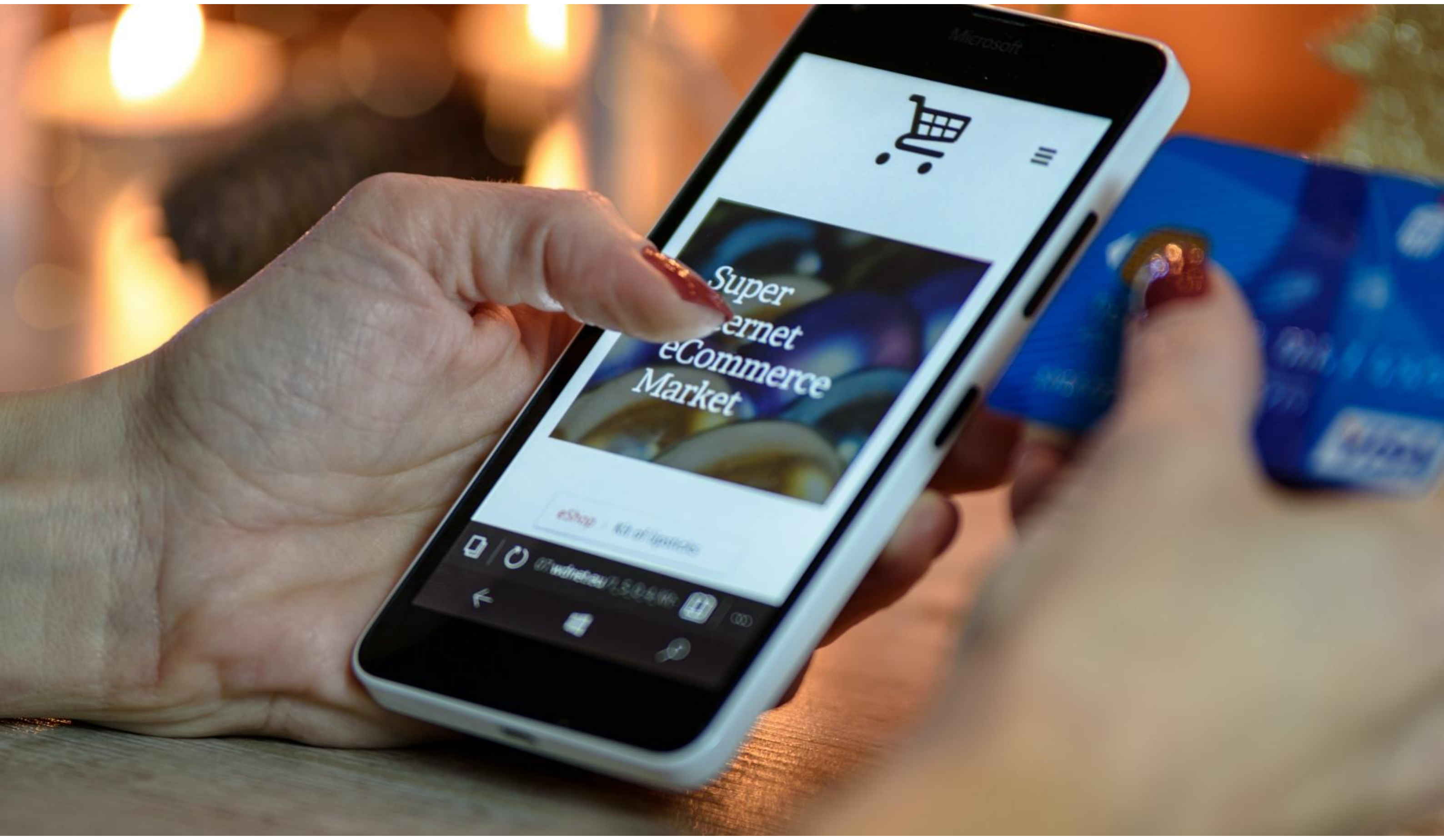

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MOLDOVA RAPID E-COMMERCE REVIEW

USAID MOLDOVA STRUCTURAL REFORM PROGRAM

October 2020

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Tables

ACRONYMS

API	Application Programming Interface
GoM	Government of Moldova
MoEI	Ministry of Economy and Infrastructure
USAID	United States Agency for International Development
B2C	Business to consumer
B2B	Business to business
G2C	Government to consumer
NBM	National Bank of Moldova
MSRP	Moldova Structural Reform Program
PSP	Payment Service Provider
PSD2	Payment Services Directive 2 (European Union)
PISP	Payment Initiation Service Provider
GDPR	General Data Protection Regulation (European Union)
CCPA	California Consumer Privacy Act
NCPDP	National Center for Personal Data Protection
BPMN	Business Process Model & Notation
ASYCUDA	Automated System for Customs Data
OPCML	Office for Prevention and Combating of Money Laundering
STISC	Information Technology and Cyber Security Service
NEPPP	National Electronic Payment Processing Platform
CX	Customer Experience (CX)
UX	User Experience (UX)
ODIMM	Organizatia pentru Dezvoltarea Intreprinderilor Mici si Mijlocii

EXECUTIVE SUMMARY

Digitization of the national economy and development of e-commerce is a national priority for Moldova. This is reflected in the e-commerce Roadmap developed in early 2020 by the Ministry of Economy and Infrastructure. The need for this development is exacerbated by the recent Pandemic crisis. When working effectively, e-commerce has the potential to enhance the overall economy, drive up exports, and allow the Government to enhance tax collection. However, for e-commerce to thrive, all stakeholders need to ensure that a conducive environment is created.

USAID, through the Moldova Structural Reform Program (MSRP), commissioned a rapid review of the e-commerce landscape in Moldova with the view of quickly identifying any roadblock and offering its support for the development of e-commerce in the country.

The project was commenced around the 8th of July 2020, with a team comprising local and international experts. Given COVID restrictions, the expert team engaged with over 135 stakeholders in online meetings. 41 Meetings were carried out with the highest-level representatives from Government Ministries, Regulators, Development Partners, Associations, Logistics Firms, Telecommunication Providers, Payment Providers, SMEs, and E-Commerce Merchants. The meetings were aimed at understanding the critical roadblocks to the development of e-commerce. In many cases, we re-engaged with stakeholders to gain more insights or test our understanding and recommendations.

Through desk-based research and interviews, the experts found that the majority of the necessary building blocks of an e-commerce ecosystem are in place in Moldova. In other words:

1. Government policies and regulatory regimes are moving in the right direction
2. Fiscal incentives have been successfully implemented for specific sectors such as the IT
3. The infrastructure necessary for e-commerce is mostly in place.
4. The financial and payment system currently facilitates e-commerce transactions, and consumers have access to a variety of non-cash channels to make payments.
5. Logistic services are mainly in place for local and export deliveries.
6. Marketing and branding are being supported, although much work remains to educate small merchants on its importance.

There have been many interventions to get the necessary building blocks in place, and the expert group found a significant number of studies that informed their research. Whilst, all the building blocks are in place, there is evidence of friction within the system that needs to be addressed to get e-commerce accelerating in Moldova.

STRENGTHENING GOVERNANCE & IMPLEMENTATION AT A NATIONAL LEVEL

Despite a number of initiatives, e-commerce is slow or even stagnant in its development. Why is this the case? This was a topic of intense discussion among the expert team. The major conclusion they reached is that there is an absence of a centralized leadership framework to coordinate the various initiatives to drive the desired outcomes.

Moldova could benefit from a more comprehensive digital vision and strategy, where e-commerce is a part of it. Furthermore, Moldova would benefit from an implementation body at the national level that could program and manage all the digital and e-commerce initiatives and coordinate the provision of technical support where required.

The expert group also concluded that the private sector's involvement in the design and implementation of a digital and e-commerce strategy is crucial to success.

Getting Governance and implementation right at the national level is paramount. Without it, the expert team highlighted that even this report would end up in the elaborate archives of previous studies and recommendations. We propose two governance and implementation arrangements for consideration.

OVERVIEW ASSESSMENT OF E-COMMERCE IN MOLDOVA

The first key finding is the quasi-absence of e-commerce specific data collection and statistics. Naturally, it is difficult to measure any progress if there are no data sets to rely on.

Benchmarked against regional developments, Moldova’s e-commerce is at an early stage of development. While the necessary infrastructure exists, both end-users and merchants seem to resist online channels for commerce.

Current e-commerce volumes are low; however, it is noteworthy that a consistent number of Moldovan’s seemed to prefer international online e-commerce platforms to local ones. Frictions and inconvenience are cited as the main reason causing inertia in Moldova’s e-commerce markets.

Overall, as things exist today, there are disincentives and barriers for merchants to go online, and for consumers to prefer digital over electronic channels for buying and paying for goods and services.

LEGAL & POLICY BARRIERS

Legal frameworks are in place, but inconsistent and self-contradictory interpretations by the regulators cause critical bottlenecks that stand in the way of e-commerce.

For example, one part of the law on data protection is restrictive in accepting other consent forms, such as a checkbox or a click. Albeit not being applied, another part of the same law exempts merchants from the obligation to obtain customer’s consent during an online checkout process. Meanwhile, the strictest data protection laws in the world (GDPR and CCPA) do accept the click or checkbox as consent. This issue has been raised and acknowledged for years, yet the problem remains. Changing the law can take years; we have identified a practical quick-fix recommendation.

Distant customer identification is another anomaly that can stop e-commerce altogether. The law allows for distant identification; however, the AML agency threatens prosecution if a person is not systematically and physically identified during onboarding. In other words, distant commerce is only possible if there is a physical encounter first. Participants have testified that this rule is a forced exposure to contamination risks during pandemic times. In reality, the law only classifies the absence of physical presence as a risk, to mitigate via enhanced due diligence, and not as an interdiction per se. A National Bank regulation specifies to banks the requirements for conducting distant customer identification, further proving the legality of such a method. Current and former EU AML directives have been authorizing and leveraging distant customer identification for almost two decades.

There are also discrepancies between the different laws regulating e-commerce and other normative regulations, such as consumer protection laws. Coherence and harmonization will ensure clarity and reduce the cost of compliance, as merchants and other players in the ecosystem would not be forced to seek legal counsel before launching or expanding their e-commerce venture.

FISCAL AND ACCOUNTING CHALLENGES

Informal sellers have an unfair competitive advantage, as they avoid applying VAT and other taxes to their retail prices. Therefore, they can sell at far lower prices and have no incentives to formalize their business. When the e-commerce merchants scale, they hit the VAT registration threshold, and from that point onwards, they need to apply a steep 20% or more increase in prices, which turns away buyers. As a mitigation technique, small merchants avoid growing beyond the threshold or register a new company and split their transaction volume among the two entities, effectively doubling their overall VAT registration threshold.

E-factura or electronic invoicing is the dysfunctional digital version of an otherwise complex requirement. The "Factura" is a billing rule that requires both the seller and the buyer to get every B2B invoice signed by their respective executives or their official accountants. Our discussions with SMEs highlighted that such a requirement pushes buyers to pay for small B2B purchases informally, using personal cards or cash, to avoid the time and troubles of running after both sides' signatories. Complying with the "Factura" rule reduces SMEs' performance as they unnecessarily spend critical time and resources on every little B2B transaction, and at every step of their value and supply chains.

Similarly, the "e-bon fiscal" is another dysfunctional digital version of a fiscal payment receipt requirement. These printed receipts can only be printed by specific devices known to be unreliable and expensively sold and maintained by a handful of authorized providers. Small logistics firms offering cash-on-delivery payments for e-commerce purchases are suffering the most from the dysfunctional machines and the instability of the fiscal API. The resources invested in compliance with the "bon fiscal" requirement effectively double the actual cost of last-mile cash-on-delivery. Some logistics companies are looking at replacing the fiscal printers by a Mobile App through which customers can sign on delivery and receive an electronic "bon fiscal", provided that the API from the fiscal authorities do work as expected.

Merchants face further challenges because of the Fiscal authorities' complex accounting, reporting, and auditing requirements. The study has found that a Moldovan SME incurs twice the bookkeeping costs of an American SME, for the same turnover, and with a lower purchasing power.

FINTECH, PAYMENTS AND WIDER FINANCIAL SERVICES.

Consumers choose financial exclusion because they lack trust in the financial system, and therefore prefer cash as the best payment mechanism.

Merchants avoid non-cash payment mechanisms because of high interchange fees, the high cost and inconvenience of installing payment solutions on their e-commerce website, and high deposit requirements by banks and other payment providers. While many financial services products such as loan and equity financing for merchants, insurance, and point of sale credit for end consumers, are available, merchants prefer not to take advantage of them and hence limited scalability.

The regulators have been progressive enough to allow alternative payment providers. However, based on the past crisis of confidence in the financial system, regulators are wary of allowing competition, innovation, or disruption. Thus, the status quo remains, allowing banks and card companies to dominate and dictate terms. Newcomers find it extremely restrictive to enter the financial services market because of high regulatory requirements and the difficulty in openly engaging with the regulators.

Alternative payment providers are admittedly a lot better than traditional players, according to ecommerce merchants; however, they do not offer their service to the same standard as international players. They are also constrained in being able to reduce payment fees because they are solely reliant on the banks to process payments.

The private sector is keen to develop a Fintech sector in Moldova. However, initiatives underway would benefit from extended coordination rather than specific types of companies or sub-sectors.

DOMESTIC AND EXPORT LOGISTICS

Domestic logistics are in place and allow for added value sellers to deliver their orders cost-efficiently. Improvements can be made by Posta Moldovei and two other last-mile logistic providers, especially about system integration (APIs) and service level agreements.

We found anecdotal evidence that shows a tendency for SMEs and market players to build and maintain their own storage, fleets, and logistics operations.

There is an evident lack of e-fulfillment solutions such as "Fulfilled by Amazon," although some projects along these lines are emerging. If such a solution were available, we believe that e-commerce could develop faster.

On the export front, the logistics situation is worse. Export processes result in a slow and costly export of goods, especially for SMEs. Export documentation is cumbersome, and merchants do not mutualize resources like "Bulk and Break" solutions. The international return of goods is almost impossible to deal with.

In terms of logistics infrastructures, the country suffers from multiple pain-points such as; delays in constructing the Chisinau Giurgiulesti port highway, a blockade of road freight towards the east because of the Transnistria issue, long delays at the crossing of the Romanian border, and the non-recognition of the Cernavoda as an international waterway by Romanian custom authorities.

BRANDING & MARKETING

We noticed a clear lack of advanced digital marketing know-how and solution providers, which lead to low margin e-commerce businesses that barely survive, let alone scale.

At the branding level, a number of sectorial brands are being deployed; however, we could not find any follow-up actions on the "Made in Moldova" initiative. We strongly invite the authorities to secure the "Made in Moldova" trademark registration and build upon it at later stages.

On international marketplaces such as Amazon, eBay, Alibaba, and Etsy, we have noticed that Moldova is under-represented as compared to its neighboring countries.

On the other hand, we have identified the great potential for Moldovan SMEs to leverage the opportunity of e-Exports, especially towards the EU market. Moreover, we believe that SMEs have better chances of competing if they invest in Direct to Consumer (D2C) e-commerce, leveraging their quality and branding, rather than competing on volumes and prices.

An additional Fiscal-Marketing-Logistic opportunity of obtaining EU VAT numbers for Moldovan SMEs has been highlighted. It can enable SMEs to import and distribute their products on the EU online marketplaces without any intermediary.

SUMMARY OF RECOMMENDATIONS

We set out a summary of our recommendations and their alignment with the MOEI roadmap. Highlighted in red are the critical quick-win recommendations that are to be deployed immediately.

MOE REF.	MSRP REF.	OWNER	TITLE
NA	AML-01	AML Office	Publication on Distant Customer Identification (cases, technical & security requirements)
30	POS-01	Posta Moldovei	Develop an API for third parties & e-commerce platforms integrations
9	DAT-01	Data Protection Agency	Publication on the exemption from the consent requirement for e-commerce checkouts
9	DAT-02	Data Protection Agency	Amend Law no. 133/2011, adding different formats of customer's electronic consent
3	CON-01	Consumer Protection Ag.	Amend Law no. 105/2003 on consumers' rights in line with Civil Code
NA	MOE-01	MOEI Ministry of Economy	Update & ensure cross-reference between E-commerce law (284/2004) & other laws
22	MOE-02	MOEI Ministry of Economy	Create Incentive Mechanisms for the Development of Fintech
NA	MOE-03	MOEI Ministry of Economy	Include e-fulfillment services development to existing industrial parks projects
10	MOE-04	MOEI Ministry of Economy	Develop an advanced digital marketing capacity building program
11	MOE-05	MOEI Ministry of Economy	Assess the opportunity to register a state trademark & program "Made in Moldova"
35	MOE-06	MOEI Ministry of Economy	Encourage Direct to Consumer business model for SMEs
35	MOE-07	MOEI Ministry of Economy	Fiscal/Logistics/Marketing e-Export corridors to EU Marketplaces (quick-win)
NA	GOV-01	Government of Moldova	Define and implement a Digital Transformation Governance
5	EGO-01	E-government Agency	Company register website upgrade for international e-commerce compliance facilitation
13	NBM-01	National Bank of Moldova	Accelerate the Promulgation of PSD2 - allowing open banking
13	NBM-02	National Bank of Moldova	Launch of a Regulatory Innovation Hub for Fintech & PSPs
13	NBM-03	National Bank of Moldova	Lower licensing threshold conditions for small payment service providers
NA	MOF-01	Ministry of Finance	Creation of an Open Banking Implementation Entity
15	MOF-02	Ministry of Finance	A unified & instant collection VAT rate of 10% to boost e-formalization of SMEs
8	MOF-03	Ministry of Finance	Extension of the IT Park fiscal package to Fintech firms and SMEs from other sectors
22	ASO-01	ATIC & APCFA	Launch a Focused Fintech Association
NA	STA-01	National Bureau of Statistics	Develop & deploy an e-commerce specific data collection framework

Table 1. Summary list of recommendations and MOEI roadmap correspondences

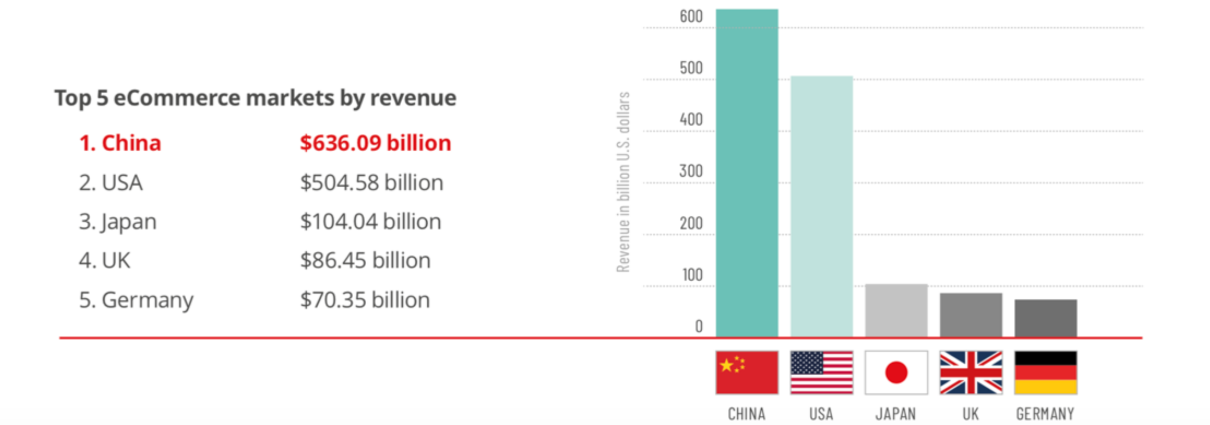
Source: MSRP team research

CHAPTER 1: INTRODUCTION

SUMMARY OF UNDERTAKING & VISION

E-commerce is a global trend, continuously growing worldwide. According to various sources, the largest e-commerce markets currently are China, the USA, Japan, UK, and Germany. Yearly revenue from e-commerce sales has already passed the half-trillion dollars mark in China and the USA

Figure 1. Top five e-commerce markets by revenue (2019)



Source: https://www.worldretailcongress.com/__media/Global_e-commerce_Market_Ranking_2019_001.pdf

Digital transformation of the Moldovan economy and e-commerce is at the forefront of the Government's agenda. COVID pandemic of 2020 has highlighted the importance of e-commerce, and MSRP wants to seize this opportunity and commissioned a quick Rapid Review of e-commerce opportunities. The idea is to build on the 2018 Moldova SAF-DE report's recommendations, which sets out to develop a vision and roadmap for e-commerce development in Moldova, providing specific and actionable recommendations and clear expected outcomes.

The vision for Moldova and this project is clear. Government has to find a way to drive economic growth rapidly through e-commerce, as one of the options. Furthermore, a digitized and modern economy will also help the country get closer to the desired European Union integration, boosting trade, and economic development. Digitization of commerce takes transactions out of the grey market and thus increase tax collections.

It is encouraging to see green shoots in the field of e-commerce in the country, as it is still quite a small sector, but one that is growing and can substantially scale even further, especially in light of changing consumer due to the Coronavirus pandemic. Several "e-commerce only" SME's are emerging, and many brick and mortar stores are also looking to expand online. SMEs receive significant support from development partners to drive marketing and sales.

The e-commerce ecosystem is developing. We found at least two or three domestic private sector providers for every component of the e-commerce ecosystem. Digital innovation and Moldovan Government support for the IT sector contributes to the emergence and growth of e-commerce. The government's achievements in launching the IT Park must be acknowledged as a critical advance for the digitization of the economy, and potentially for the benefit of many other sectors.

In addition to the IT Park, Government has demonstrated some progress in the area of digital transformation. We found evidence of a plethora of initiatives on track for implementation or already bearing results, including:

- MOEI E-commerce Roadmap and Digital Moldova 2020 strategy
- Recognition of electronic signature and eKYC
- Commercially connecting up all Government and public authorities through MPay
- Secure data exchanges between government entities through MConnect
- Government to Consumer facilitated by MPay.

eGovernment is usually the first stage in the digitalization of the economy and specifically payments. When the government forces people to use electronic channels to pay and receive funds, they become accustomed and are more likely to use digital finance channels and other portals.

These digital initiatives demonstrate the Government and its various agencies' ability and capacity in developing complex systems, quickly and efficiently. The country now needs to build on these highly prized capabilities already developed. It also bodes well for the development of e-commerce.

Moldova is very fortunate to attract international Development Agencies and Donors' technical and financial support, such as USAID, GIZ, the EU, the UN, and many others. Support is ongoing, and there is an eagerness to help Moldova progress and thrive. The IMF and the World Bank are also key players in supporting and financing programs and are actively involved in bringing about positive change and development in Moldova. Suffice it to say that "international funding" for Moldova is not the main issue here.

E-COMMERCE INITIATIVES TO DATE

We found evidence of support programs for the development of e-commerce: Tekwill, one of the most prominent Development Partner, announced, in July 2020, an initiative to encourage the IT companies to apply for co-financing of ongoing, work or new concepts using information technologies to boost the e-Commerce in Moldova.

The defined areas for support were: Online Stores/Marketplaces; E-commerce Marketing (Online and Offline); Payment Gateway (Online Transaction); E-commerce Security; Product Acquisition; Shipment/Delivery; Supply Chain Management; Warehousing; Customer Care Assistance; Debt (Accounts Receivable, Disputes) Management

Out of eighteen participants, six were selected for co-financing: specific solutions such as:

a. A fiscal gateway.
b. A concept for the payment switch.
c. API connections between SaaS solution and delivery companies (Muvi Express, Nova Poshta)
d. An API for the on-lending.
e. Payments plug-ins for various CMS.
f. An e-commerce payments platform (for payments and in addition to the banks' gateways)

While these recommendations will go some way to accelerating e-commerce, we believe that we have found the key missing ingredient, which will put e-commerce back on the accelerated path if addressed. We genuinely believe that our finding is pivotal and will break the cycle of even more expert recommendations piling up in archives, without being implemented.

Our key findings highlight the absence of a cohesive governance and implementation structure that should regularly bring relevant stakeholders around the table to address e-commerce and broader digital transformation initiatives. These initiatives should take a macro perspective, with a detailed understanding of interdependencies and how best to sequence implementation in the most efficient manner.

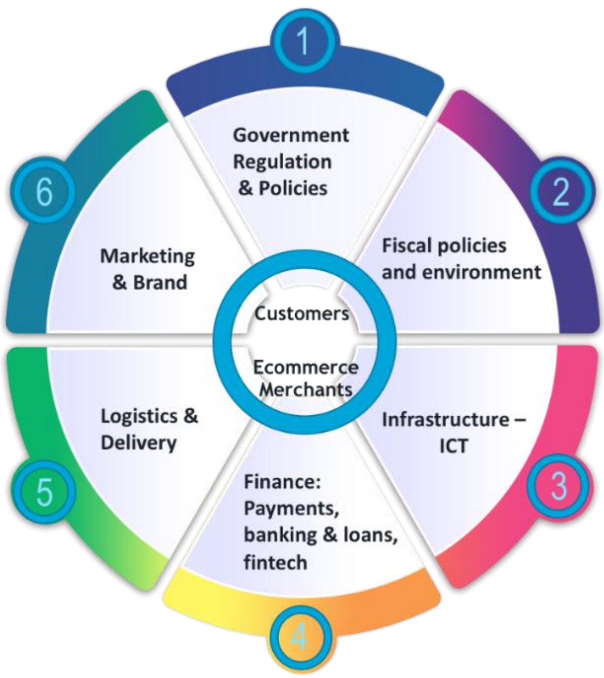
The right governance structure with the right level of authority and representation by key decision-makers can drive e-commerce from the top. A crossbody public and private implementation structure can execute agreed strategies with robust oversight and holding people accountable. Multibody working groups can focus on specific implementation initiatives, ensuring that things get done correctly and on time at ground level. With such a structure (detailed later in this report), the desired results that e-commerce can bring to Moldova will indeed be realized

A compelling vision that gets all stakeholders' buy-in is another powerful driver for quick, effective, and results-driven change. A vision for e-commerce is not enough. Moldova would benefit highly from rolling out a more comprehensive Digital Transformation Strategy at the national level. Evidence from neighboring countries like Estonia, and Ukraine, who have gained international prominence for their digital efforts, confirms the importance and benefits of a national digitalization initiative. When addressed in a broader digital strategy, e-commerce has greater chances of realizing economic and social benefits.

