mechanisms when applied to digital products, where failure is less attributable to an intrinsic and initial defect than to software updates or a lack of maintenance over time. Under Moroccan law, the warranty against hidden defects, as established by the provisions of the DOC [6], is based on a physical representation of the item sold. This refers to a defect existing prior to the sale, which is concealed and sufficiently serious to affect the normal use of the goods. However, a digital defect, by its very nature, frequently develops over time and operates within a constantly changing technical environment. It may thus result not from a defect pre-existing at the time of delivery, but from a failure to update, the evolution of an operating system, a change in interoperability imposed by a third party, or even a unilateral modification of a software component essential to the product's operation. In these circumstances, the mechanical application of the hidden defect framework shifts the focus of the analysis to proving the defect's pre-existence, even though the core of the dispute actually concerns the continued provision of an expected functionality and the maintenance, over time, of a level of performance consistent with the legitimate expectations regarding the use of the digital product.

The example of connected devices makes this difficulty particularly tangible. Indeed, when a consumer purchases a smartwatch, the physical item is, in practice, merely a means of accessing a set of functions dependent on a mobile app, remote servers and regular updates. If the manufacturer ceases to provide the updates necessary for compatibility with new versions of the operating system, the watch becomes partially unusable, with certain functions ceasing to respond, the app no longer opening, or synchronisation no longer being guaranteed. Can it therefore reasonably be argued that the defect existed at the time of sale within the meaning of the warranty against hidden defects, when the watch's inoperability results from a break in the maintenance chain and subsequent external developments? Such a question reveals that traditional logic struggles to grasp the specific nature of digital products, whose conformity cannot be assessed instantly but must be considered in the light of ongoing requirements for compatibility, security and performance.

Furthermore, the inadequacy of the Moroccan legal framework becomes even more apparent when considering the rules of evidence. Indeed, Moroccan law does not, to date, provide for an evidentiary mechanism specifically geared towards digital products, even though digital non-conformity often manifests itself over time and results from complex interactions between software, hardware and remote infrastructure [7]. Consumers therefore remain subject to a particularly heavy burden of proof, all the more so when the trader invokes external technological developments to absolve themselves of any liability. In practical terms, establishing the cause of the malfunction requires access to technical data that the consumer does not possess, such as event logs, firmware versions, patch histories, support policies or interoperability documentation [8]. Under these circumstances, the failure to adapt the warranty regime and the rules of evidence does not merely constitute a lack of regulatory precision but profoundly undermines the effectiveness of remedies, perpetuates a structural information imbalance and highlights the need for targeted reform, centred on conformity over time, the obligation to update, and a reduction in the burden of proof in favour of the online consumer.

II. Prospects for reform of Moroccan law in light of the European approach to digital products

Following the observation that Moroccan positive law is inadequate in the face of the specific characteristics of digital products, it appears necessary to consider the conditions for a coherent and structured regulatory adaptation. In this regard, the European experience offers a particularly relevant framework for analysis, in that it has progressively integrated the technical realities of the digital age into contractual categories, compliance mechanisms and liability regimes. Consequently, any examination of the prospects for reforming Moroccan law must consider the modalities of a reasoned transposition of these instruments, without disregarding the specific balances inherent in the national legal system.

1. The establishment of an autonomous legal regime for digital products

The European experience shows that the effective protection of the online consumer necessarily requires a clarification of legal categories. In this regard, Directive (EU) 2019/770 of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services [9] introduced a fundamental distinction between, on the one hand, digital content, which refers to data produced and supplied in digital form, and digital services, on the other, which are understood to mean, in particular, a service enabling the consumer to create, process or store data in digital form, or to access it [10]. This distinction is not purely theoretical but aims, more practically, to ensure effective consumer protection by determining, from the outset, what is due, according to which requirements, and under what conditions the service can be deemed to be in conformity [11].