METHODOLOGY, LIMITATIONS & PRIORITIZATIONS

The team of experts has developed a "non-standard" methodology to capture more granular and holistic information, including some of the activities happening in the informal market. This proposed approach addresses both the "top-down" and "bottom-up" perspectives, which are required to have a more comprehensive view and understanding of the subject. We approached our analysis by analyzing the various interdependent components that make up the e-commerce ecosystem.

Figure 2. The e-commerce ecosystem



Source: MSRP Team – The six elements that compose the e-commerce ecosystem

Our methodology is based on a multi-disciplinary approach:

First, we approach the disciplines of marketing, payments and finance, logistics, and taxation as an interrelated ecosystem with the fiscal environment playing the role of a connecting plate. This holistic perspective highlights the underestimated importance that tax compliance plays in commerce and exponentially in e-commerce.

The study also covers the regulations and policies as well as the infrastructure & IT service offering so to complete the full e-commerce ecosystem.

Every component of the ecosystem has to be sequenced in the right order and all components must work together to bring about the desired results. For instance, we may not envisage a great return on investment on a marketing campaign unless we can efficiently collect payments from the target market and present an offer inclusive of sales taxes, duties, and shipping fees. Likewise, a company cannot open a payment or bank account unless it is compliant with fiscal regulations. Deliveries and returns management are also intrinsically linked with complex and sometimes outdated fiscal rules and consumer protection policies.

We started our interviews with SMEs, representing the vital demand component, without which, the e-commerce ecosystem cannot function. Through discussions, we captured their most immediate concerns. We then calibrate initial findings through interviews with solution providers such as payments and logistics companies. Finally, we bring the discussion to the regulators and public institutions concerned, understanding the wider policy and regulatory aspects that may or may not hinder the progress of e-commerce.

Where needed, we reconvened new meetings to calibrate our findings or dig deeper into a specific issue or potential opportunity.

We highlight certain challenges and limitations of our study:

1- We had a narrow time window within which to carry out the study, as the intention was for rapid review. A detailed study to investigate certain findings in more detail, may well be necessary further down the line, as this initial findings reveal directional findings that may need to be confirmed.
2- A dynamic political landscape may impact how the recommendations are implemented, and we cannot be sure who will take responsibility for certain recommendations, although, we have ventured to propose the relevant body that may take responsibility for certain recommendations.
3- The pandemic limited face-to-face interviews and to that extent, video conferencing may limit the extent of participation by interviewees, depending on their level of comfort engaging online.
4- The mandate was to make the recommendations practically and quickly implementable, which may not always be the case where certain recommendations may require a medium to long term time frame. This is especially the case in the area of payments and finance.

Given the context, the research team has focused on the most immediate bottlenecks impeding the development of e-commerce. As a result, this study may not provide exhaustive coverage, nor can it address in-depth mid-long-term issues.

The resulting output will mainly consist of preliminary findings of the current state of e-commerce and a proposed vision on how to develop E-commerce. The study also formulates a set of recommendations that can be implemented within six months and with little resources (quick wins). We have, as far as is possible, mapped our recommendations to the corresponding Roadmap recently developed by the Ministry of Economy and Infrastructure, with a few to highlighting overlaps and facilitating efficient implementation initiatives.

In addition to specific recommendations, we make concrete recommendations on specific governance and national coordination initiatives that can help in ensuring that the recommendations are implemented. Where possible, we have also brought in international best practice and case studies that will further support implementation initiatives.

CHAPTER 2: THE DIGITAL TRADE POLICY LANDSCAPE

Moldova was an early adopter of e-commerce legislation, sixteen years ago, with Law 284/2004. Since then, multiple laws and regulations have been promulgated, and most of them have been recently updated and or are being aligned with equivalent EU legislations. The general legal framework for e-commerce is in place, and we could find no critical gaps. We have summarized the most relevant regulations related to e-commerce.

THE E-COMMERCE REGULATORY FRAMEWORK

Further below, we propose a table that presents our analysis of the laws relating to e-commerce. It appears that the country has a well-developed legal framework. However, we found minor yet critical issues from a technical perspective and how some laws are interpreted. We highlight the two most critical issues in red in the table below, and we will provide further details about our findings and practical recommendations. These issues are even more frustrating as their resolution does not require a change in the respective laws. The problem's source is a misinterpretation and or malpractice by the Moldovan stakeholders, especially compared to international e-commerce standards.

Table 2. Matrix of legislation relating to e-commerce

LAW	REF.	UPDATE	COMMENTS
E-commerce Law	284/2004	2018	"Incomplete" Law. Peasant households are excluded from the list of subjects able to perform e-commerce. Poor cross-references. References to abolished laws & institutions
Digital Contracts	1107/2002	2019	Still early to assess impact. The judicial practice is lacking on this subject.
E-Signatures	91/2014	2019	A significant number of public & private institutions still require paper-ink signatures. Courts still reluctant to accept the full legal effects of e-signatures.
Payment Services	114/2012 NBM	2019 PSD2 Law in transposition	Non-Bank Payment Providers are authorized. Transposition of EU licensing fees not adapted to Moldovan market specifics
Data Protection	133/2011	2020	Critical confusion on the definition & practical obtention of the user's consent. Burdensome data operator registration.
Consumer Protection	105/2003 1107/2002	2019	Recent amendments have introduced specific e-commerce protections such as the right to revoke the contract. There are two primary laws regulating consumers' rights protection, which have to be aligned.
Intellectual Property	38/2008 161/2007 139/2010	2016	The laws cover trademarks, industrial designs, and copyrights.
Anti-Money Laundering	317/2007 Civil Code	AML4 aligned AML5 not yet	Unjustified forbidding of distant customer identification, which is pandemic time, completely prevents new e-commerce relations from happening.
	08/2018	2018	OPCML Guide on identifying & reporting suspicious activities
	200/09.08.2018	2018	NBM Requirements for prevention/combating money laundering for Banks

Source: MSRP team desk research

The first critical confusion is about the Data Protection law 133/2011 and the definition of "user consent." We found inconsistencies between how regulators interpret the law versus how businesses interpret them. The result is that consumers in Moldova have to go through an additional and unnecessary step of "signature" even for small essential online purchases when in the rest of the world, a simple click or checkbox is enough to confirm the consent and purchase.

A different way of presenting this issue is proposed in the table below. We compare the world's most drastic data protection laws, with the Moldovan case developing in a reverse direction.

Table 3. User consent comparison table, International standards vs. Moldovan trend

ACCEPTED USER CONSENT	CLICK	CHECKBOX	E-SIGNATURE	INK SIGNATURE
GDPR (EU)	✓	✓	✗	✗
CCPA (USA)	✓	✓	✗	✗
MOLDOVA	✗	✗	✓	✓

Source: MSRP team desk research. (Red cross icon = Not required for EU & US, and not accepted for Moldova)

On the one hand, the Data Protection agency's interpretation is that user consent is almost "always" required. If given in an electronic form, then it has to be done exclusively using a digital signature.

The concerned law, on the other hand, does not concur and states the following:

A- In article 3, we find the following definition: "*Consent of the subject of personal data is any manifestation of a free will, expressly and unconditional, in written or electronic form, according to the requirements of the electronic document, by which the subject of personal data agrees to be processed data concerning him/her.*". The so-called electronic consent has to be signed with an electronic signature. The option to agree to the terms of an e-commerce checkout page by clicking a checkbox is not recognized as consent by the Law no. 133/2011, nor by the Law no. 91/2014 on electronic document and electronic signature. The consent is the primary legal ground for collecting and processing personal data.

B- Then article 5 specifies that: "*The consent of the subject of personal data is not required in cases where the processing is necessary for: a) performing a contract to which the subject of personal data is a party or for taking measures before concluding the contract, at his request.*" It is here clearly stated that consent is not required for the purpose of a commercial contract, which is the case for most online orders processes.

According to interviewed entrepreneurs, SMEs engaging in e-commerce must register as "Data Operators," a complex process that may take months to finalize. Many also lack the know-how to navigate this complex regulatory requirement, which may even drive them away from e-commerce, satisfied with brick and mortar channels to sell their goods and services. Our recommendations about this Data Privacy issue of "consent" can be found in our recommendations table 4.

We highlight a second critical inconsistency that should be addressed urgently, especially in the pandemic context. This issue relates to "Distant Customer Identification."

E-merchants and e-services providers may never need to meet their customers physically. A distant relationship is the essence of e-commerce or digital channels, bringing speed, efficiency, and reduced costs. During pandemics, E-government and G2C need to maintain services without the consumer being physically present. Under such circumstances, being able to verify a person by distance is the ultimate necessity without which no service can be rendered online. Nevertheless, according to the OPCML, Distant Customer Identification is not allowed.

Our research highlights multiple legal sources supporting the contrary thesis:

1- Law no.317/2007 does not explicitly prohibit remote customer identification; it says in art. 8 par. (3) The non-presence is a risk factor requiring an "Enhanced Due Diligence" – but it is not outright prohibited.
2- Law no.317/2007 in art. 6 par. (3) allows reporting entities to take a risk-based approach.
3- Law no.317/2007 is harmonized with the EU Directive 2015/849, which aligns it with the EU AML4 Directive. The EU experience has shown an extensive use of Distant Customer Identification and details on how to conduct it in the AML5 directive.
4- Regulation 200/09.08.2018 from the National Bank on p. 58 specifies Banks' possibilities to use various electronic/distant means to identify non-present customers. Explicitly allowing distant verification.

Given the need for Enhanced Due Diligence and a risk-based approach, companies may take a conservative interpretation and over comply, thus hindering the development of e-commerce in Moldova. We believe we have a solution to this "Distant Customer Identification" issue, and we set out our recommendations in table 3.

The protection of consumer's rights remains an issue to be addressed, even if Moldova has made significant progress with the civil code's latest amendments. After amending this law and introducing a wide range of protection tools, the Law no. 105/2003 on consumer's protection was not yet adequately amended. For example, the consumer's right to revoke a contract prescribed in the Civil Code is not updated in Law no. 105/2004. According to the Agency for Consumer Protection and Market Surveillance, as much as 80% of the merchants do not offer any information on the consumer's right to revoke a contract. Nor do these merchants provide information on the time and the process to revoke a contract.

At the international level of compliance, e-commerce services providers rely exclusively on the official national company register to verify information about Moldovan companies and their ultimate beneficiaries. The Moldovan company register has been recently updated and has made significant progress. However, we would like to highlight two remaining bottlenecks, that if addressed, could facilitate cross-border compliance for Moldovan SMEs:

1- The company register website does not have an SSL Certificate and does not provide assurance that it belongs to an official government institution and can be trusted.

2- Moldovan company data such as registration number and date and the list of directors and shareholders are not available in an immediate, secure, and trusted format.

Such small and quick upgrades are possible as the SITIC has confirmed their technical capacity to update the system, for virtually no costs quickly, should it be requested by the authorities. The potential savings for Moldovan e-exporters are weeks of compliance delays and hundreds of dollars in translation and certifications before they can access international marketplaces and payment gateways.

POLICY RECOMMENDATIONS

We present a summary of our legal recommendations below, and more detailed recommendations are set out in the Detailed Recommendations section at the end of this report. The detailed recommendations contain additional commentaries, references, illustrations and guidelines to implementation.

Our priority recommendations for policies that relate to e-commerce are to be considered as critical "Must-Do." We insist on these first recommendations because these seemingly small problems can completely stop any digital transaction, especially during pandemic times. Our recommendations for these particular issues can be implemented quickly and at low costs, leaving no excuses for delaying the necessary actions.

Table 4. Priority Policy Recommendations

Ref.	Recommendation	Rationale	Priority
FOR THE OPCML (E-KYC)			
AML-01	Approve a technical guide on Distant Customer Identification that comprises case studies, technical and security requirements while conducting distant customer identification.	As demonstrated, the remote identification is allowed by law, and the EU experience has proven the necessity and reliability of such measure. Excellent international practice and basis could be Germany's AML compliant Technical Guidelines TR-03147.	Priority: HIGH Impact: HIGH Effort: LOW
FOR THE DATA PROTECTION AGENCY			
DAT-01	Launch an official communication and a Guideline clarifying that consent is: 1- Not required for e-purchases. 2- Click & Checkbox are acceptable consent forms 3- Simplify Data Operators registration	The consent is, in fact, one of the leading legal grounds. The same Law no. 133/2011 also prescribes additional legitimate grounds based on which the personal data could be processed and stored, like those mentioned in art. 5. where the consent is not mandatory.	Priority: HIGH Impact: HIGH Effort: LOW
DAT-02	Amendments to the Law no. 133/2011 by extending and accepting different consent formats, such as a checkbox.	Currently, the only consent form that complies with Law no. 91/2014 is only achievable using an electronic signature.	Priority: HIGH Impact: HIGH Effort: MEDIUM

Source: MSRP team desk research

We stress that these recommendations shall be implemented immediately and without any condition.-

Our secondary recommendations are also important and should be carefully considered and planned to create a favorable policy environment for e-commerce in the mid and long term.

Table 5. Secondary Policy Recommendations

No.	Recommendation	Rationale	Priority
FOR AGENCY FOR CONSUMER PROTECTION AND MARKET SURVEILLANCE			
CON-01	1-Amend Law no. 105/2003 on consumers' right protection in line with the Civil Code latest amendments related to consumers' right protection (right to revoke a contract). 2- Training and awareness campaign on implementing the new provisions of the Civil Code related to consumer rights and the merchant's obligations.	Amendments of the Civil code were enforced on 1st March 2019. However, merchants seem to be still applying the previously Law no. 105/2003 on consumers' protection, which does not incorporate the latest additions in consumer protection.	Priority: HIGH Impact: HIGH Effort: HIGH
FOR EDITORS OF NATIONAL LAW ON E-COMMERCE			
MOE-01	Update and ensure cross-references between the Law on E-commerce (284/2004) and other related laws.	Law 284/2004 could play a role in creating consistency in e-commerce policies	Priority: LOW Impact: HIGH Effort: MEDIUM
FOR THE E-GOV AGENCY (OR WHO IS IN CHARGE OF COMPANY DIRECTORY)			
EGO-01	Upgrade the company register: 1- Assign specific URL: register.gov.md 2- Apply an EV SSL certificate to the website. The cost is $200/year. 3- Publish company data with a list of directors & shareholders. UK example: https://beta.companieshouse.gov.uk	The national company register is the "guarantor" of the country's companies' compliance at the international level. Such improvement will increase the volume and speed of cross-border e-commerce development for SMEs.	Priority: HIGH Impact: MEDIUM Effort: LOW

Source: MSRP team desk research

We reiterate that further details about each recommendation are available in the annexes, section A.

CHAPTER 3: FINANCE, FINTECH & E-PAYMENTS ECOSYSTEM

VISION FOR FINTECH DEVELOPMENT IN MOLDOVA

Finance is an essential component that makes e-commerce possible. The payment system allows for the exchange of money for goods and services, whether by cash on delivery or through electronic payment channels. Across the e-commerce ecosystem, point of sale credit also funds consumer purchases, especially for more expensive items, allowing for gradual repayments. Loan and equity financing allow e-commerce merchants to scale their businesses. Trade finance facilitates exports, and insurance (or hedging) plays a crucial part in protecting merchants against damages on goods while in transit or against currency fluctuation risks.

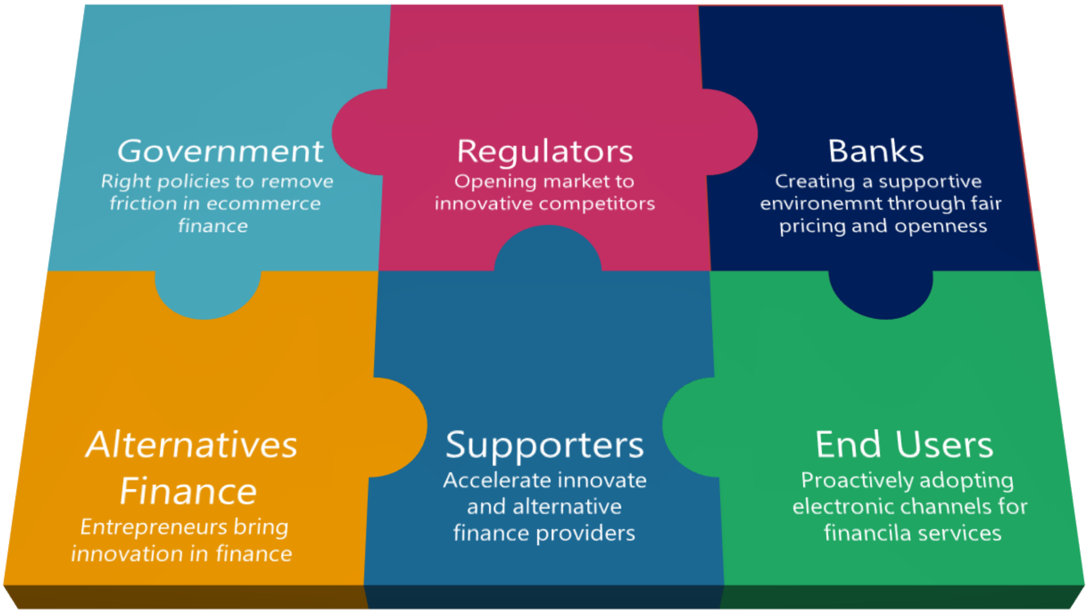
However, friction in the financial system hampers the development and growth of e-commerce, and our vision is for Moldova to enhance the financial landscape in a way that it is aligned with international norms and equally drive accelerated local and cross border growth in e-commerce, as is evident in countries like Ukraine and Estonia.

More transactions carried out through digital channels also allow for more tax collection, as there is an audit trail of transactions as they move out of the grey market into the formal market. The use of loan and equity financing products more readily available to SMEs helps them scale their e-commerce businesses.

FINANCIAL ECOSYSTEM NEEDED FOR E-COMMERCE TO SUCCEED

The success of e-commerce is dependent on many components of the financial system, working together in unison. Collectively, all these essential components make up the financial ecosystem, and each part of the ecosystem has to function effectively to make the entire ecosystem work. All stakeholders must work together in harmony and with the right level of accountability towards implementing a common goal. This is what makes a vibrant ecosystem that thrives.

Figure 3. The Fintech ecosystem



Source: MSRP Team – The six elements that compose the e-commerce ecosystem

In a thriving ecosystem, end consumers and e-commerce merchants are happy to engage with digital financial services. In fact, in many progressive countries, this is the preferred method of payments. Digital channels bring speed, convenience, and security. However, if end users are not willing to engage with these digital channels, then without the demand, other stakeholders are limited in what they can do to drive e-commerce in Moldova.

Here is an example of what a well-functioning financial e-commerce ecosystem could look like in the e-commerce space specifically.

If there is a high volume of business because of high demand, then banks can justify investing in innovative solutions for merchants that could drive payment costs down and make it convenient for them to accept electronic payments or offer point-of-sale financing and insurance. If banks do not respond to demand, alternative finance providers or Fintech firms see the opportunity and step in to remove the friction that's less nimble banks or credit card providers do not wish to address. They can offer a better and faster service at low prices.

Globally, Fintech payment companies like SQUARE and STRIPE have stepped in to serve SMEs that are unable to acquire merchant accounts from traditional channels such as banks. They were successful because, despite banks' unwillingness to support SMEs directly, they were willing to work with these alternative payment providers and open their payment infrastructure. The symbiotic relations meant that banks also benefited because they could indirectly monetize the SME sector without much effort or incremental costs.

Even if this relationship works, alternative finance providers can only succeed if regulators are more open and supportive, especially at the licensing stage. In some cases, innovative Fintech business models do not fit within the current regulatory frameworks. It is now standard practice for regulators around the world to offer regulatory sandbox testing. A sandbox uses legal mechanisms and a lot of oversight to allow Fintech innovators to breach regulation under a controlled environment technically.

For Regulators to allow sandbox testing, they, in turn, have to be empowered by the right government policies and legislation that encourage innovation, experimentation, and competition in financial services, as long as it is within the interest of consumers and the stability of the overall financial system.

The government also has a significant role to play. They can create a conducive environment for Fintech innovators to thrive. For example, they create tax incentives for Fintech start-ups or investors who invest in Fintech led innovation.

Finally, supporters, such as Donor Agencies, Associations, Accelerators and Incubators, and Universities play a crucial role in supporting the development of digital financial services that benefits the consumers, merchants, Fintech innovators, as well as traditional players such as banks and the broader economy.

So, we see that all parts of the ecosystem have to function effectively to drive the success of e-commerce. It is like a chair – any one leg that is broken brings the entire chair down. Below we examine the financial and Fintech landscape in Moldova, looking at it from the perspective of each of the stakeholders in the ecosystem.

LANDSCAPE & ANALYSIS OF THE FINANCIAL SECTOR WITHIN THE CONTEXT OF E-COMMERCE SPECIFICALLY

We found that Moldova has a well-developed financial system. According to the International Monetary Fund[1], significant progress has been achieved in reforming the financial sector in the last few years. Banks are well capitalized and remain liquid, with a sizeable share of assets held in the National Bank of Moldova (NBM) reserves and government bonds. Bank profitability is also healthy. The Law on Bank Activity came into force in July 2018, transposing the EU CRD IV / CRR Directive for credit institutions and modernizing the banking regulatory framework.

At ground level, consumers have most of the payment channels open to them, like credit cards, QR codes, point of sale payments, ATMs, cash-in terminals, and e-wallets. However, we also found that consumers prefer not to use this plethora of payment channels.

END-USER LANDSCAPE – ASSESSMENT OF DEMAND FOR E-COMMERCE RELATED FINANCIAL SERVICES

Digital financial services can bring significant benefits for the end consumers and to e-commerce merchants. Once approved, customers can pay for goods and services online without having to insert their payment details or login to their bank and make a money transfer. They can apply for credit for more expensive purchases, from the comfort of their own home. Online payment providers often protect consumers from fraudulent purchases or where disputes arise with merchants. In such cases, they are assured of full compensation for the loss.

For merchants, online sales and payments offer an alternative channel to bricks and mortar. COVID 19 pandemic highlighted the importance of being able to make sales online. Merchants that did not

[1] International Monetary Fund, IMF Country Report No 19/305, Septemver 2019, Republic of Moldova:

have online presence were forced to close their doors and lose sales, possibly never recovering and being forced to close.

For the Fiscal authorities, online payments capture payment flows, allowing for better tax collection.

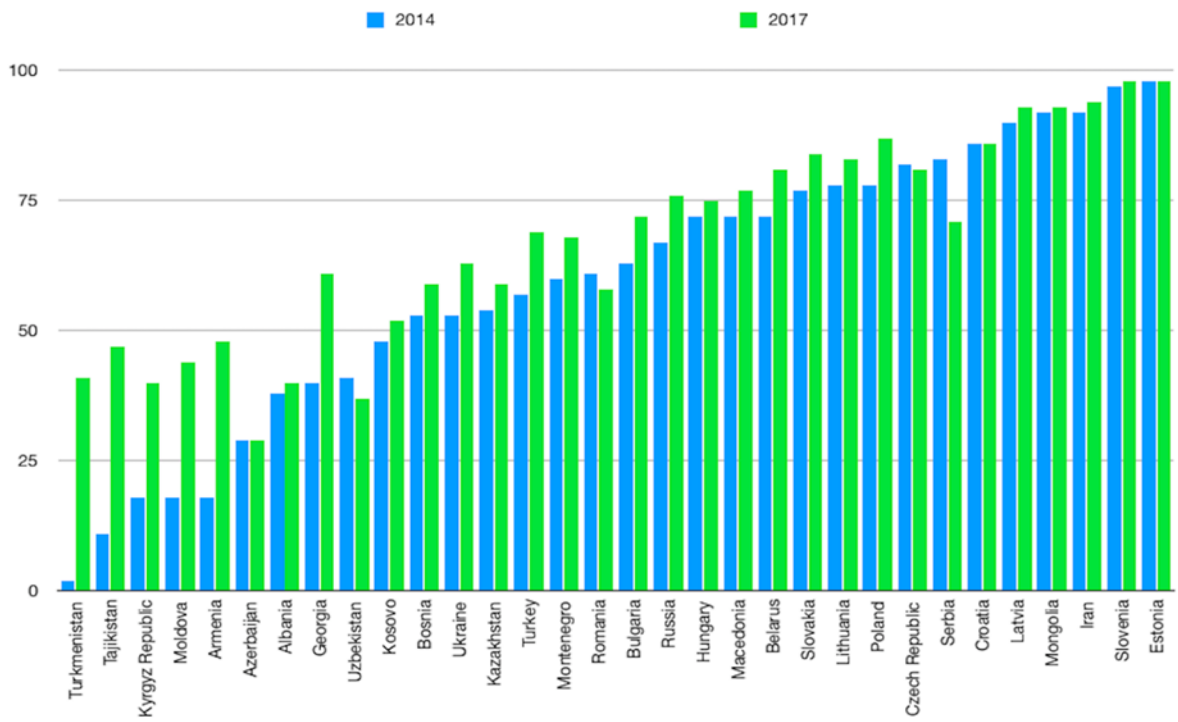
However, despite a well-developed financial and payment system, and despite the significant advantages of e-commerce highlighted here, our research suggests that consumers prefer cash and merchants equally shy away from digital financial services. While the levels of e-commerce are admittedly increasing, cash on delivery remains the most popular payment method. We try to make sense of this dichotomy below.

CONSUMERS LANDSCAPE

FINANCIAL INCLUSION

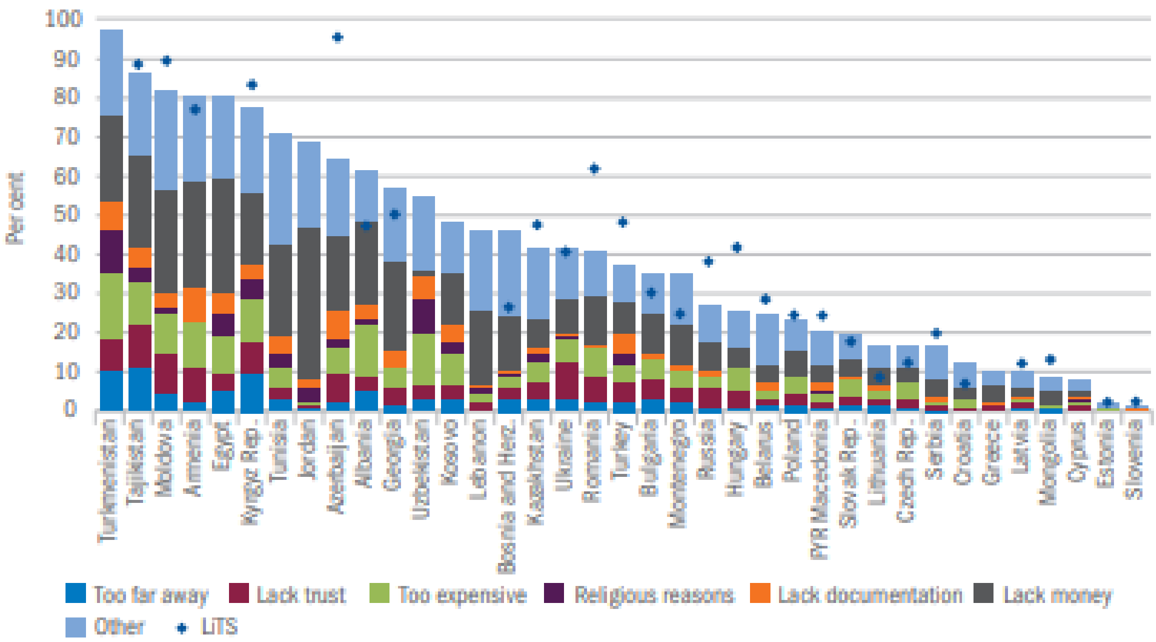
There are no documented studies on financial inclusion. In other words, what proportion of the population has a bank account. However, it is thought that Moldova has a low level of financial inclusion, compared to its neighbors, even if bank account penetration among the people has been increasing over the last few years. World Bank estimates suggest that financial inclusion increased from around 18% in 2014 to around 44% in 2017. A high increase, but from a low base, and the resulting figure is still lower than what financial inclusion looks like in neighboring countries,

Figure 4. Moldova in the Global Findex database (2017)



Source: Global Findex database (2017)

Figure 5. Reasons for not having a bank account (per country)



Source: BNI Intellinews (www.intellinews.com/eurasians-come-in-from-the-financial-cold-142432)

Lack of money, high banking fees, and lack of trust in the banking sector were cited as the main reasons for the high levels of financial exclusion in Moldova, according to a 2016 study by European Bank for Reconstruction and Development (EBRD)[2]. Opening a bank account in Moldova is relatively easy, but a lack of trust and not meeting certain criteria seems to be the leading cause for high levels of financial exclusion. There may well be a cultural bias that prefers cash.

Since the massive fraud in 2014, Moldova's population has lost trust in the financial system. A November 2018 study by USAID[3] found anecdotal evidence of people receiving their salaries in an account or pre-paid card, and they will immediately cash out at an ATM. They will then make bill payments by cash, often at the same time at the teller, where they withdrew their salary. Cash-in terminals are also a more popular way of paying bills rather than using online payment options.

CASH IS STILL KING

However, in 2019, the situation has improved somewhat. According to the National Bank of Moldova[4], the total number of cards in circulation reached 2,102,566 against a total population (adults and children) of 4,032,704[5]. However, 97.8% are debit cards versus only 2.2% credit cards. Like many other countries, Moldova's merchants may ask for an additional fee when their customers choose to pay by credit card instead of debit cards. Credit cards may also attract an ongoing bank fee and high-interest rates. Consumers may also fail to meet the credit requirements of obtaining a bank credit card. This may explain why the majority of the cards in circulation debit cards are.

Regarding the number of transactions, non-cash payments (37,333,957) outweighed cash withdrawals (27,974,317) in 2019. An encouraging sign, however, in terms of the total value of transactions, cash

[2] Transition Report 2016-2017: Transition for All: Equal Opportunities in an Unequal World – Financial Inclusion, EBRD
[3] USAID, November 2018: Moldova's Enabling Environment for Doing Business in the Digital Economy
[4] https://www.bnm.md/bdi/pages/reports/dsp/DSP1.xhtml
[5] Worldmeter

withdrawal (MDL 51.43 billion) far outweighed non-cash payments of MDL 10.54 billion, indicating that non-cash payments are likely to be small payment and the majority of people are still paying by cash for larger transactions.

Again, in terms of the value of transactions, card-present transactions amounted to MDL 7.38 billion against MDL 3.15 billion for card-not-present, indicating that people may be using their cards when physically at the merchant or paying by cash on delivery for their item, rather than buying and paying exclusively online.

NON-CASH PAYMENTS PREFERRED ABROAD

The total value of transactions conducted abroad with cards issued in Moldova and with card-not-present (MDL 4,29 billion) exceeded local transactions where the card-was-not-present, by 36%. This suggests that Moldovans are using online payments for e-commerce; however, they seem to be **buying more goods from merchants abroad** compared with what they spend at local e-commerce merchants.

There have been several initiatives to promote non-cash and mobile payments in Moldova:

1. Report for the National Bank of Moldova (NBM) on Financial Inclusion and the Feasibility of Instant / Mobile Payments, August 2017, Financial Services Volunteer Corps (FSVC) – looking to reduce overall payment fees.
2. Roundtable to Facilitate Dialogue: Promoting Non-Cash Payments, December 2017, FSVC and USAID

These studies confirm the critical barriers to electronic payments, as follows:

1. Low levels of financial literacy
2. Low penetration of bank accounts
3. Greater trust in cash by the public, mainly due to fraud risk
4. High costs of card payments
5. Regulatory barriers, such as eKYC.

EFFORTS TO ENCOURAGE NON-CASH PAYMENTS

FSVC suggested the increase of deposit insurance as a way to build consumer trust in the financial system. At the time of their report in 2017, mandatory deposit insurance was quoted low, at MDL 6,000. This was increased to MDL 50,000 as of 1 January 2020[6]. It would be of interest to monitor whether this has had an impact on improving financial inclusion.

There have also been proposals[7] to statutorily require transactions above a certain limit to be conducted through non-cash instruments. This solution makes sense to manage money laundering; however, it is questionable whether this is the right policy option to discourage cash use. For example,

[6] https://en.publika.md/deposit-guarantee-ceiling-in-banking-system-increased-to-50000-lei_2652398.html

[7] The limited use of non-cash payments in Moldova: Diagnosis and policy options, Policy Paper Series (PP/02/2016), German Economic Team, Moldova

in most countries, it is cheaper or even free to withdraw money from an ATM. However, consumers still prefer to use non-cash payment channels because of the convenience it brings.

We also found evidence suggesting that consumers sometimes prefer cash payments because it avoids them having to pay a whopping 20% VAT over and above the purchase price. This would suggest that merchants may well encourage VAT avoidance, and cash channels bring the added advantage of revenues going undetected for income tax purposes.

MERCHANT LANDSCAPE

During the study, we interviewed many e-commerce merchants, as well as their Associations. We also spoke with development partners about problems that merchants face. Unanimously, they all concurred that payments and financial services, in general, is an issue that hinders e-commerce in Moldova. They site three key challenges:

1. **High Interchange Fees -** High fees for accepting electronic payments, reaching 3.5% of the transaction. This fee eats into the margins of roughly between 5% and 6%. Thus, electronic payments are not commercially viable, and 2018 research by the USAID team found that merchants will often claim that their card machine is broken when customers ask to pay by card or other electronic means.

   Merchants felt payment fees in neighboring countries seemed much lower. Our research confirms their suspicion, and the Table in Appendix A highlights the disparity in interchange commission fees across countries.

   Of course, while alternative payment providers can connect to the National Payment System, many rely on banking payment infrastructure, which adds to the cost. Alternative payment providers also cannot as yet connect directly with Visa and Mastercard (although Visa and Mastercard do have preferential lower fee programs for Fintech newcomers, that alternative payment providers may not be aware of), and have to partner with banks to gain access. There are dialogues by the Economic Council, currently in progress, to explore how alternative providers can get direct access.

2. **High Merchant Deposit Requirements -** Opening a merchant account at a bank comes with many restrictive conditions, with the key limiting requirement being the deposit that banks hold in order to cover refunds and disputed payments. The deposits amount to roughly 7% of the total six months' worth of turnover held for a rolling period of up to 180 days. This deposit significantly impacts merchants' cash flow, especially when their margins are so low.

   We must, however, point out that discussions with payment providers revealed that certain alternative payment services providers (such as Paynet) and certain banks such as Victoria Bank are waiving the deposit, except for a minority of tiny merchants. They are also finding other ways to manage refunds and payment disputes, or fraud risk, for example, by being able to reverse transactions through set-off perhaps.

3. **Poor & Expensive Integration of Payment Software -** Integrating payment gateways on e-commerce platforms seem to pose a significant challenge. Merchants have to hire specialized software developers to integrate these payment gateways, and it could take up to three weeks

or longer to get this done. Developer costs are high and likely to be unaffordable by many smaller merchants. Even once integrated, some merchants informed us that the payment gateways do not work as smoothly.

World-class payment providers like SQUARE and STRIPE have API integration solutions that allow merchants to connect within minutes rather than days or even weeks, as is the case in Moldova. Furthermore, these foreign payment companies charge no up-front fees for integration, unlike the case in Moldova, and rarely is a developer needed to integrate their payment solution onto e-commerce web platforms.

When interviewing various payment providers, we came across one of the leading platforms, who was in the process of launching software that would allow easy integration of their payment gateway, potentially being completed the same day and with minimal effort. Perhaps SQUARER and STRIPE like payment solutions may start to emerge in Moldova soon - hopefully.

See **Appendix B** for a breakdown of payment costs in Moldova against Romania and Ukraine. In Moldova, a maximum interchange fee of 2.25% is relatively high compared to a maximum of 1.2% and 1%, respectively, in Romania and Ukraine.

According to the National Bank of Moldova figures, Point of Sale terminals (20,517 as of 2020) now exceed ATMs (1.137). This can be explained by the regulatory requirements of merchants whose quarterly turnover exceeds MDL 2,000,000 are required to offer consumers the option of paying by debit or credit card at POS terminals. 18,057 Are located at merchants while 2,460 are located at providers (and may include mobile payment terminals used by cash on delivery courier services). Conversely, there are only 406 e-commerce platforms – allowing for online acceptance of payments.

These low figures seem to support our findings above. However, our research also seems to suggest that merchants are not as well educated on how to take their business online, and this could also explain the low e-commerce platform figures reported by the National Bank.

Furthermore, we also found anecdotal evidence that merchants do not use other financial services products and services outside payments. For example:

1. Smaller merchants do not appear to provide a point of sale credit for high-value purchases. They could partner with banks to provide such additional services, seamlessly and thereby increase their sales volumes.
2. They seem to fund their businesses from their savings or raising money from friends and family to launch their business. The merchants we spoke to were very reluctant to seek debt or equity funding to grow their businesses. Without external funding, merchants will find it very difficult to scale. We found evidence of innovative firms offering crowdfunding solutions. However, this is still at the early stages, and regulatory certainty is in the process of emerging. Merchants may find this a valuable channel for raising funds and getting marketing traction when this type of funding business model has matured.
3. We also found anecdotal evidence suggesting that smaller merchants were not in favor of acquiring insurance protection for goods, especially in transit, or currency hedging when exporting their goods. Without protection, merchants have to near any losses, setting them back and hampering scalability.

FINANCIAL SERVICES PROVIDER LANDSCAPE

BANKS & ALTERNATIVE FINANCE PROVIDERS

As already pointed out above, the financial system is well developed in Moldova. There are 11 licensed banks[8]:

1. Banca Comerciala Comertbank S.A.
2. Banca Comerciala Energbank S.A.
3. Banca Comerciala Euro Credit Bank S.A.
4. Joint Stock Commercial Bank Exim Bank
5. Banca Comerciala Moldindconbank S.A.
6. Banka Comerciala Moldova Agroindbank S.A.
7. Banca Comerciala ProCredit Bank S.A.
8. Banca Comerciala Romana Chisinau S. A.
9. Banca Comerciala Victoria Bank S.A.
10. Banca de Finante si Comerta S.A.
11. Mobiasbanca – OTP Group S.A.

Banks dominate the financial sector, and given their stable profits, they have little incentives to change the status quo or encourage innovation or competition. Serving e-commerce SME's would be considered high risk and attract high regulatory capital, so banks will be cautious about serving this sector.

In 2012, the National Bank of Moldova opened the payment market to non-banks, encouraging competition in the interest of consumers. Three payment institutions are holding a license according to Law no. 114 of 15 May 2012 on payment service and electronic money[9].

1. I.S. Posta Moldovei (licensed for money remittance services)
2. Plata Online SRL (licensed for the execution of payment transactions where the consent of the payer is given by means of any telecommunication, digital, or IT device, including through cash payment terminals and the payment is made to the telecommunication, IT system, or network operator, acting only as an intermediary between the payment service user and the supplier of the goods and services.)
3. SC MMPS Com SRL (licensed in the same way as Plata))

Law no. 114 also provides licensing for e-money issuers. There are currently five providers in Moldova[10], with one provider having their license withdrawn:

1. Paymaster SRL
2. Paynet Services SRL
3. BPAY SRL
4. QIWI M SRL
5. FINTECLY SRL

[8] https://www.bnm.md/en/content/authorized-banks-republic-moldova
[9] https://www.bnm.md/en/content/register-payment-institutions-postal-operators-0
[10] https://www.bnm.md/en/content/register-electronic-money-institutions-0

The government has also set up MPAY; however, they only facilitate people to government (P2G) or other public institution payments and will be able to facilitate government to people (G2P) payment shortly.

PayPal is available; however, their fee structure makes it an expensive option. One of the merchants informed us that costs could go as high as 10% (although not verified) when factoring in additional charged and currency exchange fees. There is confusion as to whether PayPal offers business accounts. We have confirmed this with one merchant who was able to open such an account.

There are three card processing banks: Moldova Agroindbank (MAIB) through a separate subsidiary, Moldmediacard, Victoria Bank, and Moldindconbank (MICB). Therefore, alternative payment providers are very much dependent on banks' infrastructure for processing their card payments. Hence, card payment processing fees add up because these banks will charge their fees in addition to Mastercard and Visa fees that banks would be subject to themselves.

Alternative payment providers could bypass banks and connect directly with Mastercard and Visa. However, their requirements prove to be too onerous for many smaller payment providers to comply with, and the cost of direct connection would be prohibitive as it amounts to between €250,000 and €300,000. Mastercard does offer the MasterCard Fintech Express[11] , which provides a suite of tools and resources to enable payment innovators to grow and scale their business by leveraging the power of partnerships. Visa has a similar program called Visa Fintech Initiatives[12], available to European Fintech innovators. We did not find any evidence of Moldova's alternative payment providers being part of such programs. Perhaps they are not even aware of such programs, and it is up to Visa and Mastercard to promote this message.

We understand that the Economic Council is in discussions to get both card companies to be more open and commercially enabling to payment innovators and banks, so that the overall cost of payments may go down.

In the past, alternative financial services providers were excluded from connecting to the National Payment System for interbank payments, securities settlement, and e-banking. However, they are now able to do so, provided they comply with regulatory standards. Getting direct access to payment systems could allow alternative payment providers to bypass banks, where card payments are not involved.

The high cost of non-cash payments in Moldova has been widely discussed among many stakeholders, looking for ways to reduce the fees. However, the limitations discussed above are real and challenging to overcome. Payment providers we interviewed seem to concur that there are only three potential solutions to reduce payment costs:

1. Develop a National Payment Switch that could bypass the card companies to process cards and other electronic forms of payments.
2. Somehow allow alternative payment providers the possibility of connecting directly to the card companies, as discussed above.
3. Innovate to develop new business models that could lower fees and be compliant with the regulation, as explored below.

[11] https://eu.mastercard.com/a/eu/fintechexpressEU/
[12] https://www.finntechfwd.com/visa-fintech-initiatives/

Payment providers agreed that PSD2 driven open banking could pave the way for a solution that may help to reduce fees. This regulation is discussed more in detail below; however, for payment providers, it would allow them to implement a Payment Initiation Service Provider (PISP) business model allowed under PSD2.

A PISP is authorized by a customer to transfer funds directly (through API integration with the bank account) from their bank account to a merchant or utility provider or any other type of approved product or service provider. If this were possible, then payment provider could facilitate an interbank transfer that only attracts around 1% commission, reducing payment fees considerably, and possibly stimulating e-commerce.

As far as payment options are concerned, there is no shortage of providers in Moldova. For the small size of the market, supply exceeds demand, considering all firms that provide payment services. Merchants we spoke to confirmed that alternative payment providers offer a significantly better product and services compared with their bank counterparts. However, they would still prefer payment solutions similar to SQUARE and STRIPE out of the US or Revolut from UK or WebMoney in Ukraine and Mint in Estonia. These alternative payment providers seem to make life very convenient for merchants in their respective countries; they are also likely to be cheaper compared with traditional banks or card companies.

Admittedly Moldova has a small market size for financial services providers. However, considering financial inclusion is below 50%, there is room for growth, thus accommodating more plyers. More payment providers and other types of innovative Fintech firms entering the market could create much-needed competition and break the stronghold by banks. This could improve overall levels of service and potentially also reduce the costs.

A competitive landscape could also stimulate the entry of new players from abroad. Often the first to land, when markets open, are foreign payment innovators that have proved their business case in their home markets. With greater foreign driven competition, banks and other incumbents respond quickly when they feel threatened by new competitors. Overall, supply increases even further, and customers are presented with better, cheaper, and faster solutions – they have a choice and get fairer treatment. Ultimately, financial inclusion increases.

Over time, more players saturate the market, and the next phase leads to the consolidation and survival of the best players. So, in the short term, it makes sense for supply to far exceed demand, especially in the context of Moldova's low levels of financial inclusion. The market will correct itself over time.

HIGH BARRIERS TO ENTRY

Moldova has seen alternative (non- bank) payment providers entering the market; however, barriers to entry are still significantly high. Payment Service Providers and E-Money firms require a regulatory license to operate. This license comes at a high regulatory cost; in addition, the up-front costs required to set up such a business.

Payment Service Providers – Regulatory & Equity Capital Requirement in terms of Law on Payment Services and Electronic Money no. 114 of 18 May 2012[13].

1. Article 12 requires the payment institution, at the time of submitting their application for authorization, to hold between MDL 350,000 (around €18,000) to MDL 2,2000,000 (around €113,000) of equity capital, depending on their regulated activities.
2. Equity capital could include paid-up shares, reserves, and profit of the previous financial year. Although this is company money, it has conditions that tie the money up.
3. Article 13 requires the payment institution's regulatory capital to not (at any time) fall below a set percentage of volumes of payments initiated, according to a set formula.

ELECTRONIC MONEY ISSUERS

1. Article 82 requires these firms to hold at least MDL 6,000,000 (around €309,000) of equity capital at the time of their application for a license.
2. These firms also have to hold a volume-based minimum regulatory capital amount.
3. The fee for issuing the license is MDL 30,000.

The regulatory capital requirements alone make it challenging for entrepreneurs to launch a payment or e-money issuer venture without substantial investor funding or high levels of capital injection by the founders, in addition to general start-up costs such as:

1. IT hosting and systems costs
2. Staff (including expert compliance staff)
3. Legal advisers who can help draft contracts and help with the regulatory licensing application
4. Expert consultancy fees to help set up the business.
5. Office accommodation and furnishing cost
6. Etc.

High barriers to entry keep out new ideas that could benefit consumers, e-commerce, and the broader financial system

TELCO'S AND POSTAL PROVIDERS

As highlighted above, Posta Moldovei is already licensed to provide remittance services. Our discussion with senior leadership revealed that they have plans to apply for an e-money license soon. Posta Moldovei[14] is the largest operator of its kind in Moldova, having a territorial network of 1,146 offices and postal agencies, and 37 branches, providing postal services in 1,527 localities

We also spoke with the three mobile network operators in Moldova, namely, Orange, Moldcell, and Unite. While they did not confirm their intention to enter into the financial services and payments space, they did point out that commercially such a strategic move would make business sense. According to the National Regulatory Agency[15], in 2018, penetration of mobile phones per 100 individuals was a staggering 123.2%, with 4,375,856 total number of users. Mobile broadband

[13] https://www.bnm.md/en/content/law-payment-services-and-electronic-money-no-114-18052012
[14] http://www.posta.md/en/description
[15] https://en.anrceti.md/files/filefield/2018_Evol_Piata_%20FINAL%20engl__2019.pdf

penetration rate per hundred inhabitants stood at 83% in 2018, while the fixed broadband penetration rate was a mere 17.5%. Only 31.2 out of 100 people had fixed phone lines. Clearly, with mobile internet access, a vast proportion of Moldovans could gain access to mobile or online-based financial services.

Collectively, the mobile network operators and Posta Moldovei could have a significant positive impact on enhancing financial inclusion and promoting non-cash payments, given their reach in the remotest part of Moldova and their infrastructure, which they could easily leverage to facilitate payments. With a large customer base, they may also be able to reduce payment fees by leveraging economies of scale. Their active participation could be a game-changer and provide the much-needed competition in the marketplace.

REGULATORY LANDSCAPE FOR FINANCE / PAYMENTS AND E-COMMERCE

Within the context of financial services associated with e-commerce, there are two relevant regulators in Moldova.

1. The National Bank of Moldova regulates banks, payment providers and e-money institutions
2. The National Commission for Financial Markets regulates non-banks actors such as microfinancing organizations, credit brokers, and insurance providers.

Both regulators are reforming their regulatory system to align with European law. Laws that apply to financial services firms that serve e-commerce firms include (please click text to link to legislation):

1. Law on Payment Services and Electronic Money, no. 114 of 18 May05.2012
2. Regulation on requirements for prevention and combating money laundering and terrorist financing in the activity of banks No. 200 of 09 August, 2018
3. Regulation on requirements related to prevention and combating money laundering and terrorism financing in the activity of non-bank payment services provider No. 202 of 09 August, 2018
4. Regulation regarding on-site inspections for non-bank payment service providers and the criteria for applying remedies and sanctions, approved by the Decision of the Executive Board of the NBM, No. 326 of December 11, 2019
5. Regulation on the activity of non-bank payment service providers, approved by the Decision of the Executive Board of the NBM no.217 of 16 August 2019
6. Regulation on the Automated Interbank Payments System, approved by the Decision of the Executive Board of the NBM, No. 179 of June 27, 2019
7. Regulation on holdings in non-bank payment service providers, approved by the Decision of the Executive Board of the NBM no.159 of 5 June 2019
8. Regulation on the credit activity of non-bank payment service providers, approved by the Decision of the Executive Board of the NBM no.158 of 5 June 2019
9. Regulation on payment cards, approved by the DCA of the NBM no. 157 of August 1, 2013
10. Regulation on the activity of payment service providers within money remittance systems, approved by the DCA of the NBM, No. 204 of October 15, 2010
11. Law on savings and credit associations
12. Financial prudential norms for savings and credit associations
13. Law on microfinance organization

AN UNDERSTANDABLY CAUTIOUS REGULATOR IN LIGHT OF RECENT EVENTS

The regulatory stability that we witnessed today in Moldova has not always been the case. In 2014, Moldova experienced a banking crisis[16] when more than $1 billion disappeared from three commercial banks (Banca de Economii, Unibank, and Banca Sociala), leading to their collapse and causing a loss of around 12 percent of GDP in the banking assets. With support from IMF, the Governor and Ministry of finance manage to plug the fiscal gap created by guaranteeing and reimbursing in full, deposits of the failed banks. The funding was conditional on banking reform

Following investigations, in March 2020, two current and two former senior central bank officials were detained on suspicion of involvement in the theft[17]. The Public Prosecutor was confident that the National Bank was directly involved in the crime. Public lost trust in the National Bank and the banking system. Although much effort has been expanded into building this trust, the public is still wary, and this is reflected in the low financial inclusion figures compared with neighboring countries.

In the aftermath of the crisis, the National Bank and its senior leadership team are understandably adopting a very cautious approach. They recognize the need for innovation and competition in the payments sector to drive more non-cash payments. However, they are also wary of taking any action to promote this innovation and competition, fearing unintended consequences.

Unlike their neighbors, the regulators in Moldova have not adopted the concept of an Innovation Hub (which makes it easier for entrepreneurial Fintech innovators to engage with the regulator) or Regulatory Sandbox (that allows controlled but live testing of new products and services that may not fit the current regulatory system).

Fintech innovators we spoke to would welcome a regulatory innovation hub and possibly also a sandbox. Without one, it is harder for Fintech innovators to engage with the regulator for licensing support or advice, especially when they cannot afford legal advice at such an early stage in their lifecycle.

However, the National Bank believes that there is unlikely to be a demand for such a concept, given the size of Moldova's e-commerce and financial services market. The National Bank also expressed concerns about allowing Fintech innovators to experiment outside the law, especially in the current climate.

As seen in Table 5, we counted 21 EU member states and 3 EEA States that have adopted an Innovation Hub, among which 14 have implemented a regulatory sandbox in addition to the innovation hub.

[16] https://emerging-europe.com/interviews/restoring-trust-in-moldovas-banking-sector/

Table 6. EEA countries that have innovation hub and sandbox (Click on country to access Innovation Hub website and on Tick to access Sandbox Website)

EEA COUNTRIES	INNOVATION HUB	SANDBOX	SANDBOX COMMENT
Austria	✓	✓	to be launched in September 2020
Belgium	✓		to be launched in 2020
Bulgaria		✓	
Cyprus	✓		
Germany	✓		
Denmark	✓	✓	Sandbox active
Estonia	✓	✓	to be launched soon (no date specified)
Spain	✓		
Finland	✓		
France	✓		
Hungary	✓	✓	Launched in 2018
Ireland	✓		
Iceland	✓		
Italy	✓	✓	to be launched in 2020 (Law No 58/2019)
Latvia		✓	Sandbox active
Liechtenstein	✓		
Lithuania	✓	✓	Launched in 2017
Luxembourg	✓		
Latvia	✓		
Moldova	✗	✗	NBM not open to a establish a sandbox
Netherlands	✓	✓	Sandbox active
Norway	✓	✓	Launched in 2019
Poland	✓	✓	Sandbox active
Portugal	✓	✓	To be launched in April 2020
Romania	✓		
Spain		✓	Launched in March 2020
Sweden	✓		
United Kingdom	✓	✓	One of the earliest adopter of Sandbox

Source: Fintech: Regulatory sandbox and innovation hubs, 2018, ESMA, EBA, and EIOPA

REGULATORY PROGRESS

Despite the lack of an innovation hub or a regulatory sandbox, Moldova's financial services regulators are still allowing innovative alternative finance providers to the market, although in a limited way.

The Law on Payment Services and Electronic Money has allowed alternative (non-bank) payment providers to enter the market and deliver a better service compared with banks. Merchants acknowledged that they have a much better level of service from these alternative payment and e-money providers, and some also require no deposits to cover fraud and charge backs.

We also found evidence of initiatives underway to explore the feasibility of loan and equity-based crowdfunding in Moldova[18].