Building on this distinction, the European framework is structured around an obligation to supply digital content or digital services in conformity, which is conceived as a benchmark standard rather than a mere formality of delivery. Conformity, in this context, is understood in terms of the agreed characteristics, but also in relation to the requirements objectively expected of a comparable digital service, taking into account in particular functionality, compatibility, interoperability and security [12]. Such an approach addresses a difficulty specific to the digital realm, namely that a lack of conformity is not always detectable at the time of supply, nor even attributable to an initial anomaly, but sometimes manifests itself through use, the technical environment or the evolution of an operating system. Consequently, conformity cannot reasonably be assessed immediately. It is assessed over time, in relation to a level of performance and reliability consistent with the promised use and the consumer's legitimate expectations.

To illustrate the scope of these provisions, one might cite the example of a consumer who takes out a subscription to an online storage service promising a capacity of 1 terabyte and permanent access. In this case, a unilateral reduction in available space or repeated unjustified interruptions may constitute a lack of conformity within the meaning of the provisions of the aforementioned Directive. Article 14 of the Directive provides for graduated remedies, including bringing the goods or services into conformity, a proportionate reduction in price, or termination of the contract [13]. The advantage of this framework lies in the fact that it does not compel the consumer to reclassify the dispute as a hidden defect or a tortious liability claim but, on the contrary, offers them a legal remedy centred on the concept of conformity, that is to say, on the digital service's ability to effectively fulfil the function contractually expected of it.

Furthermore, Directive [14] requires the provision of updates necessary to maintain the conformity of the digital content or service for the period reasonably expected by the consumer. This obligation constitutes a key innovation in light of the evolving nature of digital products and enables the handling of situations such as the premature discontinuation of security updates for antivirus software or a banking app.

This framework is extended, in the same spirit, by Directive (EU) 2019/771 [15] on the sale of goods, which provides a

specific regulatory framework for goods incorporating digital elements, i.e. goods whose functionality depends, inseparably, on digital content or a digital service [16]. The value of this approach lies in the explicit recognition of the hybrid nature of certain products. A smartphone, for example, is no longer regarded as a mere tangible good, and its conformity depends closely on the regular provision of software updates. If the manufacturer ceases to provide these updates after an abnormally short period, the consumer may claim a lack of conformity.

Applied to the Moroccan context, this logic implies a reform of Law No. 31-08 to introduce a legal definition of digital content, digital services and goods incorporating a digital element. Such a reform would remove the uncertainty regarding classification mentioned above and establish a specific regime of conformity including an explicit obligation to provide updates.

It would also be appropriate to introduce a presumption of non-conformity where the defect appears within a specified period following supply, in line with the provisions of the European directives which adjust the burden of proof in favour of the consumer [17].

2. Strengthening liability and regulatory mechanisms for digital products

Beyond the recognition of a specific regime for digital content and services, the European experience highlights a second imperative: that of adapting civil liability mechanisms to the specific risks of the software economy. Indeed, when a product's operation depends on code, an update, interoperability or a remote service, the damage no longer stems solely from a perceptible material defect, but may result from a software failure, an unpatched cybersecurity vulnerability or an update that impairs the product's performance or safety. It is precisely to address this shift that Directive (EU) 2024/2853 on liability for defective products [18] modernises the 1985 framework and enshrines an explicitly digital-focused approach, by expressly incorporating software into the concept of a product and acknowledging the central role of updates in assessing defects.

The main benefit of this modernisation lies in the way it reconfigures the very concept of defect in an evolving technical environment. Whereas the traditional regime focused primarily on the placing on the market of a physical object and its original defect, the European approach recognises that the safety expected of a product may be affected by subsequent conduct, particularly where a manufacturer retains a degree of control over the product's development through updates, patches or software architecture. Consequently, a defect can be analysed on the basis of a set of specifically digital indicators, such as inadequate cybersecurity protections, the absence of necessary updates, functional degradation following an update, or the effects of machine learning or software modifications occurring after the product has been placed on the market [19]. The manufacturer's liability remains, of course, structured around proof of a defect, damage and a causal link, but it is freed from the traditional requirement to prove fault, which is a decisive factor in situations where the consumer, or the victim, has neither access to the code nor to technical logs, nor the ability to reconstruct the causal chain.