NATIONAL BANK OF MOLDOVA PAYMENT SWITCH

Reducing payment fees for merchants has been a topic of ongoing discussion in Moldova. The Financial Services Volunteer Corps (FSVC)[19] worked with the National Bank of Moldova over 18 months (ending in 2018) looking for ways to encourage greater levels of non-cash transactions and finding ways to reduce interchange fees.

One of the recommendations proposed was creating a national payment switch, which would lower card processing costs. The proposal was for the National Bank of Moldova to build and operate the switch. The advisory group concluded that setting up a domestic switching and settlement environment, including building a brand and acceptable network, would not be economically viable.

The payment business requires scale to make the solution commercially viable, and Moldova does not have the volumes to run a domestic switch economically. In addition to operational costs, the initial investment to build and operationalize the switch must also be recouped from transaction fee margins. They concluded that given the costs and investment involved, it would be challenging to reduce payment costs, and perhaps, the cost may even be higher than current fees charged in the market.

OTHER REGULATORY INITIATIVES TO RESOLVE PAYMENT CONSTRAINTS

There were proposals to cap interchange fees; however, the FSVC[20] strongly advised against lowering these fees during their period of engagement because they felt that the card market in Moldova was in an early stage of development and the income from the interchange fee represents a critical resource for marketing to cardholders to promote cashless payments and to cover operational costs as well as initial investments in the system.

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[18] Dezvoltarea Finanțării Participative în Republica Moldova, 2019, Business Consulting Institute

[19] Report for the National Bank of Moldova on the Feasibility of a Domestic Switching Capability. September 2018, FSVC and USAID, Vladislav Nimerenco, Rodman Reef & David True

[20] FSVC Follow Up to the Report for the National Bank of Moldova to Assess the Feasibility of a Somestic Switching Capability, FSVC

They also highlighted that international experience suggests that if interchange fees are capped, banks and non-bank payment providers may ask their customers to pay an annual or monthly fee for using the card, passing the cost from merchants onto consumers.

There are ongoing discussions to explore the feasibility of raising (with relevant legislation) the ATM cash withdrawal fee as a means to disincentivize cash payments. However, authorities seem to allow free market forces to drive consumer behavior rightly. In many countries, ATM cash withdrawals are free, and even this does not discourage people away from a card or smartwatch-based payments.

The National Bank confirmed that they are on track to implementing PSD2 in Moldova, although they did not provide exact timelines when this legislation will be in force in the country. Payment firms we spoke with suggested that PSD2 may take up to two years to implement from the date of this report.

LANDSCAPING GOVERNMENT INITIATIVES IN THE FINANCIAL SPACE TO DRIVE E-COMMERCE

A PROACTIVE GOVERNMENT WITH MANY INITIATIVES

Moldova's government is supportive of developing e-commerce, especially considering the coronavirus crisis. A thriving e-commerce sector can improve the economy and allow the Government to collect more taxes. In response and in June 2020, the Ministry of Economy and Infrastructure set out their Road Map for Boosting Digitization of the National Economy and Development of e-Commerce in June 2020. Specifically, concerning financial services aspects associated with e-commerce, they:

1. Set out their desire to stimulate competition in the market of payment services, given the current dominance of banks and card companies, which keep payment costs high and lack innovation to deliver a better customer experience.

2. Set out measures for remote identification and onboarding customers, which will make it easier for customers to carry out e-commerce transactions.

3. Proposed the creation and implementation of a Support Fund and mechanisms to promote digital innovation and technological start-ups, including the support of Fintech alternative financial services firms that bring innovation and competition in the financial system, in the interest of end consumers and merchants.

4. Suggestion to raise the awareness of consumers and to provide information on the benefits of online transactions.

5. Proposed enabling the national post office to acquire an e-money license, which will allow it to integrate payment services and e-wallet services into their suite of services, thus bringing greater reach and competition in the payments space.

NATIONAL ELECTRONIC PAYMENT PROCESSING PLATFORM

As highlighted above, MPay service was established by the Government and represents a consolidated mechanism for paying public services, collecting taxes, duties, and other payments to the national budget using available payment tools. When we interviewed MPay, they confirmed that up until now, they have mainly facilitated people to government payments, and they are now on track to be able to facilitate government to people payments, such as social security and pension payouts.

MPay is tasked with ensuring that all government departments are connected to facilitate electronic payments. International experience confirms that digital government payments are usually the starting point to digitally transforming a country's financial and other systems, such as e-commerce. When people receive money from the government electronically, or they make payments to the government electronically, they become comfortable with non-cash payments. Once they have trust in this channel, they are far more likely to start paying for other things online.

<While the National Bank's Payment Switch idea proved not to be feasible, there are discussions between Government and Development Partners such as USAID for MPAY to upgrade to a fully-fledged National Electronic Payment Processing Platform (NEPPP), which will integrate besides public services providers and payment services providers (PSPs), also e-commerce providers, and international money transfer operators. NEPPP, if implemented as intended, will provide new payment integration facilities to end-users (both legal entities and individuals).

If successful, this upgrade can boost the promotion of widespread e-commerce and cashless payment services. If the recommendations are adopted, implementation will be rolled out in two phases:

Phase 1 – 2021 -2022

1. National E-commerce Payment Processing Service: end-users will be able to pay for e-commerce services through a centralized facility, using open banking standards.
2. National Direct Debit Processing Service. Public utility providers will be able to initiate direct debit instructions from payment accounts of end-users.
3. National Remittances-to-Accounts (Cards/eWallets) Processing Service – Individuals will be able to register an international remittance to payment accounts.
4. National Financial Switch for eWallet Providers – Eliminates the problem of interoperability between EMoney licensed providers.
5. A National Instant Payment Processing Service would allow 24/7 near-real-time payment processing service for end-users (individuals and legal entities through PSPs.

Phase 2: 2022 - 2023

1. National Financial Switch for Payment Cards Transactions – Eliminates the current problem of all card transactions cleared at processing centers outside Moldova. There is a high probability of reducing interchange fees.
2. National Remittances Hub facilitates the reduction of costs of implementing robust AML and financial risk controls.

If these measures are implemented, it could be a game-changer in reducing payment fees and facilitating faster and more secure payments. However, the devil is in the detail, and concerted implementation effort will be needed with involvement from the right stakeholder at the right time in the process. Of course, it remains to be seen whether this centralized MPay solution will allow for lower payment costs overall.

Discussions are still at the early stages, and the plans will need approval at the right Government level as well as a mechanism for the implementation of recommendations to coincide with the anticipated timelines.

INFORMATION TECHNOLOGY PARK

Law no. 77 of 21.04.2016 on Information Technology Park[21] establishes this park and sets out how it will function. This law aims to create necessary premises to stimulate the development of the information technology industry, research, and innovation on information technology in different fields and encourage foreign direct investment. The park offers many benefits, including advice and consultancy services. However, the most important benefits are the tax rebates (Article 15) that allow entrepreneurs to invest this saving into development activities. The Park facilitates a single tax charge of 7% of sales income, which is very attractive for bootstrapped start-ups.

Article 8 stipulates what activities should be carried out by residents in the park to qualify. Although comprehensive activities are covered, they do not provide for technology-led financial services businesses. However, pure technology solution providers to the financial sector are covered.

We also did not find any other investment programs for Fintech start-ups, and thus it is not surprising to see slow progress in the field of Fintech in Moldova. As we highlight in this report, more Fintech players can bring greater levels of competition in financial services, driving down costs and improving access and levels of service.

RELEVANT SUPPORTING ECOSYSTEM FOR E-COMMERCE RELATED FINANCE SERVICES TO THRIVE

There is a vibrant community of supporters working together to bring about transformative change in financial services for the benefit of e-commerce.

1. Tekwill enables information technology, including the development of Fintech technical solutions. They are a hub where IT professionals can connect and share ideas and resources to empower Moldova's economy. Tekwill also runs the XY Accelerator for Moldovan start-ups. Tekwill also hosted the very First Fintech Conference in Moldova in 2019.
2. ATIC – Moldovan Association of Information and Communications Technology promotes the development of the ICT sector. They have a Fintech chapter, however, only from the perspective IT solutions developed for the financial sector.
3. APCFA – Alternative Finance Service Association of Moldova, unites non-bank financial institutions. They cover Fintech but only outside the banking sector.
4. Moldova is fortunate to have many international development partners supporting the government and the private sector, including:
    a. USAID
    b. World Bank
    c. European Bank for Reconstruction and Development

[21] https://moldovaitpark.md/wp-content/uploads/2019/09/Law-77_2016.pdf

d. GIZ

We did not find any evidence of a Payment Service Provider Association or E-Money Association. However, most alternative payment and EMoney firms are represented on the National Payment Council, where they engage with the National Bank. This Council is designed as a professional forum for high-level consultation between the various public and private institutions to facilitate the safe and stable functioning of the payment system.

While there are many initiatives to promote the development of Fintech, efforts seem to be disjointed and not representing the entire Fintech ecosystem. In the absence of such a forum, Fintech innovators will find it challenging to engage with regulators and Government policymakers, as a collective sector. Vice versa, from international experience, we find that regulators do not have adequate resources to engage with individual Fintech innovators. They always prefer engaging with an Association, unless of course, the matter relates specifically to the business of the Fintech venture that is trying to engage with them. If such a National Fintech Association was in existence, they could also create coordinated support programs to help capacity-building initiatives at Fintech ventures and existing payment companies.

FINTECH RECOMMENDATIONS

In Chapter 8 lists the detailed Fintech and recommendations to create a conducive environment for e-commerce to accelerate. Below is the summary table of the said recommendations.

Table 7. Fintech Recommendations

No.	Recommendation	Rationale	Priority
REGULATORY PERSPECTIVE			
NBM-01	Accelerate the promulgation of PSD2 into law.	Open banking allows for new Fintech models like PISP that may enhance competition and reduce payment fees.	Priority: HIGH Impact: HIGH Effort: Medium
NBM-02	Launch a Regulatory Innovation Hub	Create an enabling regulatory environment that supports Fintech innovators and entrepreneurs applying for a license. The competition will increase and benefit e-commerce merchants and consumers.	Priority: HIGH Impact: HIGH Effort: HIGH
NBM-03	Lower licensing and ongoing compliance requirements for small PSP and EMIs	Even if they get Innovation Hub support, the licensing and capital requirements are high and creates a barrier to Fintech innovators to enter the payment and finance market.	Priority: HIGH Impact: HIGH Effort: LOW
GOVERNMENT PERSPECTIVE			
MOF-01	Create an Open Banking Implementation Entity	Despite open banking regulation, implementation is often a challenge. If third party providers cannot connect effectively with the right APIs to banks, PSD2 will have little impact in Moldova.	Priority: MEDIUM Impact: HIGH Effort: HIGH
MOE-02	Create incentive mechanisms for the development of Fintech	Fintech appears to be excluded from Gov. support. We suggest legislation to allow Fintech firms to receive support. We recommend incentives such as R&D tax credits, grants, and incentives for investors	Priority: HIGH Impact: LOW Effort: LOW
SUPPORTERS PERSPECTIVE			
ASO-01	Launch a focused Fintech Association in Moldova	Fintech lacks visibility in Moldova, and initiatives to support the sector are disjoint. A Fintech association will give a stronger voice to bring the desired results and carry out many activities to support the sector.	Priority: HIGH Impact: HIGH Effort: LOW

Source: MSRP Expert team research work

CHAPTER 4: THE LOGISTICS INFRASTRUCTURE

Almost all stakeholders we interviewed highlighted that logistics is one of the key problem, especially for SMEs and exporters. Logistics includes the shipping and the returns management, which in many cases, is either not offered or a loss-making operation, especially for international returns. This subject may benefit from a more detailed and dedicated study given the complexity of the problem.

DOMESTIC & LAST MILE LOGISTICS

At the domestic level, the last-mile logistics delivery offering is sufficient to be able to launch an e-commerce business. Today, three major last-mile logistics providers offer great national coverage and are already providing relatively competitive local delivery rates.

We briefly introduce below the said logistics providers:

1- **Posta Moldovei:** https://www.posta.md
Post offices have been active as early as of 1812, around the end of the Russian-Turkish War. The modern period of Posta Moldovei started on January 29th, 1993, with the re-organization of the of information and telecommunication enterprise into the Posta Moldovei and Moldtelecom state enterprises. Posta Moldovei has been given the status of a national operator on May 18, 1995.

Between 1993 and 1999, the Moldovan post became a full member of the Universal Postal Union (UPU), thus joining the common postal space and also joined a series of other related international organizations such as the Regional Communications Community, PostEurop (European Association of Postal Operators).

Posta Moldovei is running traditional postal mail and parcel delivery services, as well as the EMS express mail service, express courier service (Curier Rapid), money transfers, payments services, and business services such as marketing materials and e-mails distribution

Their website explicitly publishes prices and offers an online fee calculator. Customer support seems of good quality, and the website content is offered in three languages (Romanian, Russian, and English).

Automated Parcels boxes have recently been deployed in Chisinau and Balti. Stakeholders have highlighted that the Parcel boxes do not yet accept payment by card upon the boxes' opening, which is a useful feature seen in other countries.

2- **Nova Poshta,** https://www.main.novaposhta.md/rus/

Initially opening a representation office in 2014, Nova Posta is a subsidiary of its Ukrainian holding company, which has gained an excellent reputation since its establishment in 2014.
The company offers national coverage with a 24H delivery service in the main cities. Several offices have been opened in Chisinau (4), Balti (1), and in Comrat (1). International delivery is also offered.

An encouraging development for e-commerce is the partnership that Nova Posta has made with the Moldovan instance of the Rozetka online marketplace, offering a more integrated service for local merchants.

3- **Muvi Express**, https://muvi.md
Backed by an investment from Neogen Capital, Muvi Express is a local company established in Chisinau in 2019. Interestingly Muvi Express is branding itself more as an IT company than a "per se" logistics provider. A consumer mobile App is being developed to allow customers to follow their delivery and electronically sign at reception.

The company is currently offering a 24 hour delivery service, with national coverage, but does not offer international shipping at the moment. As a relatively small company, this provider uses vans and smaller vehicles with a maximum load capacity ranging from 500kg to 3.5 tons As for their website, we have noticed a critical lack of information, clear pricing, and customer support touchpoints, which may offset initial interactions with SMEs.

Cost-wise we have conducted a comparison of pricing of the three-existing last-mile logistics companies in the following table.

Table 8. Last-mile delivery fees comparison

TARIFF / PROVIDER	POSTA MOLDOVEI	NOVA POSHTA	MUVI EXPRESS
1-2 KG CHISINAU	35 MDL	40 MDL	35 MDL
1-2 KG REMOTE REGION/CITY	53 MDL	60 MDL	70 MDL

Source: Respective official websites

We have identified several other small players such as Curier Prest, Posta Atlassib (with delivery in Moldova, Romania & Malta), Unipost-Express, Dafnis/Mentor-express; as well as Chisinau only based specialized food delivery service: Straus.md.

Established international logistics services such as DHL and TNT are also visible in the country, albeit not directly.

We could not find any recent studies or statistics about the number and mode of deliveries in the county, nor could we not collect such information from the providers during our interviews.

We also noticed a general lack of integration readiness. Nova Posta and Muvi do not publicly display their API documentation so that other providers could develop applications that can integrate these postal services. There are initiatives from the local IT development community to develop a standard API to better interoperability. Posta Moldova, however, does not have an API at all.

Works have been resumed for the construction of the highway that links Chisinau to the port of Giurgiulesti, which may ease export routes that currently suffer from poor road infrastructure.

The warehousing infrastructure is well established and growing. A Government initiative is planning to build sixteen multifunctional industrial platforms in regional and under-served areas in addition to the existing fifty-one facilities already available in the country. The first financing tranche of fifty million

MDL has been allocated to the project. (https://mei.gov.md/ro/content/sergiu-railean-platformele-de-suport-afaceri-infrastructura-industriala-la-nivel-local-sunt).

Although warehousing infrastructure is relatively abundant in the country, we could not find any readily operational "e-fulfillment" company, such as "Fulfilled by Amazon", that takes care of warehousing and delivery as a service for SME e-commerce merchants.

For now, each company tends to build its own e-fulfillment operations and often even has its own fleet of vehicles and drivers. Recent discussions in the e-commerce logistics community suggest establishing a first e-fulfillment center that could cater to current online marketplaces and most active merchants.

EXPORT & CROSS-BORDER LOGISTICS

For cross-border logistics, the situation is much more difficult. Our study has highlighted a few infrastructures and politico-economic challenges which are impeding international freight:

1. The Transnistria region is "cutting" the most efficient road southeast towards Odesa's port, and as a result, forces road traffic to go north, then east and south all through Ukrainian territory to reach back to Odesa. This disputed region is also creating difficulties and uncertainty and, therefore, impacts the trade potential with eastern neighbors.

2. The railroad infrastructure is obsolete in terms of speed, coverage, and infrastructure. Such a situation renders the rail freight almost un-usable as an international mode of transport. It appears that the most critical rail segment that is to be addressed is the short and recently built line that connects the port of Giurgiulesti to the central national railroad. These recent rails have been deployed in the context of an emergency alternative to the then blocked connecting line going through Ukraine.

3. The road infrastructure and bridges to the north have now appeared as a weak link in the cross-border infrastructure, due to the traffic that is re-routed in order to go around the Transnistria region. It also impacts the freight traffic of the Chisinau-Kiev-Moscow route.

4. Delays at the Romanian road crossing points have been pointed out by AITA and its members, where a former "Green Line" that allowed empty trucks and pre-declared cargo to cross faster, is now merged with all other road traffic by the Romanian side. Such a situation creates, in some cases, up to three or four days of delays at the border.

5. Maritime traffic from the port of Giurgiulesti to the black sea has difficulty accommodating large cargo ships due to the waterway's depth and customs clearances challenges with Ukraine and Romania. That said, our study has focused on studying the "upstream" opportunity of the Danube river, as it technically allows for river freight to reach Passau in Germany within five days. This inner Danube waterway presents an excellent opportunity for the large cargo of low-value commodities to reach the heart of Europe in a cost-effective and timely manner. Unfortunately, leveraging the internal Danube link to the EU is hindered by two main problems:

    a. At Galatz, the Romanian customs authorities lack the knowledge and instruments to clear the river cargo using the usual simplified customs procedures for international maritime freight transit. Instead, they wrongly apply the rules and procedures of road freight.

b. The canal of Cernavoda is not effectively treated as an international waterway by Romanian customs authorities, although it is explicitly included in the Danube convention. The Sulina canal, on the other hand, does benefit from this qualification. Therefore, the upstream river freight flow is suffering from un-necessary export/import procedures that could be avoided if Romanian authorities effectively consider the Cernavoda canal as an international waterway.

VISION & NATIONAL LOGISTICS STRATEGY

Our proposed quick wins allow for the possibility of sustaining and growing an initial flow of exports towards the EU. However, logistics and warehousing's fundamental and structural weaknesses need to be addressed before trade and e-commerce can truly reach their potential. A full-fledged Logistics Development Strategy should be considered in the short term, calling upon international partners.

LOGISTICS RECOMMENDATIONS

While political situations and large logistics infrastructure upgrades may take time and significant efforts to achieve, we believe that Moldovan exporters can still use available logistics opportunities, especially towards the EU market.

The idea is that under the leadership of the Ministry of Economy, a group of pilot SMEs could be "assisted" in creating specific export trade flows, which would create the basis for scaling up volumes and justifying the needs for policy optimizations.

We have identified a series of "Fiscal-Logistics-Marketing" quick-wins, which can be leveraged for a minimal cost. These "Quick-wins" rely on three principles:

- ✓ Registering and using a VAT number from EU countries
- ✓ Building logistic corridors between Chisinau and specific EU cities
- ✓ Registering with EU online marketplaces & payment solutions (using the EU VAT certificate)

At the International fiscal level, it is to be noted that the United Kingdom, Germany, France, and the Czech Republic have removed the requirement of having a local fiscal representative for VAT purposes. This exemption for non-EU companies means that a Moldovan SME can apply for and obtain "FOR VIRTUALLY FREE" an EU VAT number in any of the cited countries. Having an EU VAT number opens a fiscal and legal way for Moldovan exporters to import their products by themselves into the EU and distribute at wholesale and retail levels without the need for an EU intermediary. Being fiscally registered in the EU also opens access to EU based payment solutions, and EU based e-fulfillment and logistics providers otherwise non-accessible for a Moldovan entity.

Once fiscally registered in EU countries, Moldovan entrepreneurs can then mutualize their traffic and negotiate regular and long-term routes with Moldovan freight partners, for the following suggested routes:

- ✓ **Air Freight:**
  In cooperation with Moldovan Airlines, a group of SMEs can access a preferential price for the traffic of at least 2T per week towards Frankfurt, Paris, and London. This mode is useful for high-value/low-volume products or for premium perishables. The advised merchandise value to transport through this line is for products that have a €30/Kg retail value and above

- ✓ **Road Freight:**
  As we have discussed with AITA members and IRU, Moldovan exporters could benefit from the existing road flows towards the EU and use their EU VAT numbers to streamline their import administrative costs. We suggest focusing on the Chisinau to Dresden route, which offers the most cost-effective fiscal-logistic entry point to the EU. This mode is suitable for almost any type of product, starting from products with a €10/Kg retail value.

- ✓ **Maritime Freight:**
  As highlighted earlier, the inner and upstream Danube river freight is a great potential opportunity for Moldovan B2B exporters. We invite the Ministry of Economy to elaborate an assistance project with relevant international organizations such as USAID, the EU, and or GIZ to address the bottlenecks currently affecting the upstream Danube customs clearance issues.

To give a better picture of how such type of "Fiscal-Logistics Quick-Win" could work, we have developed an illustration for the case of road freight from Chisinau to Dresden.

Figure 6. Example of a trade corridor to EU

Source: MSRP team

Our second recommendation is to initiate a negotiation with the Romanian tax authorities, to obtain a similar local representation exemption for the purpose of Romanian VAT registration for Moldovan enterprises. It is currently possible to obtain a fiscal representation in Romania, but because of the requirement to have a local fiscal agent, the costs of establishing fiscal representation in Romania overpass the costs of establishing a limited liability company. Removing the local representation requirement would make Romania an even greater partner and bridge to access the EU market. This would provide an alternative to the fiscally non-beneficial practice of using Romanian entities, which, although legal, creates risks of capital evasion since financial flows are not cashed in Moldova.

Table 9. Summary Logistics Recommendations

Ref.	Recommendation	Rationale	Priority
FOR THE MINISTRY OF ECONOMY & INFRASTRUCTURE			
MOE-07	Fiscal/Logistics/Marketing e-Export corridors to EU Marketplaces (quick-win)	We suggest to the MOEI to coach a pilot group of SMEs to demonstrate how EU VAT fiscal registration can allow Moldovan SMEs to register with EU marketplaces and obtain EU payment methods while controlling the full distribution chain of the products. A consolidation of export volumes by destination can render the shipping costs efficient.	Priority: HIGH Impact: HIGH Effort: LOW
FOR THE MINISTRY OF ECONOMY & INFRASTRUCTURE			
MOE-03	Include e-fulfillment services development to existing industrial parks projects	E-fulfillment is the most demanded and beneficial development needed for the improvement of the domestic logistics for e-commerce. This could be achieved relatively by leveraging the current industrial parks and warehousing development projects and re-purpose one of its activities. A tender can then be launched to have a private sector operator to operate the e-fulfillment services for the benefit of the whole e-commerce community.	Priority: HIGH Impact: HIGH Effort: MEDIUM

Source: MSRP Expert team research work

CHAPTER 5: THE FISCAL ENVIRONMENT FOR E-COMMERCE

THE CURRENT FISCAL ENVIRONMENT

Most SMEs and market players complained about over-regulation and over-taxation. The issues are not only about the tax rates themselves but as much about the reporting rules and how these rules create overwhelming accounting costs and stress, especially for small businesses that do not necessarily have an accounting department.

The e-Factura technical issues and the rule of "double signature" for fiscal invoices are raising significant challenges to everyday B2B transactions. Special machine is required to print "fiscal receipts" and this causes another challenge both at the technical (maintenance) level and at the accounting process level.

Small and or new businesses are reluctant to exit the grey market because they would be "under the radar" and subject to reporting and possible prosecution for tax evasion.

Informal merchants clearly have a commercial advantage as they are not subject to 20% VAT and other taxes. In some instances, a given product can be informally purchased for cash payment for 30% to 50% cheaper than from a formal online seller who is subject to the necessary taxes. Such a situation renders the online offering virtually "not worth it" for consumers and buyers.

For the same reasons, small producers, especially in the agriculture sector, may find it non-beneficial to formalize and sell online and prefer to continue selling their products in informal ways.

A study from 2019 by World Bank (Rekindling Economic Dynamism) has qualified the Moldovan tax system as one that "*favors capital over labor, consumption over savings, and large firms… over small firms*" and further suggests that the best way forward in the case of Moldova is through a "systematic review of the entire tax system."

Such a recommendation is even more true now that we have gone through the COVID-19 pandemic. A recent McKinsey report from September 2020 (Adapting tax collection for uncertain times) demonstrates how all countries around the world should reconsider their fiscal policies and tax collection modus operandi.

Although it may initially be perceived as potential tax revenue loss, we believe that the Moldovan tax authority could lead the way by "leapfrogging" into a whole new fiscal paradigm. Furthermore, this has already been successfully started in Moldova with the IT park fiscal policies and the new income tax changes planned for 2021.

Studies indicate that the recent fiscal revenue corresponds to about 20% of the GDP of Moldova as of 2019. Within this fiscal revenue, VAT revenues account for 20%. VAT on the sales of services seems to account for 60% of overall VAT income. To further understand the fiscal context, we have summarized and compared various tax rates impacting SMEs in the IT Park, versus SMEs from other sectors, see below in the following table.

Table 10. Tax rates for IT park vs. other sectors

TAX RATES / SECTORS	IT PARK	OTHER SECTORS
VAT Tax Rates	20%	20%, 15%, 8% or 0%
Corporate Income Tax	**7% SINGLE RATE ON REVENUE**	12% (on net income)
Employment contributions Employer + Employee		33% (on gross salary)
Personal Income Tax		12% (on net income)

Source: Ministry of Finance

The 7% single rate of the IT park is calculated on the total revenue and includes corporate income tax, personal income tax, and employer/employee social security and health contributions.

We have identified a risk of non-IT companies using the IT park for fiscal benefit. We suggest that a regulator ensures each application's stricter compliance and verify that said company are IT companies. Simultaneously, extending similar conditions to other sectors will reduce this risk and open the opportunity to the whole economy.

THE GREAT PROBLEM OF THE INFORMAL ECONOMY

As mentioned above, the size of the informal economy is relatively overwhelming compared to the current size of the formal market. Such a situation presents significant difficulties for digitizing the economy in general, and for the growth of e-commerce specifically. Multiple studies have highlighted different aspects of the informal economy, which we have summarized below:

- $3 Billion is an estimate of the total informal cash in circulation (Worldwide Moldova Business Association, April 2019)
- 35% of active population is informally employed by local companies (ILO, 2016)
- 30% of active population is informally working abroad in neighboring countries (ILO, 2016)
- 35% of Moldovans may use their Romanian citizenship/companies/banks for exports
- 30% of the GDP is an estimate of the relative size of the informal economy (Shadow Economy Index 2016)

Recommendation:
There is a lack of overall e-commerce information and KPI's associated with the sector that allows authorities and merchants themselves to track performance. There are no register documenting the

number of e-commerce players. There is no information about e-commerce turn-over. There is a lack of clear data to benchmark progress (difficult to define/use KPIs).

The tax authorities have confirmed the informal economy issue, and different measures are in place, mainly from a monitoring perspective. We also salute the initiative of a flat 3% tax on informal cash declaration. However, not enough is being done to reverse the trend towards formalization, as formalization threats still outweigh the benefits of formalization. Informal cash holders tend to buy from informal sellers in a sort of unhealthy communion.

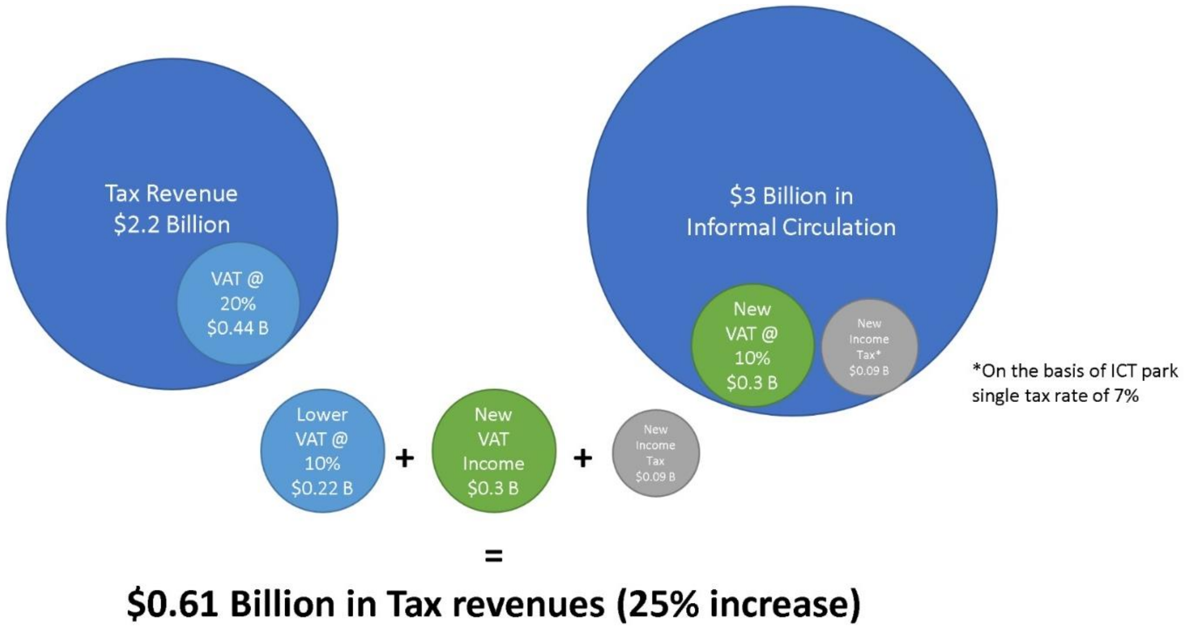
VAT AND THE E-FORMALIZATION OPPORTUNITY

A single VAT rate of 10%:

Our main recommendation is to invite the Tax authorities to study adopting a single and low VAT rate. We believe that given the informal economy's size and the COVID-19 new tax collection realities, Moldova stands better chances of fiscal revenue collection if it can collect relatively less VAT but instantly and from a relatively higher volume of transactions.

VAT is the first tax blockade for making online offers more competitive. Based on the 2018 Fiscal revenue statistics and using a "rule of thumb" rapid estimation, we believe that the overall tax collection would increase by two figures even though the VAT rate is reduced to a single 10% rate. And this is due to the new fiscal revenues that would be generated out of the formalization of the informal transactions. An illustration below shows a graphic representation of this calculus.

Figure 7. Simulation of tax income after VAT reduction & formalization of businesses



Source: Ministry of Finance

Many countries have managed to bring down the informal economy to a level below 10% of the GDP. For instance, in Switzerland, the informal economy is estimated at 6% of the GDP. While we are conscious that reaching a 0% informal economy is utopic, we believe that Moldova, through comprehensive and efficient digitization and formalization strategy, could very well bring the informal economy to a level below 10% equivalent of GDP, which would still create an increase in tax collection while providing a much more fiscally conducive environment.

Revenue lost due to reducing VAT rate to 10%, could be recouped through various initiatives, including:

a) Increase all previously reduced VAT rates from 8% to 10% (except for critical produce)
    a. Additional VAT collection must be estimated by the Fiscal authority.
b) Increase zero* rated VAT to 10% for Gaming & Gambling (and other)
    a. Additional VAT collection must be estimated by the Fiscal authority.
c) Remove VAT registration threshold of MDL 1.2 million
    a. Will give good VAT habits from day one to entrepreneurs
    b. Will capture missed VAT from a significant number of companies
    c. Will formalize and increase income tax (VAT = Revenue benchmark)
    d. Reduces informal price competition from non-VAT registered companies
d) Systemize Postal collection of import VAT on B2C imports
    a. Increases in import VAT collection.
    b. Reduces informal B2C foreign e-commerce providers competition
e) Recent application of VAT to foreign services/digital provision
    a. A new VAT revenue stream
    b. To be enhanced by real-time VAT reporting (API activation)
f) Savings in reporting, auditing & customer support
    a. Savings for businesses (one single rate of 10% eases bookkeeping & reporting)
    b. Savings for Tax Authorities in terms of HR and classification of goods/services

THE IT PARK FISCAL INCENTIVE

We have identified that the IT Park fiscal offer is potentially being abused by certain companies who are not purely IT-related but manage to qualify for the program. Such a situation highlights two interesting points:

1. The IT Parc fiscal offer is a success
2. The other sectors want to benefit from it too and are ready to cheat to get it

It seems only natural to replicate a winning strategy to other sectors. The Moldovan landscape of companies is dominated by SMEs or Micro SMEs, who have minimal accounting capacity and could greatly benefit from the simplified calculation and reporting based on revenues. Also, most of these small entities tend to have one or family shareholders and, to a certain extent, complain about a perception of a “double taxation” of their already small income.

In aggregation with the single VAT rate of 10%, we suggest pushing the IT park idea further and propose a 15% single tax rate on revenue, inclusive of “everything”:

- ✓ VAT
- ✓ Corporate Income Tax
- ✓ Personal Income Tax
- ✓ Employment Contributions

This single “all-inclusive” 15% tax on all revenue could greatly simplify SMEs' reporting, pricing, and marketing activities. A figure of 15% (10% for VAT + 5% for IT specified fiscal taxes) is psychologically acceptable, especially by small stakeholders, and would offer nearly no excuse to formalize while allowing e-commerce offers to be more competitive against informal offers.

The reason we propose to have the rate of 7% offered to IT park brought down to 5% is that other sectors who deal with logistics costs and physical goods usually have lower margins than IT companies who once they have broken-even from development costs, may benefit from perpetually higher margins on their digital products or services.
From a tax collection perspective, the seemingly lower rate of 15% may be perceived as creating an opportunity cost, but the following arguments could be considered:

1- A lower rate applied on revenue "guarantees" the collection and gives predictable figures
2- A high tax rate on gross profit may yield less taxes due to invoicing and deduction practices

A study could be done or referenced to show how revenue-based taxation may provide more effective tax collection, especially in a heavily informal economy.

FISCAL RECOMMENDATIONS

Table 11. Fiscal Recommendations

Ref.	Recommendation	Rationale	Priority
FOR THE MINISTRY OF FINANCE			
MOF-02	A unified & instant collection VAT rate of 10% to boost e-formalization of SMEs	Income tax incentives have been deployed and proven effective; however, VAT's case is still impeding the formalization of small sellers and the competitivity of existing formal e-commerce players. Given the new POST-COVID paradigm of tax collection, we suggest a flat 10% Vat rate with the advantage of having instant reporting and collection	Priority: HIGH Impact: HIGH Effort: HIGH
FOR THE MINISTRY OF FINANCE			
MOF-03	Extension of the IT Park fiscal package to Fintech firms and SMEs from other sectors	SMEs are abusing the IT Park fiscal package's success by "simulating" an IT relation just to benefit from this incentive. We believe it would be beneficial to extend this offer to SMEs of other sectors.	Priority: HIGH Impact: HIGH Effort: MEDIUM

Source: MSRP Expert team research work

CHAPTER 6: THE BRANDING & MARKETING CAPITAL

DIGITAL MOLDOVA STRATEGY 2020 – A BASE FOR FURTHER DEVELOPMENT

The Digital Moldova Strategy 2020, approved by Government decision # 857 on the 31.10.2013, focused on the development of the following areas:

1. Infrastructure & access – connectivity & networks access.
2. Digital content & electronic services – promotion for the content generation and digital services development.
3. Capacities & utilization – Increasing the degree of digital literacy, the development of digital skills and digital inclusion.
4. Create a conducive environment for the increase of security and trust in digital space.

The Digital Moldova Strategy 2020 focused on the IT infrastructure as a base for the digital economy. According to the last 2019 status report, 81 actions out of the 95 initially planned have been completed. The remaining fourteen actions are still in progress.

Some of the IT priorities were high-performance electronic communications infrastructures, such as Broadband, Radio Frequency Management, and initiatives related to developing an ecosystem for IT firms (digital education, IT excellence centers, IT Park).

We summarize below the main takeaways from the Digital Moldova Strategy 2020 document:

- International rating position Moldova as a state with a developed electronic communications infrastructure, favorable for ICT businesses.

- Moldova is making significant progress in the ICT sector.

- The share of the ICT sector in the Gross Domestic Product (GDP) of the country is about 7%, with annual revenue of 13 billion MDL. According to data presented by the National Bank of Moldova, the volume of exports of ICT services has increased in the last five years, from 159 million USD to 222.92 million USD.

- The IT sector has seen an increase in revenue from 2.4 billion MDL in 2016 to 5.3 billion MDL in 2018.

- The total volume of investments made in the ICT sector amounted to 1.7 trillion MDL. The most important investments were made in the mobile telephony sector, accelerating 3G / 4G networks' development.

- The Government has demonstrated a certain ability to work closely with entrepreneurs, investors, corporations, and other stakeholders.

Overall, this program's primary objectives have been met, especially at the level of IT infrastructure, e-Government services, and cybersecurity. World Bank is supporting further developments for the 2018-2023 period, and a Government Interoperability framework is also still in development

The public bodies, agencies, and institutions are publishing growing volumes of data sets to the Open Government Data Portal (https://date.gov.md), a significant move forward. However, several issues remain, which can be organized into two groups:

1) Data quality, accessibility & reliability indicators are not clearly defined, and the provision of data lacks Service Level Agreements (SLA) for public and private clients.
2) User Experience (UX) is weak. Most services are technically operational but have user-friendliness issues.

For activities that were not fully implemented or are missing critical components, the lack of financial resources has been cited, in the Digital Moldova Strategy 2020 report, as one of the main reasons. Our research believes otherwise, as the country receives substantial international financial assistance from international development partners such as USAID and GIZ. The World Bank alone has allocated $20 Million to the e-Government project between 2011 and 2016.

A second reason cited in the report is the lack of Governance and implementation, which we fully concur with. Finally, the shortage of qualified human resources is also cited and remains to be addressed.

In this study, we have not decided to formulate specific recommendations about the Digital Moldova Strategy project; however, we would like to highlight a few points to be taken into consideration in any further development projects:

a. Data and Interoperability Frameworks, re-design of the Data Management Platforms, using the modern architectures (Big Data, Data Lakes), based on cloud technologies and best practices.

b. Optimize processes: managing group/dept in the e-Governance Agency; re-design of the existing services, develop a CX/UX training program, and include User Experience as a performance indicator.

c. Develop a national digital literacy curriculum for the public and private sectors.

d. Develop programs for the motivation and retention of talents (brain-drain)

e. Systematically ensure Public-Private Partnerships for each project.

LANDSCAPE OF THE LOCAL MARKETING SOLUTIONS

We have already highlighted the quasi-absence of e-commerce related statistics and indicators. The only basis we can rely on for now is the numbers given by the National Bank of Moldova about the card-not-present transactions.

We have estimated that only 12% of the card-not-present transactions concern e-commerce, representing a mere 1% of the total national card payments volume.

We also studied the country's leading e-commerce players. It appears that online marketplaces, many of which are subsidiaries of foreign players, dominate the first flow of e-commerce transactions. The most prominent locally available marketplaces are listed in table 9.

We have also found a small number of single-store e-commerce champions, which are listed in the Table below. Finally, many local brands from the fashion sector are being groomed for e-commerce by various local projects such as TekWill and ZipHouse initiatives.

Table 12. Domestic online marketplaces

Source: Ministry of Finance

LOCAL MARKETPLACES	TYPES OF PRODUCTS AND SERVICES
https://www.a1.md	All type of goods - from food to auto & construction
https://totul.online/	Most types of goods launched by MAIB
https://elefant.md	Books, perfumes, cosmetics, fashion, appliances & gadgets
https://mp.agrobiznes.md	All stuff for the agribusiness - from tractors to chemicals
https://rozetka.md	All types of goods, subsidiary of a Ukrainian company
https://www.prom.md	All types of goods operate as well in Russia, Kazakhstan, Ukraine & Belarus
https://enter.online	Electronics & electric bikes, home appliances
https://price.md	All type of goods, except auto (SIMPALS)
https://www.netmarket.md	All goods

Table 13. Local e-commerce champions (single store)

LOCAL E-SHOPS	TYPES OF PRODUCTS AND SERVICES
https://www.bomba.md	Home appliances, electronics
https://maximum.md/ro/	Electronics, computers & laptops. home appliances
https://gsmshop.md	Mobile phones, gadgets, electronics
https://darwin.md	Electronics home appliances

As we highlighted in the Fintech section, foreign purchases dominate the card-not-present payments statistics, meaning that Moldovan consumers are actively buying online from AliExpress, Amazon, and other international marketplaces and merchants. The main reasons that we have found that can explain this situation are:

1- Current local e-commerce offering is not developed enough in terms of choice, quantity, availability, and quality of service (customer support).

2- Current local e-commerce offering is not price-competitive compared to local informal and or foreign sellers, who both tend to avoid applying the sales or import VAT to their prices.

From a technical perspective, our study has found a general tendency to develop e-commerce solutions in-house and from "scratch" by hiring developers. Both business owners and local developers lack experience in e-commerce international development good-practices and quickly find themselves limited.

This seems to be the case for both SMEs and larger marketplaces websites as well. It is often after some initial growth and complications that companies decide to "switch" to a professional or standardized solution such as CS-Cart, Magento, Shopify, or VTEX. Such was the case for the marketplace Elefant.md, which has recently revamped both their Moldovan and Romanian platforms.

A similar pattern is observed with Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) solutions, which are often locally made and lacking interoperability and scalability standards.

Branding wise, several active e-commerce companies have registered their trademark and even developed brand-books. However, very few have registered their trademark in class 35 (advertising and communications) and abroad, preventing their trademarks from benefiting from the international marketplaces brand protection and promotion programs such as the Amazon Brand Registry.

As for the marketing know-how and tools used, we noticed a rather "old-fashion" offering in the local market. Web marketing services are in the majority based on tools such as Google AdWords, Analytics, Tag Manager, or MyBusiness. Some more advanced companies are doing SEO (Search Engine Optimization) and SMM (Social Media Marketing). Nevertheless, rarely does a company cover the full marketing cycle, especially when it comes to funneling and transformation strategies.

Marketing efforts targeting the EU market beyond Romania or the English-speaking foreign markets are almost absent.

Customer analytics and digital campaign solutions are also mainly developed in-house or based on limited open-source software. Only a handful of companies are starting to use specialized campaign management software such as Tableau, SAS, or Unica.

It is not only the marketing tools and software that is lacking in the market but, more importantly, human skills. Most of the interviewed companies have testified their challenges in finding appropriate marketing support, especially for the international markets. Only a handful of web marketing agencies are currently serving the market; below are three of the most known:

- Boomerang, Tudor Plăcintă, https://www.boomerang.md
- ASAP digital marketing agency, Dumitru Talmazan, http://www.talmazan.md
- Vadim Cușnir, https://socialmediainculise.md

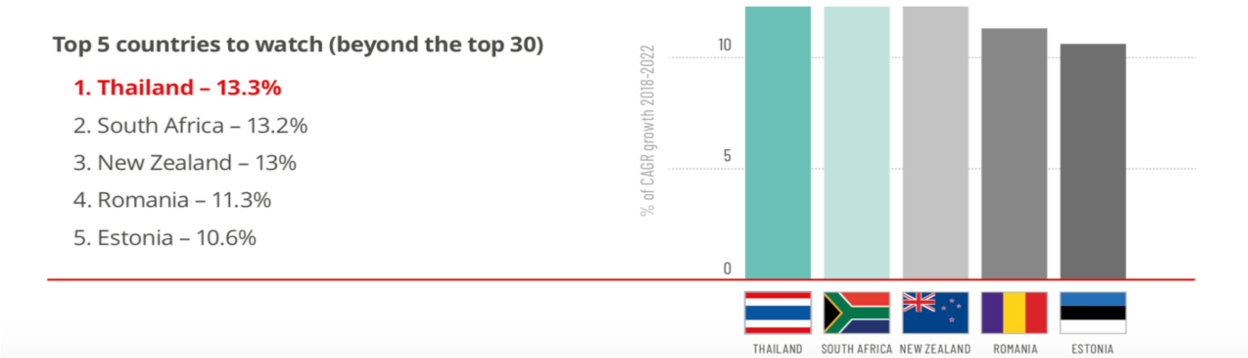
INTERNATIONAL MARKET LINKAGES OPPORTUNITIES

Our key finding is that Moldovan brands and SMEs have virtually not started e-exporting. Even if a significant number of local e-commerce websites are multi-lingual and seemingly export-oriented, our interviews with entrepreneurs have highlighted an almost inexistent cross-border e-commerce flow. We believe that e-export is one of the most relevant segments of e-commerce to be leveraged by the nation, given the local difficulties and limited size of the domestic market. The EU market can become commercially viable if our EU VAT registration and logistic recommendations are addressed.

Romania can be used as an end-market but, more importantly, as a bridging territory to the EU. Likewise, Estonia can be an EU entry point, thanks to the current e-commerce provider ecosystem built around the e-Residency program. Such a program allows a Moldovan entrepreneur to access EU payments and logistic solutions by quickly "e-registering"an Estonian company.

International studies (Figure 8.) already recognize neighboring EU countries such as Romania and Estonia as great secondary markets for exports.

Figure 8. Top five Markets to watch



Source: Global Ecommerce Market Ranking 2019 https://bit.ly/34BqrDz

Moldovan companies can benefit from the powerful sales channel of international online marketplaces. However, before leveraging such channels, the Moldovan entrepreneurs need to have an excellent understanding of the logistics, payments, and taxation rules that will apply to their cross-border flows. As a country and through its exporting companies, Moldova has a relatively low representation and presence on the international online marketplaces. The table below shows a benchmark as to where the country stands at the moment in terms of the number of sellers registered or products offered:

Table 14. Moldovan sellers' presence on international marketplaces (comparison)

MARKETPLACE	KPI	ROMANIA	UKRAINE	MOLDOVA
Alibaba	Seller Accounts	4,576	4,551	654
EUROPAGES	Seller Accounts	365	369	50
ebay	Food Sellers	435	1,043	201
Etsy	Dress Listings	4,303	43,954	1,485

Source: MSRP team desk research

VISION & NATIONAL BRANDING STRATEGY

A few years ago, a "Made in Moldova" project was being discussed, but we could not find any active project or party in charge of this theme.

Several national promotion initiatives are being deployed by the Moldovan Investment Agency (http://invest.gov.md) to attract foreign Direct Investment (FDI) and promote the national offer.

A successful branding case is that of 'Pomul Vieții' ('Tree of Life'), designed and registered as Moldova's tourism brand. Further branding work has been assisted by the USAID CEED II project for the State Tourism Agency for the update of the national tourism portal: turism.gov.md

Another example, with the support of USAID and the Embassy of Sweden, is the local program, designed under the name "Din Inima" ("From Heart"), under the patronage of the Light Industry Employers Association (APIUS).

Several branding and private initiatives have also been noticed in the Wineries sector.

We suggest strengthening these efforts further and involving them in the building and use of the "Made in Moldova" branding guidelines. National brands can play a significant role in increasing the perception of the country and its offering. Success stories such as the "Made in France" or the "Made in Italy" are of interest and are the results of decades of public and private investments.

Today Moldova can leverage the experience of established National Branding programs and leap-forward directly into a Digital Umbrella brand for cross-border e-commerce.

An appealing experience is that of the UK, where the Royal Mail (National Post) has set up a "National Pavilion" on the TMALL marketplace. Thanks to this mutualized logistic/marketing organization, smaller British companies can now access the otherwise costly Chinese e-market.

Figure 9. UK's National e-commerce pavillon on Tmall

Source: UK Department of Internal Trade https://www.great.gov.uk/selling-online-overseas/markets/details/royal-mail-t-mall/

BRANDING AND MARKETING RECOMMENDATIONS

Table 15. Branding & Marketing Priority Recommendations

Ref.	Recommendation	Rationale	Priority
FOR THE MINISTRY OF ECONOMY & INFRASTRUCTURE, INVESTMENT AGENCY			
MOE-05	Assess the opportunity to register a state trademark & Program "Made in Moldova"	Moldova as a country and its leading brands are still relatively unknown at the international level. Moldova regulations allow the registration of national trademarks or so-called state brands. The Government, through the MOEI, to register "Made in Moldova" trademark and to design a set of "brand guidelines" that would specify branding guidelines for websites, products packaging and other medias.	Priority: HIGH Impact: HIGH Effort: LOW
FOR THE ODIMM			
MOE-04	Design a capacity building program for digital marketing	Marketing is one of the costliest activity of e-commerce if not properly managed. ODIMM & Government to consider the development of an advanced digital marketing technical and practical capacity building program that would target SMEs, local marketing firms as well as Universities.	Priority: HIGH Impact: HIGH Effort: MEDIUM
FOR THE NATIONAL BUREAU OF STATISTICS			
STA-01	Develop a data collection framework to capture e-commerce specific statistics	There are few data able to be collected in Moldova about e-commerce, the unique reliable data can be got on the payments, so taking the NBM reports on cards (i.e. for card-not-present transactions), we can have some estimations. National Bureau of Statistics, with the Ministry of Economy and Infrastructure to develop and deploy an framework for collecting the data on e-commerce, including fintech, and other 'new', digital economy businesses: e-health, e-insurance, e-consulting, include e-government services), etc. With the clear indicators (i.e. what to be defined as e-commerce, by areas, by # of transactions, volumes, deliveries, etc.)	Priority: HIGH Impact: HIGH Effort: MEDIUM

Source: MSRP Expert team research work

Table 16. Branding & Marketing Secondary Recommendations

Ref.	Recommendation	Rationale	Priority
FOR THE MINISTRY OF ECONOMY & INFRASTRUCTURE, AIM, ODIMM			
MOE-06	Consider a Direct to Consumer (D2C) practical coaching of export-ready SMEs	D2C can be a niche and differentiation e-commerce segment where local SMEs can leverage their branding and quality rather than competing on volume and price. Consider linking this initiative to the "Made in Moldova" brand, allowing to optimize efforts and resources the coordination and promotion. This recommendation is more effective if our Fiscal-Logistics recommendations are in place.	Priority: HIGH Impact: HIGH Effort: MEDIUM

Source: MSRP Expert team research work

CHAPTER 7: GOVERNANCE AND IMPLEMENTATION

THE NEED FOR A STRONG DIGITAL GOVERNANCE

We started this report by highlighting the excellent work done by all stakeholders to enable e-commerce in Moldova. Apart from a few minor short, medium, and long-term tactical strategies, that we recommend in this report, we point out that the country has the necessary building blocks in place for e-commerce to thrive. In fact, our evidence shows that the initiatives well developed and aligning to international benchmarks.

Regardless, e-commerce still struggles to gain prominence, let alone scale in Moldova. The consequential outcome is that the economy does not reach its full potential. A significant part of the economy remains within the grey zone and outside the government or regulators' radar, and the Fiscal authorities cannot optimize tax collection under these circumstances.

The reason for this slow progress, according to our research, is the implementation approach used for any policy change or project deployment. The good news is that this can be addressed quickly and can bring e-commerce and a broader digital transformation back on an accelerated path.

We find that a cohesive governance and implementation framework which driven at the highest level and represented by the public and private sectors is the key missing ingredient. Getting this right could be a quick win to not only implementing e-commerce but driving the entire digital transformation strategy for Moldova. In this chapter, we propose a framework that we believe could work

CURRENT GOVERNANCE & IMPLEMENTATION INITIATIVES

The government established an Economic Council chaired by the Prime Minister, and the deputy chair is the Minister of Economy. It is an advisory body to the Prime Minister, established by Government Decision No. 631 of 22 August 2011. The Council consists of 118 members, representing public and private bodies and industry associations, and international bodies. The Council currently has seven working groups, in addition to ad-hoc working groups. The Council engages in the implementation of various initiatives that we highlighted above.

From 2016, the Council is assigned the functions of the National Committee for Trade Facilitation. From August 2019, the platform also exercises the Advisory Council's functions for small and medium enterprises.

This is an advisory body, without any specific legislative neither executive powers. They have a “Motivator” function that can prod and encourage action; however, this is an informal mechanism. With 118 members, it proves challenging to arrange working meetings involving all members, so the working groups tend to be more active.

The Economic Council is a laudable development bringing all relevant stakeholders together under one structure. However, despite this body being in existence and driven by the Prime Minister and Ministry of Economy, as well as represented by key development partners and private sector bodies, it has not always succeeded in getting things done, especially in the area of e-commerce. There are several limitations:

- Apart from working groups, there are no coordinated governance arrangements around specific broad key initiatives, such as the digital transformation of the economy, which may require various working groups to cooperate in addition to other government and private sector bodies.