The significance of this shift is all the greater given that damage in the digital economy is not limited to physical injury or traditional material damage. Software systems can cause more diffuse harm, particularly through data corruption or loss, or the disruption of essential digital services. In this context, adapting the liability regime becomes a tool for building trust, in the sense that it makes product safety and the continuity of its technical support legally enforceable, whilst encouraging producers to integrate cybersecurity, maintenance and update management into their compliance model.

In the same vein, the protection of online consumers cannot be viewed solely through the prism of product defects and compensation for damages, given that digital risks often arise at an earlier stage, namely during the marketing phase and in relation to pre-contractual information. In this regard, EU law also draws on the framework of unfair commercial practices to impose greater transparency in digital environments, particularly where the pricing structures, subscription or options presented to the consumer are likely to distort the perception of the actual cost of the service [20]. The interpretation given by the Court of Justice in the Canal Digital Danmark judgment illustrates this requirement, in that it confirms that, in a digital context, a presentation of prices likely to mislead the consumer may constitute an unfair commercial practice, which usefully complements the logic of security and trust pursued by conformity and liability regimes [21].

Moroccan law could usefully draw inspiration from these mechanisms by adapting the articles relating to the pre-contractual information obligation to include specific requirements concerning software compatibility, the foreseeable duration of updates and the conditions for modifying digital functionalities. A reform could also consider enshrining an explicit right to data portability in the event of the termination of a digital service contract, in

conjunction with the provisions of Law No. 09-08 on the protection of personal data [22].

Finally, the European approach shows that the protection of online consumers cannot be limited to the contractual framework. Regulation (EU) 2022/2065 on digital services, known as the Digital Services Act [23], imposes due diligence obligations on platforms regarding transparency and the removal of illegal content. Although this text goes beyond the strict scope of digital products, it illustrates the need for structural regulation of the digital ecosystem.

In the Moroccan context, a gradual adaptation could be envisaged to regulate the obligations of platform providers distributing applications or digital content, particularly regarding cooperation with the authorities and the handling of consumer complaints.

Conclusion

The digital transformation highlights a growing disconnect between, on the one hand, the technical reality of digital products—conceived as evolving services dependent on updates, interoperability and remote services—and, on the other hand, the categories and mechanisms on which the bulk of consumer protection under Moroccan law still relies. The analysis has clearly shown that the lack of an autonomous classification of digital products, combined with the application of guarantees designed for tangible goods, undermines the effectiveness of remedies, both at the stage of determining the applicable regime and at the stage of proof, where information asymmetry tends, in practice, to neutralise the rights of the online consumer. Consequently, the real difficulty is not so much the absence of protective principles as the inadequacy of legal tools for ensuring digital conformity, which is assessed over time.

In this context, the European experience appears less as a model to be mechanically transposed than as a method, consisting of deriving appropriate categories, coherent obligations and realistic evidential mechanisms from the technical specificities of the digital environment. The distinction between digital content, digital services and goods incorporating digital elements; the objective assessment of conformity based on criteria of functionality, compatibility and security; the inclusion of an obligation to update; and the modernisation of liability for defective products all reflect the same objective: to make protection genuinely enforceable when the failure is neither instantaneous nor strictly physical. Similarly, the deployment of regulatory instruments, particularly regarding transparency and platforms' due diligence obligations, serves as a reminder that the protection of online consumers is also at stake within the digital distribution ecosystem.

Consequently, a reform of Moroccan law would benefit from following a progressive and structured approach, first by clarifying the concept of 'digital products' to stabilise legal classifications, then by adapting obligations and remedies to the reality of evolving services, and finally by strengthening, where necessary, the mechanisms for liability and market regulation. Such a development would help to remove the current legal uncertainty and restore the effectiveness of protection in the most common situations, particularly those relating to the discontinuation of updates, imposed incompatibilities, functional changes or technical opacity. Ultimately, the issue goes beyond terminological modernisation and concerns the consolidation of the legal conditions for sustainable consumer confidence in the digital age.

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