- Similarly, there is no specific implementation body around the initiatives that would drive the execution of strategies and initiatives approved by a governing body.

- Finally, in the absence of the governance arrangements set out above, applying program management disciplines to implementation could be challenging, especially given a changing political landscape.

DIGITAL TRANSFORMATION CONTEXT

The 2020 Corona Virus crisis highlighted the crucial importance of digital transformation for any country. This is even more important for commerce in general because physical channels were no longer available, and consumers, as well as e-commerce merchants, were forced to transact through the internet-based channels.

It became apparent that the countries that had implemented a digital transformation strategy faired a lot better in the face of the once in a lifetime pandemic crisis. Digital channels allowed all aspects of life to continue, despite people and businesses being forced to lockdown.

On the other hand, countries that took a more relaxed approach to implement a digital transformation witnessed the economic stress and daily challenges individuals and businesses face.

The government and businesses were forced to respond quickly and started to explore various online solutions to overcome the pandemic's challenges. This crisis certainly woke up those countries that postponed or ignored digital transformation.

On the positive side, this crisis provides a perfect opportunity for all stakeholders to take sustainable steps in digitally transforming and modernizing Moldova, and indeed their particular institution. It offers an opportunity for innovation to improve Moldova's economy and the day to day lives of its people. It also allows Moldova to become visible within the international context, and specifically within the European Union.

After discussing with more than 100 stakeholders from all sectors in Moldova, it became crystal clear that almost all necessary elements in Moldova are in place, for example, digital signature infrastructure and digital identity elements, necessary technology, the interconnectivity of the systems, and legislative/regulatory elements. In our opinion, what is missing is the coordination and cohesion between the existing IT systems, solutions, and resources in such a way that they could be used at maximum capacity to drive initiatives forward in a coordinated manner.

It is not what we have but rather how we approach implementation that could benefit from re-engineering. Success depends on building digital capacities and preparedness, from various perspectives:

- Infrastructure,
- technologies,
- Business solutions and processes,
- Skills

- Most importantly, leadership

It is encouraging to observe increased interest from all stakeholders to move forward with the digital transformation, and the recent adoption of the digital transformation roadmap is a big step in the right direction.

It is pivotal to understand that e-commerce is a part of a much larger digital economy landscape, and it's going to be part of a transformation process of the entire society, public and private entities. The E-commerce landscape is interconnected with many other elements, and only together could be developed to new levels.

In our view, there is a clear need for the increased coordination of a national digital transformation strategy, with clear roles, responsibilities, and implementation structure. A clear and understandable e-governance strategy and cohesive architecture are also vital. We find a need for an updated national digital agenda roadmap, a more efficient cooperation platform between state institutions and the private sector, and an efficient mechanism to finance the implementation of digital transformation.

Implementation has to be prioritized based on the critical needs of the economy and the citizens of Moldova, as well as their willingness to use the solutions (in other words, demand-driven). Implementation cannot succeed without a program to drive digital skills educational – which not only brings more digital skills in the economy but also educate consumers on the advantages of digital channels.

It's important to highlight that digital transformation is not only a technological effort but crucially, it is about changing mindsets. In addition, no strategy can be implemented without strong leadership driving implementation. Furthermore, we must recognize that digital transformation is a continuous process of changing society, business processes, and technological solutions to new realities. We cannot think that once the strategy is implemented, that we are done. All elements must be implemented in a systematic manner, and a coordination process in the context of the present crisis could be transformed into a remarkable opportunity.

Note: It may be easier to explain such a structure within the context of a corporation. Assuming the organization decides to embark on digital transformation. Once the Board approved the decision, a board member is given the explicit responsibility to get this strategy implemented. He/she takes on a visible sponsor role, driving the organization to achieve the intended objective. A Digital Transformation Department is set up to further develop and implement action items to bring about results envisaged in a digital transformation strategy.
To ensure things go on track, and there is adequate oversight, on behalf of the board, over the responsible executive and the new department, the board decides to create a Digital Transformation Committee.

Without such a governance and implementation structure, any corporation will find it challenging to implement Board approved strategies.

Comparing such a structure to the way the Economic Council operates, the working groups represent the Digital Transformation Department, however, without the oversight committee or the necessary governance arrangements.

A bottom-up approach needs to meet with the above-cited "top-bottom" initiative. This can be achieved by elaborating a national curriculum of capacity building and awareness-raising campaigns.

Such an education effort should spare no stakeholders, from consumers through SMEs and all the way to government officers.

RECOMMENDATIONS AND PROPOSED GOVERNANCE MODEL

We set out different options to establish an efficient governance and implementation structures to lead the country's digital transformation initiatives and boost the digital economy.

By no means are our models an absolute recommendation that must be implemented in the way we propose them. Instead, we aim to share our thinking on digital transformation leadership and provide the concerned parties with enough perspectives and building blocks for them to design the most appropriate organization, based on international experience, which we highlight further, below.

We have identified two potential approaches, which are shared below.

OPTION I

1. To establish a Digital Transformation Council, led directly by Prime Minister, with its Steering Committee (SC), taking the leadership/sponsor role, with main participants as:
    - Government and Public Institutions; Ministry of Economy and Infrastructure, Ministry of Finance, National Bank of Moldova, National Commission for Financial Markets, State Chancelery, STISC, e-Governance Agency, Agency of Public Services
    - Private sector representative Bodies, i.e., ATIC, AIM, ABM, and prominent Executives from the private companies
    - Development Partners: AmCham, EBA, EBRD, GIZ, USAID, World Bank etc.

2. Assign the Ministry of Economy entity responsible for implementation; in order to enforce the leadership, sponsor an accountable executive role, might be relevant the position of Minister of Economy to be raised to Vice Prime Minister, or Prime Vice Prime Minister;

3. The Steering Committee will be responsible for, and deal with all matters related to the digitization initiatives of the Moldovan economy and government, including Digital Strategy development and successful deployment, and, obviously including e-commerce.

4. The Economic Council should be empowered to advise, discuss and propose new programs and initiatives, its main role to supervise the development and deployment of the National Digital strategy.

5. The Steering Committee shall define an Implementation Body (Committee, Dept) to help in giving effect to policies and strategic initiatives developed by the Steering Committee. The Implementation Body, as an example, can be the e-Government Agency.

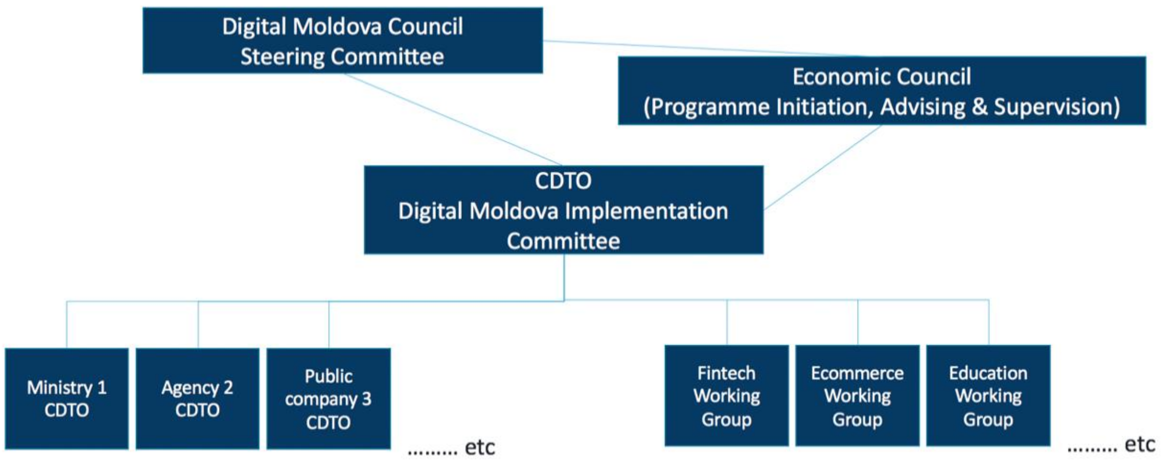
6. A role of Chief Digital Transformation Officer, who will lead the Implementation Body, to be established; according to the worldwide best practice, would be efficient to enlarge the role of the Director of e-Governance to the Government CIO and subordinate him/her to CDTO; CDTO him(her)self to be a member of SC, and subordinated to the MOE(PVPM / VPM);

7. All Ministries, Government or Public Agencies, Bodies, and Companies should be responsible(accountable) for the digitization of their direct sphere of responsibilities; in every

entity a Chief Digital Transformation Officer role to be assigned, with the relevant duties and rights;

8. Specific program/project/working groups are to be established to deal with specific implementation initiatives.

Figure 10. Digital transformation council



Source: MSRP team desk research

OPTION 2

1. To establish a Steering Committee for Digital Transformation, led by the Ministry of Economy and Infrastructure, with the participation of:
    - Government and Public Institutions; Ministry of Economy and Infrastructure, Ministry of Finance, National Bank of Moldova, National Commission for Financial Markets, State Chancellery, STISC, e-Governance Agency, Agency of Public Services
    - Private sector representative Bodies, i.e., ATIC, AIM, ABM, and prominent Executives from the private companies
      Development Partners: AmCham, EBA, EBRD, GIZ, USAID, World Bank etc.

2. Assign the Ministry of Economy the entity responsible for implementation.

3. The Steering Committee will be responsible for and deal with all matters related to the digitization initiatives of the Moldovan economy and government, including Digital Strategy development and successful deployment, and, obviously, including e-commerce.

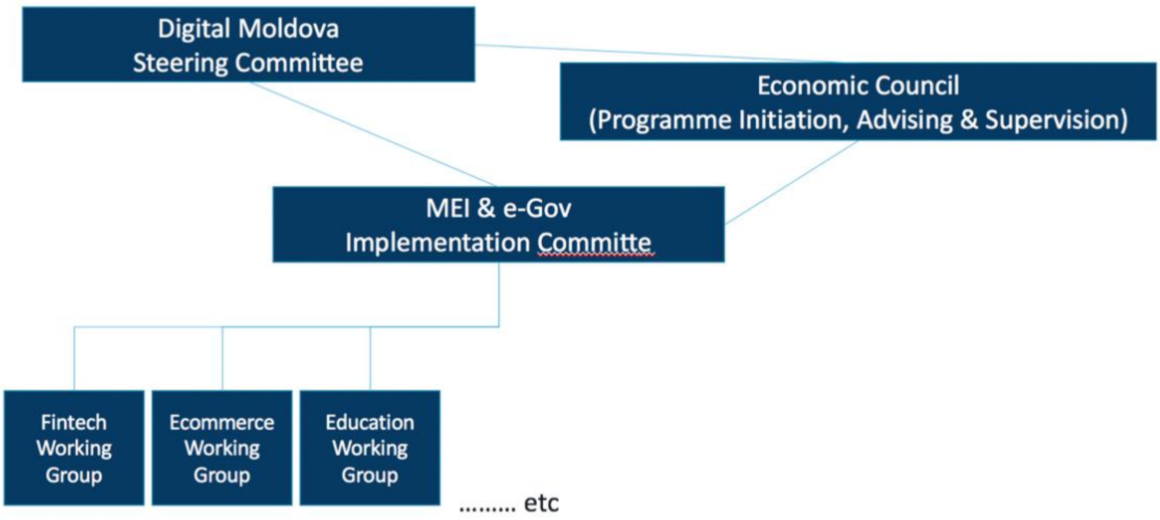
4. The Economic Council should be empowered to advise, discuss and propose new programs and initiatives, its main role to supervise the development and deployment of the National Digital strategy.

5. Assign e-Governance Agency as Secretariat & Implementation Body to help in giving effect to policies and strategic initiatives developed by the Steering Committee, enforce the role of Director of e-Governance to the Government CIO;

6. All Ministries, Government or Public Agencies, Bodies, and Companies should be responsible(accountable) for the digitization of their direct sphere of responsibilities; a responsible in every entity for Digital Transformation to be named.

7. Specific program/project/working groups are to be established to deal with specific implementation initiatives.

Figure 11. A steering committee for Digital Transformation



Source: MSRP team desk research

Digital Transformation is a not a special, new concept; few countries have already done it quite successfully, for example in Ukraine and Estonia

In our firm belief, the most effective for Moldova is Option 1, as most countries successful in digital transformation are using similar structures, with clear principles, management structure, goals, coordination, and supervision.

CASE STUDIES: DIGITAL TRANSFORMATION BRINGS UNKNOWN COUNTRIES INTO THE SPOTLIGHT

In our study, we decided to insert digital transformation management models of two countries, which proved their effectiveness, Estonia and Ukraine. We have chosen these examples deliberatively as they differ one from another but also represent a logic development of various management models. Ukrainian model is recently developed, with a clear pyramidal management structure, highly influenced by Estonian one but with very big ambitions and remarkable speed of achievements in a concise timeframe. Estonian model is still coordinated at the Government level, but the role of public-private partnerships and the level of decentralization is very high. We are not suggesting choosing exactly one of these models. However, we are confident that Moldova could choose some of the elements from these or other countries to develop a well-structured digital transformation strategy and management structure.

RISKS AND CHALLENGES OF RECOMMENDATIONS

Transformation program always is a challenge, associated with the various risks; however, acting firmly and take the initiative and actions to mitigate, it's the path to success

OPTION 1

1. The creation of the new management structure will provoke resistance on various levels and institutions, as the organizational, financial, cultural perspectives are impacted. The risk can be mitigated by empowerment the Prime Minister to make decisions regarding the best executive structure, based on the existing bodies, mobilize the Economic Council to propose and closely manage and supervise approved programs within the frame of approved Digital Strategy

2. Digital knowledge the digital economy stakeholders, almost for the entire country: Risk mitigation coming from: a) establishment of a special program for the digital culture training programs, starting with the Implementation Committee/Body, Government Executives, continuing for the specialized ones – for government employees, private companies /SMM, within the schools and universities. As well, an essential point ist o involve in the Digital Transformation the regions, through the Minister of Agriculture & Regional, additional to Chisinau, there are 32 regions, UTAG and Balti municipality, and 897 locations; also the Minister of Education, Culture and Researches to be involved closely;

3. Timing & Lack of financial resources – mitigate the risk through thorough planning, including the necessary human and financial resources for the deployment of Digital Strategy Programs within the budget; as well, various support programs from Development Partners – a solid plan brings significant outcome, including economic, social and financial indicators

OPTION 2

1. The risk to lose the opportunity to build a modern digital economy, low co-ordination and efficiency - this option si focused more on quick wins, but the road to the digital economy will be much longer, and The probability of realization fo this risk is relatively high; it can be mitigated through the empowerment of Ministry of Economy with executive rights: to manage and oversee the Program; as well Economic Council can be the involved more closely in the driving and monitoring

   Other major risks are the same as 2-3 in OPTION 1

GOVERNANCE RECOMMENDATION

Table 17. Governance recommendations

Ref.	Recommendation	Rationale	Priority
GOVERNMENT OF MOLDOVA			
GOV-01	Define and implement a Digital Transformation Governance	Our study has highlighted that the lack of governance and implementation was a transversal issue. On the basis of the Estonian and Ukrainian cases studies and local context information, we have proposed 2 models of governance. Details can be found in Chapter 8	Priority: HIGH Impact: HIGH Effort: HIGH

Source: MSRP Expert team research work

CHAPTER 8: DETAILED RECOMMENDATIONS

OFFICE FOR PREVENTION AND COMBATING OF MONEY LAUNDERING (1)

Recommendation Number: AML-01

Recommendation Name:
Approve a Guide on Distant Customer Identification with use-cases, technical and security requirements

Primary Responsibility:	Office for Prevention and Combating of Money Laundering
Secondary Responsibility:	n/a
Oversight Responsibility:	Economic Council, National Bank

Priority: High Impact: High Effort: Low

Problem & Background:
Banks, telecom companies which are issuers of electronic signatures, all raised the issue about the Distance Customer Identification that shall be conducted in person, in particular on establishing a business relationship, and for other transactions. The same procedures are required at the prolongation of bank cards or mobile, electronic signatures. Almost all payment electronic service providers still conduct remote Customer identification and are licensed by the National Bank of Moldova, being also reporting entities under national AML law.

Therefore, there is a different approach on how the legal provisions are interpreted by all participants, and the supervision body. The reporting entities under AML law tend to be more restrictive and feel more confident and protected, applying enhanced customer due diligence measures rather than simplified ones.

Office for Prevention and Combating of Money Laundering has a clear understanding that Distant Customer Identification shall be conducted only in person, and support this idea by referring to the Law no. 317/2007 on preventing and combating money laundering and terrorist financing.

Extreme measures adversely impact the customer user experience. A balance needs to be in place between customer satisfaction and security requirements, considering different levels of security and also AML risks. Security and customer due diligence measures must therefore be proportionate to the risks presented, whilst ensuring compliance with the risk-based approach as set out in AML law.

Proposed Solution:
Office for Prevention and Combating of Money Laundering approve a Guide on Distance Customer Identification, which shall prescribe in which cases it could be applied, and what would be all technical conditions for security compliance.

Justification & Desired Outcomes:
AML law no. 317/2007 does not expressly indicate in which form shall be conducted KYC, nor prohibits the Distant Customer Identification. According to the art. 5 par. (2) let. (a), *Customer due diligence measures include a) identification and verification of the identity of customer on the basis of identity documents, as well documents, data or information obtained from credible and independent source.* As it could be literally concluded from above mentioned provision is that the identification of the customer

is mandatory. However, the way he/she presents the identification documents or on how the reporting entity conducts customer identification is a subject of their internal procedures.

According to art. 8 par. (3) let. c), *On the basis of its own assessment, the reporting entity establishes the factors that generate higher risk and that determine the necessity to apply enhanced customer due diligence measures. The factors which generating high risk are c) customers that personally are nor present for identification.* The same art. 8 par. (3) let. j) prescribes another risk factor – *business relationships or non-face to face transactions, without specific protective measures, such as an electronic signature.* Thus, the absence of the customer at the identification or when a transaction is performed is considered a risk and shall be applied enhanced due diligence measures. At the same time, art. 8 par. (3) let. j) opens the window that non-face-to-face transactions are allowed, but there shall be in place protective measures. The same understanding could be applied to the distant customer identification if there are all protective measures in place such as: electronic signature, electronic ID documents, licensed software for online ID verification, etc.

The risk factors are listed in art. 8 par. (3) shall not be interpreted separately but considering all relevant circumstances and potential risks related to the customer. Otherwise, there would be no need for any risk-based approach. Therefore, the absence of the customer at the identification as a solo factor cannot be considered as a high risk.

The fact that Distant Customer Identification is not prohibited under national AML law could be also concluded from available NBM Decision on the approval of the Regulation on the requirement for prevention and combating money laundering and terrorist financing in the activity of banks no. 200 of 09 august 2018, in particular p. 58.

The desired outcome is to have a clear and common understanding of the fact that Distance Customer Identification is possible under the current regulatory framework once all technical and security requirements are in place.

Cost-Benefit Assessment

Benefits:

1. Relevant evidence in case of trials related to frauds and money laundering transactions
2. High security and decreased human factor errors
3. Improved customer satisfaction

Costs:

1. Efforts of the Office for Prevention and Combating of Money Laundering in drafting the technical guideline, which has to be circulated with a wide range of specialists (lawyers, representatives of banks and other reporting entities, IT specialists on delivering valuable information on security issues, etc.);
2. Explore best practices and lessons learned from other countries (which is an extensive research work).
3. Additional costs and efforts for trainings on the applicability of the Guideline.

Key Performance Indicators

1. Secured data of the Customers
2. Increased Customer satisfaction by reducing the time for administrative procedures substantially as it is for KYC in person
3. Access to relevant public data for customer verification (e.g. electronic IDs register, population register, etc.).
4. Reduced number of frauds related to customer identification

Proposed Action Plans

1. Office for Prevention and Combating Money Laundering establish a working group of specialists (lawyers, IT specialists, representatives from the bank sector, payment service providers representative, etc.).
2. Analysis of best practices in Europe on Distant Customer Identification (legal compliance, security compliance, technical requirements).
3. Approval of the Guideline and ensure a wide dissemination of it to interested parties.
4. Organize training for reporting entities on the applicability of the Guideline.
5. Share valuable expertise and experience of payment service providers (Moldova) that had already been implemented into practice Distant Customer Identification (lessons learned).

Key Risk & Mitigation

1. Reporting entities could not have in place technological solutions to perform remote Customer identification and to ensure compliance with AML (in particular record-keeping). Under AML law (art.9), the reporting entities shall keep for a period of 5 years the termination of business relationships all data related to national and international activities and transactions to the extent that they can respond promptly to the request of the Office for Prevention and Fight against Money Laundering, of authorities with supervision functions of the reporting entities and law enforcement agencies. The kept data must be sufficient to allow the reconstruction of each activity or transaction in the manner in which it is necessary to serve as evidence in criminal proceedings, contraventions, and any other legal proceedings. The

2. Pure usage of electronic ID in Moldova. The Government it is committed to diversifying services where electronic ID could be used, thus would boost its usage in the future.

3. High costs associated with deployment and usage of necessary infrastructure. This won't be considered a risk once the reporting entities evaluate the benefits of this infrastructure in the long-term and the security of data that they are anyway obliged to keep.

   Case studies
   The Office for Prevention and Combating Money Laundering shall analyze other countries' best practices in terms of technical solutions used to perform remote Customer identification that are compliant with EU AML regulations.

   Some relevant examples used in Europe:

https://identiway.com/en/identity_verification

https://www.idnow.io/regulation/identification-kyc/ (Germany) https://www.tremend.com/torp/ (available also in Romania)

https://www.electronicid.eu/en

https://accurascan.com/blog/detail/how-accura-scan-kyc-can-help-romania-enforce-new-compliance-law

A relevant piece of work is Germany's experience by approving the Technical Guideline TR-03147 Assurance Level Assessment of Procedures for Identity Verification of Natural Persons. It examines threats and requirements for identity proofing and verification procedures based on the usage of ID documents. This document considers that the (minimum) required level of assurance varies, depending on the kind of e-government or business process.[22]

Remote Customer identification has been a common practice in the EU for more than ten years, even under previous AML regulations. THE latest AMLD5 brings many reinforcements, including a major improvement concerning remote transactions and customer identification.

22 https://www.bsi.bund.de/SharedDocs/Downloads/EN/BSI/Publications/TechGuidelines/TR03147/TR03147.pdf?__blob=publicationFile&v=1

POSTA MOLDOVEI (1)

Recommendation Number: POS-01

Recommendation Name:
Develop an API for third parties & e-commerce platforms

Primary Responsibility: Posta Moldovei
Secondary Responsibility: Ministry of Economy
Oversight Responsibility: To be Determined

Priority: Medium Impact: Medium Effort: Medium

Problem & Background:
Interviews with companies and logistic solutions providers have expressed the need and the demand for an Application Programming Interface (API) so that their e-commerce solutions can interact with the Postal solution in a live and automated way.

Most of the European postal counterparts do have an API, and, in many cases, we can find ready to install modules for the main e-commerce solution such as Magento, Shopify, WooCommerce etc. Integration modules are of great use, especially for small merchants who may not have the financial capacity to develop a custom-made integration.

Proposed Solution:
Posta Moldovei to request assistance in accessing and implementing UPU's eCom API, or equivalent solution.

Justification & Desired Outcomes:
The development of e-commerce relies on adequate logistics infrastructures and practices. Posta Moldovei, as a state enterprise, already has the mandate to facilitate the development of trade, communications, and logistics in the country and abroad. Developing and proposing an API is a logical continuation of the current postal vision demanded by most of the SMEs and logistic providers that we have interviewed.

Cost-Benefit Assessment

Benefits:

- Less customer support inquiries related to pricing and tracking
- More SMEs and logistic players using the post for their e-commerce stores
- Moldovan consumers able to track their order delivery within their supplier website

Costs:

Development costs can vary depending on the scope of work and the current state of the digital infrastructure of the Posta Moldovei. However, in our recommendation, we propose to submit a request for assistance to UPU and potentially other international organization to assist with this initiative.

Key Performance Indicators

There are two leading performance indicators for this recommendation, and these are:

1- The number of logistic providers who integrated the post API
2- The number of SMEs who have installed the Postal e-commerce plugin

For both of these indicators, the starting point is zero.

Proposed Action Plans

1- Evaluate the current postal systems readiness for information exchange
2- Request assistance from international organizations
3- Deploy and pilot a first API integration with the three main last-mile delivery companies

Key Risk & Mitigation

Shall International Organization choose not to assist or delay such possibility, we suggest for the Posta Moldovei to consider a business model where the post develops the plugins directly for the leading e-commerce platforms and list them on the respective plugin marketplaces for a small subscription fee of say $10 per year for instance.

NATIONAL CENTER FOR PERSONAL DATA PROTECTION (2)

Recommendation Number: DAT-01

Recommendation Name:
Draft a guideline and awareness campaign on explaining the applicability of other lawful grounds on collecting and processing personal data without the additional and prior consent of the customer

Primary Responsibility: National Center for Personal Data Protection
Secondary Responsibility: n/a
Oversight Responsibility: Economic Council

Priority: High   Impact: High   Effort: Low

Problem & Background:
The main misunderstanding is that processing personal data is possible only through the consent of the subject of personal data. The consent is, in fact, one of the main legal grounds. While purchasing online is difficult under current regulation to obtain the prior consent of the customer, as this so-called electronic consent should be in compliance with all requirements of the electronic document. Thus, the customer has to be a holder of an electronic signature. This fact creates an artificial barrier to natural and friendly e-commerce experience. The main law on data protection actually regulates other lawful grounds when this consent is not mandatory, but apparently, these situations are purely applied due to a lack of a clear understanding of the subject.

Proposed Solution:
National Center for Personal Data Protection to draft a guideline explaining for business as personal data operators, and for consumers what are other lawful grounds when the prior and additional consent is not required. There shall be in place more explanations on the applicability of the art. 5 let. a) Law no. 133/2011.

Justification & Desired Outcomes:
Law no. 133/2011 also prescribes additional legitimate grounds based on which the personal data could be processed and stored, like those mentioned in art. 5. where the consent is not mandatory, such as: a*) performing a contract to which the subject of personal data is a party or for taking measures before concluding the contract, at his/her request.*

In fact, art. 5 let. a) mentioned above is relevant to e-commerce and is a viable solution in particular to online purchases. The customer who is a natural person, subject of personal data, is a part of an online purchase contract or has to take concrete steps in order to enter into such contract, at his or her request. To enter in a contract or perform a contract, it is needed and agreed that personal data processing happens within the contractual scope. This would be a legitimate basis of lawful processing of personal data in the context of a contract or the intention to enter into a contract, and there is not necessarily an additional consent.

Cost Benefit Assessment

Benefits:

1. SMEs comply with data protection regulations
2. Customers' data are lawfully collected and processed for the scope of electronic purchase

Costs:

1. Efforts of National Center for Personal Data Protection staff in drafting and approving a comprehensive Guideline and explaining the applicability (case studies) of all the lawful grounds when it is not necessary to obtain customers' additional consent on personal data collection and processing.
2. Printed materials, audio-video visuals for public awareness campaign that could imply additional costs in the budget of the Center.

Key Performance Indicators

1. E-commerce websites in compliance with the data protection laws
2. Increased customer satisfaction while purchasing online
3. Businesses are aware of how to apply the legal grounds for personal data protection collection and processing
4. Increased protection of personal data of the customers while purchasing online

Proposed Action Plans

1. National Center for Personal Data Protection drafts a Guideline on the applicability of lawful grounds of data protection collection and processing, other than prior and express consent of the customer
2. National Center for Personal Data Protection involves development partners and the civil society dealing with data protection in drafting the Guideline
3. Organize an awareness campaign by publishing relevant information on the Center's website, and create small information kits for SMEs on how to comply with the law, etc.

Key Risk & Mitigation

National Center of Personal Data Protection could lack the capacity to perform training or awareness campaign for SMEs. Thus, the NGOs form this sector, along with development partners, could offer support to perform these activities.

Recommendation Number: DAT-02

Recommendation Name:
Amendments to the Law no. 133/2011 by regulating different formats of customer's electronic consent

Primary Responsibility:	National Center for Personal Data Protection
Secondary Responsibility:	Government, Parliament (decision-making process)
Oversight Responsibility:	Economic Council

Priority: High　　Impact: High　　Effort: Medium

Problem & Background:
SMEs struggle in obtaining customer consent that could be considered valid under national law on data protection. One of the options which is widely used is to obtain the customer's consent by clicking an "Agree" option on their website.

Almost all interviewed stakeholders and SMEs mentioned about the mandatory consent of the customer in a written and electronic form, which is merely impossible to obtain on electronic purchases on websites. Not all customers are holders of electronic signatures.

Proposed Solution:
National Center for Personal Data Protection promotes into the Government amendments to the definition of the *Consent* (art. 3 of the Law no.133/2011) where the Consent could have different formats in order to be considered valid. One of the formats is the Customer's option by clicking an agree box on the website and delivering the personal data needed for online purchases.

Justification & Desired Outcomes:
An ordinary customer will not have an electronic signature in order to express his/her consent for personal data processing, nor will he come to the merchant to express it in written form (it just contradicts the principle of on-line purchase and e-commerce in general). Moreover, many merchants could perform their business only on-line without having a warehouse or a physical shop. The main outcome is to have available other lawful ways to express consent when needed and for it to be considered valid. One of the most available options is the click Agree option on the websites, option used worldwide.

Cost-Benefit Assessment

Benefits:

1. SMEs are in compliance with data protection regulations
2. Customers' data are lawfully collected and processed for the scope of electronic purchase
3. Consumers have user-friendly solutions available to express their consent for their personal data processing while purchasing online

Costs:

1. Efforts of the National Center for Personal Data Protection staff in drafting amendments to the Law and reason their necessity

Key Performance Indicators

1. E-commerce websites in compliance with the data protection laws
2. Increased customer satisfaction while purchasing online
3. Increased protection of personal data of the customers purchasing online

Proposed Action Plans

1. National Center for Personal Data Protection drafts amendments to the art. 3 of the Law no. 133/2011 and promote it for the Government for approval
2. After the promulgation of the amendments, widely inform SMEs on the available options of expressing electronic customer Consent

Key Risk & Mitigation

1. Delays in amending the law.

A set of amendments to the Law no. 133/2011 on personal data protection is in Parliament since 2018, and no further updates related to this process is observed. Even though the law has been sporadically amended in respect to certain provisions. Singular amendments to the law could have more success to pass in the Parliament, rather than going as a package of amendments similar to those waiting in Parliament since 2018. The amendments related to the format of consent are not conceptual and would not affect the scope of current law. It is more a technical aspect that shall be clarified, and which would exclude an unreasonable burden of the merchants performing their business online**.** The recommendation related to amending the regulatory framework is already on the agenda of the Economic Council under the Prime Minister of the Republic of Moldova, which initiated discussions with the National Center of Personal Data Protection. We could only reiterate the importance of this initiative

AGENCY FOR CONSUMER PROTECTION AND MARKET SURVEILLANCE (1)

Recommendation Number: CON-01

Recommendation Name:
Amendments to the Law no. 105/2003 on consumers' right protection in line with Civil Code latest amendments related to consumers' right protection

Primary Responsibility:	Agency for Consumer Protection and market surveillance
Secondary Responsibility:	Government, Parliament (decision-making process)
Oversight Responsibility:	Economic Council

Priority: High   Impact: High   Effort: Medium

Problem & Background:
From discussions with the Agency for Consumer Protection and Market Surveillance representatives, the problems with electronic commerce are quite similar to those of classic commerce. And almost all problems to consumers' right protection is a matter of legal literacy in this particular domain. Consumers are not aware of their rights and the procedures they shall follow in order to protect and revendicate their rights.

The most common problems related to e-commerce are:

a. E-commerce on social media which is not yet regulated.
b. The set of mandatory pre-contractual information available on e-commerce platforms.
c. Delivery of products with missing parts or accessories, or mechanically hit products.
d. Incomplete information on the essential characteristics of the product.
e. Incomplete information about the merchant.
f. Lack of information about the customer's right to revoke the contract

Proposed Solution:
Agency for Consumer Protection and Market Surveillance drafts amendments to Law no. 105/2003 on consumers' protection in the sense to link it more with the new provisions of the Civil Code, and to send it to the Government for promoting the initiative.

Justification & Desired Outcomes:
With the latest amendments to the Civil Code, consumers were granted with higher protection. The protection of consumers rights has been raised to a general principle, and new protection tools have been introduced, such as the term of execution of the obligation in consumers contracts, prohibition of payment collection from consumers; the prohibition of the professional not to provide erroneous information to consumers; information content requirements for distance and off-premises contracts; the required format of information delivered to consumers for distance contracts; specific obligations in case of contracts concluded by electronic means; the right to revoke the contract, etc. Most of the provisions are prohibitive, thus implies more protection of the consumer in his/her relations to the merchants (professionals). These amendments entered into force on 1st March 2019. It seems that their application is pure due to the fact that previously Law no. 105/2003 on consumers' protection was the main law regulating the consumer's right protection. And merchants are used to look into this law rather than checking the new provisions prescribed by the Civil Code.

After amending the Civil Code and introducing a wide range of protection mechanisms for consumers, Law no. 105/2003 on consumer protection was not yet properly amended. As for example, the right of the consumer to revoke the contract prescribed in the Civil Code does not have any reference in the Law no. 105/2003 on consumer's protection, nor in the Law no.284/2004 on electronic commerce. This particular right is of high importance, and it also was raised by the Agency for Consumer Protection and Market Surveillance. They are currently monitoring a pool of websites performing e-commerce, and from their preliminary findings is that more of 80% of the websites do not offer information about the consumers' right to revoke the contract, the timeframes within which the consumer could use this right; and how to do it, etc.

Cost-Benefit Assessment

Benefits:

1. Increased customer awareness about their rights and protection mechanism while purchasing online.
2. Increased awareness among merchants on the basic disclaimers to be provided to the customers.
3. Reduced cases of customers' rights violations.

Costs:

1. Efforts of Agency for Consumer Protection and Market Surveillance on research and drafting amendments to the Law.
2. Additional capacities for drafting easy information kits for SMEs on basic disclaimers to be provided on their website for customers.

Key Performance Indicators

1. Merchants websites in compliance with the laws on consumers protection (with all disclaimers in place).
2. Creation of correct expectations for customers while concluding distant contracts, awareness of their main protection tools while purchasing online.
3. Decreased number of violation of customers' rights.
4. A clear understanding of the regulations on customers' rights (Civil code & Consumer law)

Proposed Action Plans

1. Agency for Consumer Protection and Market Surveillance has to analyze wisely the latest amendments of the Civil Code and draft the amendment to the Law no. 105/2003 and make this law more a part of the whole puzzle of consumer protection.

2. Organize awareness campaign and make a clear understanding among merchants that the protection of customers is ensured not only by the Law no. 105/2003, but as well and mainly by the Civile Code of the Republic of Moldova.

Key Risk & Mitigation

3. Lack of capacities within the Agency for Consumer Protection and Market Surveillance. In order to smooth the impact of this risk, the Agency shall request support from development partners and NGOs from the sector, or academic community to help in implementing these recommendations.

MINISTRY OF ECONOMY AND INFRASTRUCTURE (6)

Recommendation Number: MOE-01

Recommendation Name:
Update and ensure cross-references between the Law on E-commerce (284/2004) and other related laws

Primary Responsibility: Ministry of Economy and Infrastructure
Secondary Responsibility: Government, Parliament (decision-making process)
Oversight Responsibility: Economic Council

Priority: Low Impact: High Effort: Medium

Problem & Background:
Despite e-commerce being adopted in legislation 16 years ago with the adoption of Law no.284/2004 on electronic commerce, implementation has progressed very slowly, and Moldova is falling significantly behind to other countries, for example, Ukraine, Estonia.

This law does not cover all the ecosystem of e-commerce, and it did not aim that, as it is not a Code of e-commerce. We also attempted to link the main aspects that imply e-commerce referring to electronic documents, personal data protection of consumers, and intellectual property law.

Since 2004 it was amended a few times but still needs to be updated, taking into account the last developments and realities, especially due to pandemic times, when e-commerce became more relevant than ever.

This law has to be amended at least from a technical point of view is following provision: *The provisions of this law are completed with the provisions of Law no. 133/2011 on the protection of personal data, Law no. 114/2012 on payment services and electronic money, Law no. 91/2014 on electronic signatures and electronic documents, Law no.105 / 2003 on consumer protection and Law no.8 / 2016 on consumer rights to conclude contracts.* The Law no. 8/2016 on consumer right to conclude contract was abolished in March 2019. As well, the reference to the Civil Code would also be necessary taking into consideration the latest amendments related to agreements concluded by electronic means, consumers' right protection, etc.

Proposed Solution:
Ministry of Economy and Infrastructure to initiate the amendments to the Law no. 284/2004 and to adjust it to other incident regulations related to e-commerce.

Justification & Desired Outcomes:
Additionally to the stated above, at the technical level, there are some inconsistencies, as for example, art. 3 par. (9), where prescribes that *the right to perform electronic commerce is obtained from the moment of registration at State Registration Chamber of the legal person or of the individual entrepreneur under conditions of the Law no. 220/2007 on the state registration of legal person and individual entrepreneurs.* From this wording, there are other subjects excluded from performing lawfully (even if the regulator did not intend these kinds of restriction) e-commerce, such as peasant households. Many of these entities have a wise approach in developing their businesses and also are present on the online market. These entities under Moldovan law are considered physical entities (not legal entities), and their registration authorities are townhalls, not the Agency of Public Services. Worth mentioning that the

State Registration Chamber does not exist since 2017. Therefore, even this kind of technical inconsistencies are underling the fact that this law has to be flexible and correspond with the current realities.

Cost-Benefit Assessment

Benefits:

4. A clear general framework on electronic commerce. The main Law no.284/2004 shall ensure proper links to other incident regulations on electronic commerce, and easy for the user to understand the whole regulatory ecosystem of electronic commerce.
5. Assurance that all subjects have access to perform electronic commerce, such as peasant households.

Costs:

1. Efforts on monitoring the amendments to other regulations and to update accordingly the main law on electronic commerce, which shall be a table of content of electronic commerce.

Key Performance Indicators

1. Updated and integrated regulatory framework related to electronic commerce
2. User-friendly regulatory framework, where it is clear and precise what are the main laws dealing with electronic commerce and how they complement each other.

Proposed Action Plans

1. Ministry of Economy and Infrastructure initiate an analysis of the regulatory framework of the primary and secondary legislation related to electronic commerce, identify the overlaps and gaps among them.

2. Ministry of Economy and Infrastructure, based on the conducted analysis, elaborates the amendments to the Law no. 284/2004 and other incident regulations in order to link them accordingly.

Key Risk & Mitigation

1. **Lack of capacity.** The Ministry of Economy and Infrastructure could request support from development partners to conduct the analysis by a local expert. Based on the findings to draft the relevant amendments.

Recommendation Number: MOE-02

Recommendation Name:
Create Incentive Mechanisms for the Development of Fintech

Primary Responsibility: Ministry of Economy and Infrastructure
Secondary Responsibility: Administrator of IT Park, Ministry of Finance

Oversight Responsibility: To be Determined

Priority: High Impact: High Effort: Low

Problem & Background:
While IT firms get Government support in the form of the IT Park, there is no such support and incentive structures for the development of Fintech in Moldova.

Encouraging more Fintech financial services firms from abroad and locally will allow for much-needed competition in financial services. More consumers may be attracted to the financial services market by these new Fintech players. More competition also brings better service and lower prices, especially in e-commerce, where high fees eat into merchants' margins. Fintech players may also facilitate easier integration of payment platforms on e-commerce websites.

Inspired by international developments, many entrepreneurs would aspire to launch Fintech ventures. However, they find it challenging to start without technical and financial support, let alone scale their businesses. Without scale, Fintech firms can hardly make a real difference.

Proposed Solution:
The government, together with development partners, consider the introduction of support mechanisms specifically for Fintech firms, considering international practices:

1. Allow Fintech firms to qualify for support in IT Parks – The law would need to be amended to include criteria that qualify Fintech firms to receive IT Park support.
2. Launch a Research and Development Tax Credit scheme that encourages R&D specifically in the field of Fintech that supports the development of e-commerce, solutions to increase non-cash usage and improve overall levels of financial inclusion.
3. Assess the feasibility of launching a tax rebate scheme for investors who invest in risk capital in Fintech ventures.
4. Examine specific grant schemes for qualifying Fintech firms.

Justification & Desired Outcomes:

1. Government support will encourage more entrepreneurs to launch Fintech ventures that drive up financial inclusion and accelerate e-commerce in Moldova.
2. Government support attracts foreign Fintech players who bring proven Fintech business models and technologies that drive financial inclusion and e-commerce.
3. Government recoups the cost of tax incentives and grants through greater levels of VAT and tax collection, resulting from more transactions moving out of the grey sector into the formal sector, where their transactions are fully accounted for, and therefore subject to tax.

Cost Benefit Assessment

Benefits:

- Fintech players bring competition. More competition in financial services brings about stability and more choice for consumers. It will encourage the development of products and services that reduce cash transactions. Fintech can also drive e-commerce because the payment system works for SMEs.
- Greater levels of financial inclusion bring more parts of the grey economy into the formal economy, raising tax collections
- Greater levels of financial inclusion also benefit the economy as small businesses are able to scale through financing, and households improve lives and security.

Costs:

- Tax rebates and grants will have a direct cost or a lost tax revenue opportunity cost.
- The government may need to recruit consultants to help implement these schemes, although donor agencies may be able to provide support.
- Tax authorities may need to recruit additional staff to factor these incentives in revenue collection.
- IT Park may need to invest in developing the capacity to support Fintech firms.

Key Performance Indicators

1. Number of new Fintech firms originating from local entrepreneurial networks.
2. Number of new foreign Fintech firms establishing businesses in Moldova.
3. Rate of change in payment fees – over time, we should see a decrease because of more competition.
4. Increased rates of financial inclusion – i.e., increase in numbers of bank accounts
5. Increase in non-cash payments.

Proposed Action Plans

1. Develop a task force/working group to advise relevant parts of Government on the feasibility of tax incentives and grants to stimulate the development of Fintech and financial services related to e-commerce.
2. International research on tax incentives and grant schemes established by other countries and assess what results they achieved.
3. Propose specific tax incentive schemes and grants that Moldova's Government can implement
4. Amendments to Law No. 77 on Information Technology Parks to include Fintech businesses.

Key Risk & Mitigation

1. Post-COVID, when the Government would have had significant expenses, they are reluctant to provide any additional tax incentives or grants that can deplete national reserves even further. This risk can be mitigated in several ways, as follows:
    a. Increase in tax collection adequately recoup costs of tax incentive schemes and grants.
    b. Donors may be willing to fund grants in the medium term, to help accelerate the development of Fintech without direct expenses to the government.

Case Studies –UK Implementation of Open Banking Implementation Entity[23]

1. UK Government have developed a Research and Development tax relief scheme[24] for small and medium sized enterprises, allowing them to deduct a total of 230% of qualifying costs from their yearly profit or claim tax credit worth 14.5% if the company is making a loss.
2. Seed Enterprise Investment Scheme[25] and the Enterprise Investment Scheme[26] launched by UK Government to provide income tax and capital gains relief for investors who invest risk capital in early stage start-ups and more developed SMEs.

[23] https://www.openbanking.org.uk/about-us/

[24] https://www.gov.uk/guidance/corporation-tax-research-and-development-tax-relief-for-small-and-medium-sized-enterprises

[25] https://www.gov.uk/government/publications/seed-enterprise-investment-scheme-income-tax-and-capital-gains-tax-reliefs-hs393-self-assessment-helpsheet

[26] https://www.gov.uk/guidance/venture-capital-schemes-tax-relief-for-investors

Recommendation Number: MOE-03

Recommendation Name:
Include e-fulfillment services development into the existing industrial parks projects

Primary Responsibility: Ministry of Economy and Infrastructure
Secondary Responsibility: Government, Ministry of Finance
Oversight Responsibility: Economic Council

Priority: High Impact: High Effort: High

Problem & Background:
The domestic logistics infrastructure in Moldova is operational. The warehousing infrastructure is also established; however, the gap is about the availability of "e-fulfillment" companies that could offer such a service to multiple clients.

For now, each company tends to build its own e-fulfillment operations and often even have its own fleet of vehicles and drivers.

In addition to the existing 51 multifunctional industrial platforms, there is a Government initiative to build an additional 16 in regional and low-developed areas. The first 50 mln MDL for the project design were allocated: https://mei.gov.md/ro/content/sergiu-railean-platformele-de-suport-afaceri-infrastructura-industriala-la-nivel-local-sunt

Proposed Solution:
Ministry of Economy and Infrastructure to monitor the works for the design of new and modernization of the existing industrial platforms, in order to ensure logistics infrastructure & e-fulfillment operators to be present there.
To investigate and propose the stimulation for companies practicing e-fulfillment activities as well

Justification & Desired Outcomes:
As soon as Moldova is a relatively small country, only a few companies are able to build and support large infrastructure & logistics services. And, those services usually are carried out only for their own activities. Or, the logistics only is provided by operators(i.e., Posta Moldovei, Muvi Express, Nova Poshta) - no operator is providing full-cycle, effective e-fulfillment for many e-commerce companies, i.e. starting from the integration with e-commerce platforms, payments tracking, pick and pack the goods, with deliveries, managing returns.

Cost-Benefit Assessment

Benefits:

1. A practical, optimized service for the e-commerce merchants; as soon as there are several focuses in e-commerce – production and/or import (re-sale for marketplaces), payments, technology solutions, design, CRM, digital marketing & branding, etc., etc., the small to medium, and even large merchants, will pass the orders processing, pack and delivery to specialized e-fulfillment operators rather than building own infrastructure.
2. E-commerce transactions, i.e., turnover growth.

Costs:

1. Efforts on monitoring the amendments to other regulations and to update accordingly the main law on electronic commerce, which shall be a table of content of electronic commerce.
2. Charges for the e-fulfillment design within industrial platforms; allocation of HR dedicated to developing the e-fulfillment; benefits/incentives/grants/preference loans for new/existing operators.

Key Performance Indicators

1. No. of industrial platforms and zones, equipped with necessary infrastructure for e-fulfilment – special, and automatized/robotized warehouses, electrical power & communications.
2. No. of e-fulfillment operators – at least 3-5 within 1-2 years

Proposed Action Plans

1. Ministry of Economy and Infrastructure to initiate an analysis of e-fulfillment services provided by operators in neighbor countries and the EU;
2. Ministry of Economy and Infrastructure, based on the conducted analysis, elaborates the detailed plan for the e-fulfillment services infrastructure and operators' stimulation and promotion; involve private companies, assure pilot launch.

Key Risk & Mitigation

1. **Lack of capacity.** The Ministry of Economy and Infrastructure could request support from major marketplaces, local and regional, to conduct the analysis and develop the exact detailed plan;
2. **Lack of funds.** The Ministry of Economy and Infrastructure could request support from major Development Partners for a pilot project; additionally, part of the necessary funds can be invested by private companies – e-fulfillment operators

Recommendation Number: MOE-04

Recommendation Name:
Consider the development of an advanced digital marketing capacity building program

Primary Responsibility:	Ministry of Economy and Infrastructure
Secondary Responsibility:	Development Partners, Moldova Investment Agency
Oversight Responsibility:	Economic Council

Priority: High Impact: High Effort: Medium

Problem & Background:

One of the key areas for e-commerce is marketing. The most important tools assuring success are the brand and digital marketing, these are a significant part of the marketplace/e-commerce efforts and budget.

As for the brand, Moldova's marketplaces and e-shops have developed and registered their own brands & brand books; however, the promotion online and offline are quite humble.

There is a lack of competence for digital marketing in the Moldovan market, either robust digital solutions and platforms; particularly for e-commerce, only a few players are providing those services.

Proposed Solution:

The Government to consider the development program for digital marketing; development of the digital marketing educational programs, including analytics and technologies; involving local marketing companies/agencies and universities, development partners, promote the local market for the regional and global players.

Justification & Desired Outcomes:

The solutions & digital marketing platforms: in the most cases are used well-known tools like Google (AdWords, Analytics, Tag Manager, My Business); on the mid knowledge level, there are SEO (Search Engine Optimization) and SMM (Social Media Marketing);

The customer analytics and digital campaigning solutions mainly developed in-house or based on open source basic software; currently, only several relatively large marketplaces (for Moldova) are starting to use specialized customer analytics and online digital campaigning management software, like Tableau, SAS, Unica, etc.

Is highly desirable to have modern, updated educational programs, both in universities and in the business environment (i.e., training programs for SME, etc.) for branding and digital marketing

Cost-Benefit Assessment

Benefits:

1. Up-to-date educational programs in digital marketing.
2. Rise the local market knowledge and competencies, additional quality digital marketing services offering for the local market, penetration on the regional and global market.

Costs:

1. Efforts & budget on initiate and conduct the study on the existing educational programs in universities and on the business environment, for the further update
2. Efforts, and budget fo launching and continuous support for the updated programs

Key Performance Indicators

1. Updated educational programs, No. of universities with digital marketing courses, business training programs for entrepreneurs.
2. # of companies, providing digital marketing services for SME

Proposed Action Plans

1. Ministry of Economy and Infrastructure, Ministry of Education to initiate a study for educational programs for digital marketing;
2. Based on the findings, plan development for digital marketing educational programs, including analytics and technologies, involving local marketing companies/agencies, universities, and development partners

Key Risk & Mitigation

1. **Lack of capacity.** The Ministry of Economy and Infrastructure, Ministry of Education, could request support from local market players and development partners.

Recommendation Number: MOE-05

Recommendation Name:
Assess the opportunity to register a state trademark & The program "Made in Moldova"

Primary Responsibility:	Ministry of Economy and Infrastructure, Moldova Investment Agency, AGEPI
Secondary Responsibility:	Development Partners
Oversight Responsibility:	Economic Council

Priority: Medium Impact: High Effort: Medium

Problem & Background:
Several Moldovan sectorial and private brands have been launched, but have not reached a significant international level. A few years ago, a project about "Made in Moldova" was initiated, but did not take off.
There are currently many excellent activities performed by the Moldovan Investment Agency (http://invest.gov.md); aimed to support investment attraction and promotion. The Agency is doing massive work to consolidate Moldova's image.

The brand 'Pomul Vieții'('Tree of Life'), designed and registered as a touristic brand of Moldova http://agepi.gov.md/en/news/"tree-life. A comprehensive brand book has been designed; the trademark has been registered. Another USAID CEED II project is assisting with the State Tourism Agency website upgrade (http://www.turism.gov.md/)

Another example, with the support of USAID and the Embassy of Sweden, is the local program, designed under the name "Din Inima" ("From Heart"), under the patronage of the Light Industry Employers Association (APIUS)
The expert team also has noticed that the private sector, with the assistance of other partners, has started sectorial umbrella brands such as for the Wine sector, for instance.

Proposed Solution:
Moldova regulatory framework allows the registration of national trademarks or the so-called state brands. Besides Law no. 38/2008 on trademarks protection, we also have the Government Decision no. 975/2016 on the management of state-owned trademarks for alcohol production and Government Decision no. 852/2001 on the use of state-owned trademarks. The State Agency for Intellectual Property registers the trademarks declared state property, based on the applications submitted by the relevant ministries and departments following the legislation's provisions. State trademarks are registered and managed by the state through its public institutions and are offered for usage to third parties based on license agreements.

Through the MOEI, the Government should register a state trademark and design a set of "brand guidelines" that would specify the color codes and rules of how the "Made in Moldova" is to be used by Moldovan on their websites, products packaging, and other media.

Another way may be the bottom-up approach – to design a brand initially for e-commerce of Moldova, with the relevant assessment and/or certification program to use, and, at the later stage to design the "Made in Moldova" umbrella brand;

Justification & Desired Outcomes:
National brands can play a great role in increasing the image perception of the country and of its enterprises and products. Success stories like the "Made in France" or the "Made in Italy" are of interest and may indeed require decades of work and planning.

We suggest to further strengthen these efforts and involve them in the building and use of the "Made in Moldova" branding guidelines.

Within the program of development & promotion of the "Made in Moldova" concept to strengthen the relevant state bodies through allocating additional qualified resources and budgets; actively involve private companies into the development and promotion; the realistic timing to this may be from 6 to 12 months

Cost-Benefit Assessment

Benefits:

1. A common strategic program for the "Made in Moldova" brand and, therefore, the country promotion
2. Assured support from the Government for Moldovan export businesses

Costs:

1. Efforts and budget for the brand/sub-brands development and registration
2. Budget for permanent brand promotion activities

Key Performance Indicators

1. Developed a brand book, registered state trademark
2. Developed and approved program for brand/sub-brand promotion

Proposed Action Plans

1. Ministry of Economy and Infrastructure, with the involvement of Moldova Investment Agency and AGEPI and performs an analysis on development for the "Made in Moldova", or, as per the selected strategy – a sub-brand initially (i.e., "e-commerce of Moldova")

2. Ministry of Economy and Infrastructure and Investment Agency, based on the conducted analysis, elaborates and approve the creation and registration of the mentioned brands or sub-brands.

Key Risk & Mitigation

1. **Lack of capacity.** The Ministry of Economy and Infrastructure could add the relevant necessary positions in the organization structure (i.e., MOEI and/or Investment Agency), with approval of the respective budgets, and request as well the support from development partners.

2. **Lack of funding.** Plan the relevant funding for the state budget for next years; request the support of development partners for the multi-years strategic brand development program

Recommendation Number: MOE-06

Recommendation Name:
Encourage Direct to Consumer business model for SMEs

Primary Responsibility: Ministry of Economy and Infrastructure, AIM
Secondary Responsibility: Development Partners
Oversight Responsibility: Economic Council

Priority: High Impact: High Effort: Medium

Problem & Background:
Moldovan producers have limited production capacity to compete with "industrial" production levels of countries like Brazil, India, or China. The Direct to Consumer model (D2C) is a differentiation technique and a more accessible and rewarding business model for SMEs.

Such types of e-commerce startups are thriving, for instance, in the US and allow the companies to create higher margins through brand recognition.

Proposed Solution:
Consider the development of this model joined with the development "Made in Moldova" brand, allowing to optimize efforts and resources for the coordination and promotion; the timing taken may be from 6 to 12 months

Justification & Desired Outcomes:
The principle advantage of Direct-to-consumer is its focus on customers, which provides stronger brand loyalty. Good relations with the customers are necessary for this situation and bring more loyal customers and keep a high retention level. Direct-to-consumer enjoys lower costs compared to physical retail, as it has reduced the number of different business components like employees, purchasing cost, mailing confirmation, renting or establishing a physical store
The acceptable outcome would be a launched pilot, with the participation of at least 5-10 SME, acting in e-commerce

Cost-Benefit Assessment

Benefits:

1. Higher margins and brand exposure
2. Experience for strengthening customer loyalty management for the SMEs

Costs:

1. Efforts and budget for the study, development, and pilot running

Key Performance Indicators

1. Developed model and pilot start

2. # of SME participants in the pilot
3. Business indicators for the SME – C/I Ratio

Proposed Action Plans

1. Ministry of Economy and Infrastructure (ODIMM), with AIM to initiate a feasibility study for the D2C model for the Moldovan SME

2. Ministry of Economy and Infrastructure, and AIM, based on the conducted analysis, elaborate and launch the pilot for selected e-commerce SMEs.

Key Risk & Mitigation

1. **Lack of capacity.** The Ministry of Economy and Infrastructure could involve the AIM and private companies' resources, as well as request support from the development agencies.

Recommendation Number: MOE-07

Recommendation Name:
Fiscal/Logistics/Marketing e-Export corridors (quick-win)

- ✓ Registering and using a VAT number from EU countries
- ✓ Building logistic corridors between Chisinau and specific EU cities
- ✓ Registering with EU online marketplaces & payment solutions (using the EU VAT certificate)

Primary Responsibility: Ministry of Finance (Customs Service, State Tax Service)
Secondary Responsibility: Ministry of Economy and Infrastructure,
Oversight Responsibility: Economic Council

Priority: High Impact: High Effort: Medium

Problem & Background:
Several Moldovan companies export their goods and services through a Romanian entity. These activities imply additional costs and timing but can provide quicker market access.

Proposed Solution:
Ministry of Economy and Infrastructure to set up a coaching program to assist Moldovan SMEs with getting EU VAT numbers. Additionally, Moldova could request from Romania to remove the requirement for a resident fiscal representative and allow Moldovan companies to apply for a Romanian EU VAT number. Moldovan entrepreneurs can then mutualize their traffic and negotiate recurrent and long-term routes with Moldovan freight partners, for the following suggested routes:

- ✓ **Air Freight:**
  In cooperation with Moldovan Airlines, a group of SME can access a preferential price for the traffic of at least 2T per week towards Frankfurt, Paris, and London. This mode is useful for high-value/low-volume products or for premium perishables. The target value to use this line is products that have €30/Kg retail value and above.

- ✓ **Road Freight:**
  As we have discussed with AITA members and IRU, Moldovan exporters could benefit from the existing road flows towards the EU and use their EU VAT numbers to streamline their import administrative costs. We suggest focusing on the Chisinau>Dresden route, which offers the most cost-effective fiscal-logistic entry point to the EU. This mode is suitable for almost any type of product, starting from products that have a €10/Kg retail value.

- ✓ **Maritime Freight:**
  In cooperation with Danube Logistics SRL, a weekly or monthly schedule could be established to cover the Giurgiulești – Passau (Germany) line, allowing Moldovan producers to export almost any commodity to the heart of the EU within 5 days only and at a great price. Danube upward maritime freight deliveries have been done in the past for the transport of Soya Been and petroleum products.

Justification & Desired Outcomes:

At the International fiscal level, it is to be noted that the United Kingdom, Germany, France and the

Czech Republic have removed the requirement of having a local fiscal representative for VAT purposes. This exemption for non-EU companies means that a Moldovan SME can apply for and obtain "FOR VIRTUALLY FREE" an EU VAT number in any of the cited countries. Having an EU VAT number opens a fiscal and legal way for Moldovan exporters to import their products by themselves into the EU and distribute at wholesale and retail levels without the need for an EU intermediary. Being fiscally registered in the EU also opens access to EU based payment solutions, and EU based eFulfillment and logistics providers otherwise non-accessible for a Moldovan entity

The outcome will result in the establishment of new export channels

Cost-Benefit Assessment

Benefits:

1. An easier and less costly way for Moldova companies to export.

Costs:

1. Efforts on discussion with Romanian Government, investigations and development of the procedures for funding controls.
2. Promotion of new logistics channels

Key Performance Indicators

1. EU VAT No agreement with Romania
2. No. of companies using the new channel
3. Export & taxes volumes growth

Proposed Action Plans

1. Ministry of Finance initiates an analysis for the opening of new export opportunities and logistics channels for Moldovan companies/SME, identify and develop the optimized procedures
2. Ministry of Finance and Ministry of Economy and Infrastructure initiate the discussions with the Government of Romania for the exemption of Moldovan companies from the obligation to open a local representative office to get an EU VAT No.;

Key Risk & Mitigation

1. **Risks of capital evasion.** The Ministry of Finance needs to investigate and propose a mechanism for controlling the funds accumulated into the EU by Moldovan companies with VAT EU No.

GOVERNMENT OF MOLDOVA (1)

Recommendation Number: GOV-01

Recommendation Name:
Define and implement a Digital Transformation Governance

Primary Responsibility: Government
Secondary Responsibility: Ministry of Economy and Infrastructure
Oversight Responsibility: Economic Council

Priority: **High** Impact: **High** Effort: **High**

Problem & Background:
As e-commerce is an embedded part of the digital economy, there is a need to have relevant governance and implementation framework for the country's Digital Transformation.

Proposed Solution:
Government and other Regulatory State Bodies to create the government structure and relevant implementation(execution) management framework for the Digital Transformation, where e-commerce is a natural part of it.

Justification & Desired Outcomes:
The government established an Economic Council that is chaired by the Prime Minister himself, and the deputy chair is the Minister of Economy. It is an advisory body to the Prime Minister established by Government Decision No. 631 of 22 August 2011. The Council consists of 118 members, represented from public and private bodies, as well as industry associations and international bodies. The Council currently has 7 working group with various ad hoc working groups formed as appropriate. The Council engages in the implementation of various initiatives that we highlighted above.

From 2016, the Council is assigned the functions of the National Committee for Trade Facilitation. From August 2019, the platform also exercises the functions of the Advisory Council for small and medium enterprises. This is an advisory body, without any specific legislative neither executive powers. They have a "Motivator" function that can prod and encourage action. However, this is an informal mechanism. With 118 members, it proves challenging to arrange working meetings involving all members, so the working groups tend to be more active.
The Economic Council is a laudable development bringing all relevant stakeholders together under one structure. However, despite this body being in existence and driven by the Prime Minister and Ministry of Economy, as well as represented by key development partners and private sector bodies, it has not always succeeded in getting things done, particularly in the area of e-commerce. There are several limitations:

- Apart from working groups, there are no coordinated governance arrangements around specific broad key initiatives, such as the digital transformation of the economy, which may require various working groups to cooperate and additional government and private sector bodies.
- Similarly, there is no specific implementation body around the initiatives that would drive the execution of strategies and initiatives approved by a governing body.
- Finally, in the absence of the governance arrangements set out above, applying program management disciplines to implementation could be a challenge, especially given a changing political landscape.

There is a clear need for the increased coordination of a national digital transformation strategy, with clear roles, responsibilities, and implementation structure. A clear and understandable e-governance strategy and cohesive architecture are also vital. We find a need for an updated national digital agenda roadmap, a more efficient cooperation platform between state institutions and the private sector, and an efficient mechanism to finance the implementation of digital transformation.

Implementation has to be prioritized based on the critical needs of the economy and the citizens of Moldova, as well as their willingness to use the solutions (in other words, demand-driven). Implementation cannot succeed without a program to drive digital skills educational – which not only brings more digital skills in the economy but also educate consumers on the advantages of digital channels.

It's important to highlight that digital transformation is not only a technological effort but crucially, it is about changing mindsets. Besides, no strategy can be implemented without strong leadership driving implementation. Furthermore, we must recognize that digital transformation is a continuous process of changing society, business processes and technological solutions to new realities. We cannot think that once the strategy is implemented, that we are done. All elements must be implemented in a systematic manner, and a coordination process in the context of the present crisis could be transformed into a remarkable opportunity.

Cost-Benefit Assessment

Benefits:

1. An efficient management and execution structure for the Digital Transformation, with the specific action plans regarding e-commerce, as an integral part of the economy
2. Digital Strategy for Moldova, developed within the balanced, comprehensive, modern approach, driving the country's economic development.

Costs:

1. Efforts on creating the real working and efficient structure
2. Finance resources, allocated: a)within the budget for the state institutions and infrastructure transformation and modernization; b) digital literacy and knowledge training and promotion programs; c) private companies stimulation and involvement;

Key Performance Indicators

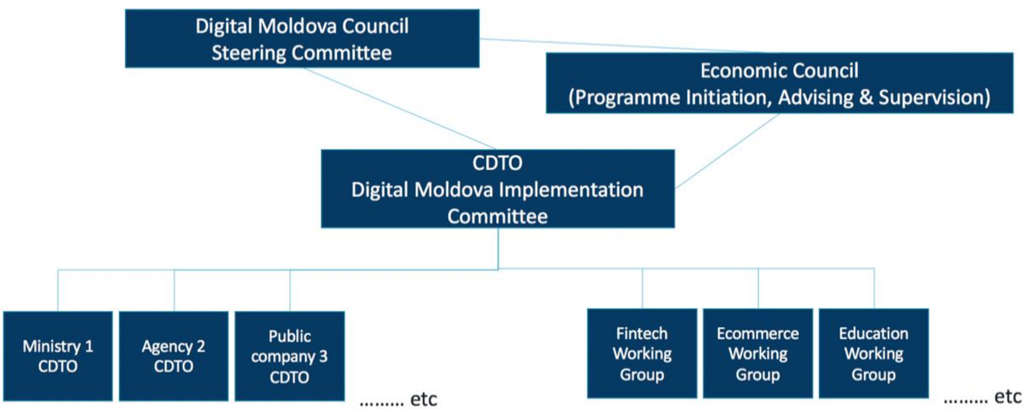
1. A new Digital Transformation program/Digital Strategy developed;
2. Digital economy, i.e. ICT & e-commerce No. of active companies, turnover, public & private investments, etc. growth

Proposed Action Plans

Two options for an efficient structure are proposed:

OPTION 1

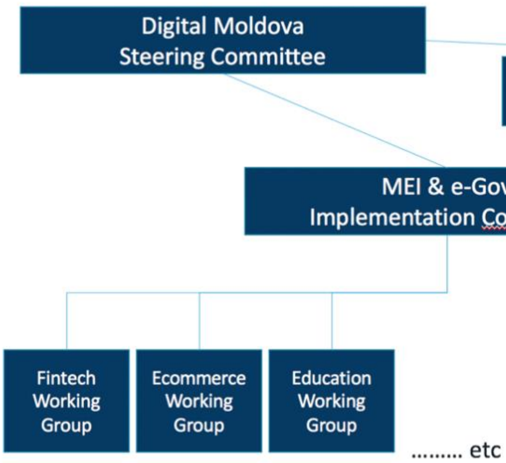
1. To establish a Digital Transformation Council, led directly by Prime Minister, with its Steering Committee (SC), taking the leadership/sponsor role, with main participants as :
    - Government and Public Institutions: Ministry of Economy and Infrastructure, Ministry of Finance, National Bank of Moldova, National Commission for Financial Markets, State Chancellery, STISC, e-Governance Agency, Agency of Public Services
    - Private sector representative Bodies, i.e., ATIC, AIM, ABM, and prominent Executives from the private companies
    - Development Partners: AmCham, EBA, EBRD, GIZ, USAID, World Bank etc.;
2. Assign the Ministry of Economy entity responsible for implementation; in order to enforce the leadership, sponsor an accountable executive role, might be relevant the position of Minister of Economy to be raised to Vice Prime Minister, or Prime Vice Prime Minister;
3. The Steering Committee will be responsible for and deal with all matters related to the digitization initiatives of the Moldovan economy and government, including Digital Strategy development and successful deployment, and, obviously including e-commerce;
4. The Economic Council should be empowered to advise, discuss and propose new programs and initiatives, its main role to supervise the development and deployment of the National Digital strategy;
5. The Steering Committee shall define an Implementation Body (Committee, Dept) to help give effect to policies and strategic initiatives developed by the Steering Committee. The Implementation Body, as an example, can be the e-Government Agency;
6. A role of Chief Digital Transformation Officer, who will lead the Implementation Body, to be established; according to the worldwide best practice, would be efficient to enlarge the role of the Director of e-Governance to the Government CIO and subordinate him/her to CDTO; CDTO him(her)self to be a member of SC, and subordinated to the MOE(PVPM / VPM);
7. All Ministries, Government or Public Agencies, Bodies, and Companies should be responsible(accountable) for the digitization of their direct sphere of responsibilities; in every entity a Chief Digital Transformation Officer role to be assigned, with the relevant duties and rights;
8. Specific program/project/working groups are to be established to deal with specific implementation initiatives.



OPTION 2

1. To establish a Steering Committee for Digital Transformation, lead by the Ministry of Economy and Infrastructure, with the participation of:
    - Government and Public Institutions; Ministry of Economy and Infrastructure, Ministry of Finance, National Bank of Moldova, National Commission for Financial Markets, State Chancelery, STISC, e-Governance Agency, Agency of Public Services
    - Private sector representative Bodies, i.e., ATIC, AIM, ABM, and prominent Executives from the private companies

      Development Partners: AmCham, EBA, EBRD, GIZ, USAID, World Bank etc.;
2. Assign the Ministry of Economy the entity responsible for implementation;
3. The Steering Committee will be responsible for and deal with all matters related to the digitization initiatives of the Moldovan economy and government, including Digital Strategy development and successful deployment, and, obviously including e-commerce.
4. The Economic Council should be empowered to advise, discuss and propose new programs and initiatives, its main role to supervise the development and deployment of the National Digital strategy;
5. Assign e-Governance Agency as Secretariat & Implementation Body to help in giving effect to policies and strategic initiatives developed by the Steering Committee, enforce the role of Director of e-Governance to the Government CIO;
6. All Ministries, Government or Public Agencies, Bodies, and Companies should be responsible (accountable) for the digitization of their direct sphere of responsibilities; a responsible person in every entity for Digital Transformation to be named;
7. Specific program/project/working groups are to be established to deal with specific implementation initiatives.



Key Risk & Mitigation

OPTION 1

Risk 1. Creation of the new management structure will provoke resistance on variois levels and institutions, as the organizational, financial, cultural perspectives are impacted. The risk can be mitigated by empowerment the Prime Minisear to take decisions regarding the best executive structure, based on the existing bodies, mobilize the Economic Council to propose and closely manage and supervise approved programs within the frame of approved Digital Strategy

Risk 2. Digital knowledge the digital economy stakeholders, almost for the entire country: Risk mitigation coming from: a) establishment of a unique program for the digital culture training programs, starting for the Implementation Committee/Body, Government Executives, continuing for the specialized ones – for government employees, private companies /SMM, within the schools and universities. As well, a significant point ist to involve in the Digital Transformation the regions, through the Minister of Agriculture & Regional, additional to Chisinau, there are 32 regions, UTAG and Balti municipality, and 897 locations; also the Minister of Education, Culture and Researches to be involved closely;

Risk 3. Timing & Lack of financial resources – mitigate the risk through thorough planning, including the necessary human and financial resources for the deployment of Digital Strategy Programs within the budget; as well, various support programs from Development Partners – a solid plan brings significant outcome, including economic, social and financial indicators

OPTION 2

Risk 1. The risk to lose the opportunity to build a modern digital economy, low co-ordination and efficiency - this option si focused more on 'quick wins', but the road to the digital economy will be much longer, and The probability of realization fo this risk is relatively high; it can be mitigated through the empowerment of Ministry of Economy with executive rights: to manage and oversee the Program; as well Economic Council can be the involved more closely in the driving and monitoring;

Risk 2-3. Same as 2-3 in OPTION 1

E-GOVERNMENT AGENCY (1)

Recommendation Number: EGO-01

Recommendation Name:
Company register website (1) upgrade for international e-commerce compliance facilitation

Primary Responsibility:	E-government Agency
Secondary Responsibility:	STICS
Oversight Responsibility:	Ministry of Economy

Priority: Low   Impact: High   Effort: Medium

Problem & Background:
For the last decade, the costs of compliance have been increasing steadily (2), creating more costs and complexity for businesses, and especially for e-Payments and online marketplaces providers. Part of the compliance complexity is passed onto the merchants, who must provide even more documentation and information before being allowed access to critical e-commerce services they need.

Moldovan companies suffer an even more challenging situation, which is due to the company register website not being ready for a "cost-effective" compliance checks by local and international providers. The current company register website suffers multiple critical drawbacks as the companies information are only available as excel files, and the website lacks SSL security as well as EV SSL authentication.

Proposed Solution:
Make company profiles searchable and browsable as web pages. Secure and authenticate the website with an EV SSL certificate applied to a dedicated URL such as https://register.gov.md. Make the register available in multiple languages and publish companies' data, including the list of the ultimate beneficiaries.

Justification & Desired Outcomes:
There exist multiple private company directories of Moldovan companies (3). However, from an international compliance perspective, only official and or public company registers are recognized. The current status of the Moldovan company register website, although complying with open data principles, does not inspire trust nor can it fully play its role as a reliable source for Moldovan company existence verification. Entrepreneurs often have to provide certified copies of their company documents with an Apostle as well as a certified English translation version of the documents. This leads to an average cost of $800 and up to a month of delays for each e-commerce provider that a Moldovan enterprise may want to work with.

Cost Benefit Assessment

The cost of an EV SSL certificate can be as low as $200 per year. An upgrade of the website to have company information available as pages could be automatically populated from the excel records. Company profile field names being common to all companies will render the translation to be virtually free. The subdomain register.gov.md is free. Such simple improvements instantly enhance the local and international e-commerce compliance for hundreds of thousands of Moldovan companies.

Key Performance Indicators

1. Company register purchases and installs the EV SSL test
2. Global E-commerce players verify Moldovan companies' existence by checking the register.

Proposed Action Plans

1. E-Government agency to purchase an EV SSL Certificate and to instruct to STICS to apply the certificate on a new register address such as register.gov.md

2. STICS to apply the changes and test the validity of the EV SSL certificate.

Key Risk & Mitigation

1. **Purchase procedure.** The purchase of an EV SSL certificate is a fully automated process whereby the requesting party applies and pays online with a payment card. Government offices and public institutions may have "purchase order" and payment process requirements which do not cover the advance payment by card online, or may take a long time to be approved. Mitigation could be to launch a quick and low-value call for proposal to private sector suppliers, who may be able to quickly purchase the certificate online, then follow the public institution purchase procedures in a second parallel step. [27]

[27] (1) Moldova company register URL: https://bit.ly/2CfL2mj
(2) Cost of compliance 2019: https://tmsnrt.rs/3flh27l (3) Company directories: idno.md bizzer.md

NATIONAL BANK OF MOLDOVA (3)

Recommendation Number: NBM-01

Recommendation Name:
Accelerate the Promulgation of PSD2 – allowing open banking

Primary Responsibility:	National Bank of Moldova, National Commission for Financial Markets
Secondary Responsibility:	Government State Chancellery, Parliament of Republic of Moldova / Regulatory Working Group
Oversight Responsibility:	Implementation Committee & Economic Council

Priority: High   Impact: High   Effort: Medium

Problem & Background:
High interchange fees and reliance on banks and card companies to process payments is one of the biggest contributing factors to the low levels of non-cash (or electronic) payment channels used for e-commerce. Cash only transaction can go undetected by fiscal authorities, who lose out on tax revenue. The inability of e-commerce merchants to take electronic payments limits the scalability of their business, as they will not attract digitally savvy customers and foreign buyers who prefer electronic channels.

Under current conditions, e-commerce merchants are having to pay up to 3.5% (of gross sale amount) commissions for clearing their payments, compared to around 1.5% in neighboring countries. These high costs eat into their already small margins of around 5 to 6% on average, and therefore, it is commercially not viable for them to accept electronic payments.

Moldova does have an E-Money licensing regime that allows for digital wallets. Technically, payments can be cheaper when using electronic or mobile wallet technologies. However, the e-Money company will still attract the standard interchange fees when customers top up their wallets with funds, using their credit or debit cards.

Most banks and some third-party payment services providers require merchants to retain a significant deposit to cover refunds, disputes, and frauds. In some cases, the charges could go as high as 7% of turnover, retained for a rolling 180 days. This charge severely hampers cashflow and exposes the merchant to the risk of running out of cash and forced to close.

The problem is exacerbated by customers' unwillingness to use electronic channels because they lack trust in the financial system or this type of non-cash payment, especially in light of one of the biggest banking fraud carried out in Moldova in 2014.

Proposed Solution:
The European Payment Services Directive 2 (PSD2) is on track to be implemented in Moldova, with the aim of aligning with international regulatory best practices. Moldova is not part of the European Union and is therefore not obliged to implement the directive or abide by implementation timelines. Estimates suggest that the Directive may take up to two years to implement.

We recommend that between the National Bank and the Legislator and Parliament, the parties' find way to accelerate its implementation, with the aim of having a working directive by the latest between June and December of 2021.

Justification & Desired Outcomes:

1. **Cardless payments** is one of the most significant benefits of PSD 2 for Moldova. PSD2 allows for a new business model of Payment Initiation Service Provider (PISP). A PISP is a third-party payment institution that can be authorized by the payer to access their bank account and make a payment on their behalf.
2. An e-commerce merchant could use the services of a third-party PISP to process the payment (for example, using a QR code) or they are large enough, they could apply for a PISP license and effect the payment themselves
3. **PSD 2 also allows for faster payments with direct bank transfers**. This business model will allow payments through interbank transfers, which only attract fees of around 1%. In addition to PISP fees, this payment method could align payment in line with neighboring countries' standards of around 1.5%.
4. **Safer payments with lower fraud risk** – Customers may also trust this form of payment channel more (from a fraud perspective), because PSD 2 requires Strong Customer Authentication Article 4 (30)), which is a mandatory component. Payments must be authenticated using at least two of the following three elements:
    a. Knowledge – Something only the customer knows, such as a password, PIN number, or security question.
    b. Possession – Something only the customer has, such as a phone, hardware token, or another device in the customer's possession.
    c. Inherence – Something the customer is, such as fingerprint, facial recognition, or iris scan.
5. **Customers can recover losses**. Article 74 (2) – The payer does not bear any responsibility of loss where the merchant being paid (payee) or payment service provider like PISP does not require strong customer authentication as part of the payment process.
6. **More competition** in payments space in the interest of e-commerce merchants and end consumers. New Fintech firms and new and existing third-party payment providers have the same rights as banks and traditional payment processors.
7. **E-commerce merchants can scale their business.** Where an e-commerce merchant offers credit for high value purchases, or where they partner with banks to offer point of sale credit, PSD2 offers an added layer of risk protection via an Account Initiation Service Provider (AISP). With full consent from the customer, an AISP can aggregate financial information and payment history that can help improve credit scoring and credit application decision making.
8. **E-commerce merchants can expand into Europe –** with PSD2 compliant payment and e-commerce channels, Moldovan merchants could tap into the huge European market to sell local goods. There is a significant diaspora market of expatriates outside Moldova who would like to purchase goods. PSD 2 compliant channels will give them reassurance of buying from local e-commerce merchants. Of course, bearing in mind that the logistics of delivering the goods outside Moldova must also work as effectively
9. **No merchant deposit requirements –** with open banking, third-party payment providers can quickly reverse transactions in case of disputes or fraud, etc.. Therefore, merchants will not be required to retain a substantial deposit that eats into cash flow.

Cost Benefit Assessment

Benefits:

- Lower interchange fees are the biggest benefit of this recommendation.
- More merchants using electronic payment channels, improving tax collections, especially from grey markets arising due to cash only channels.
- E-commerce merchants can scale their business locally and internationally because of a PSD2 compliant payment system.

- More competition in the payments space, leading to lower fees and better, faster service through technology-led innovation.
- More consumers pay using electronic channels because they feel comfortable. Indirectly, this may improve overall levels of financial inclusion in Moldova.
- Merchants no longer need to retain large deposits with payment providers to cover chargeback, disputes, and fraud.

Costs:

- National Bank may need additional resources as well as external expert consultant support to provide support.
- Banks will need to invest in developing APIs for third party payment providers, and they will also have to invest in added security layers.
- Alternative payment providers and new Fintech entrants will have to incur additional costs to comply with PSD 2 Standards.

Key Performance Indicators

1. Payment fees for e-commerce transactions
2. Trends in payment fees (reduction in fee over time)
3. Trends in E-commerce volume (preferably an increase in e-commerce sales)
4. Increase in VAT and Income Tax collections as more commerce transactions come out of the grey market
5. A number of innovative third-party payment providers entering (or exiting) the payment market.

Proposed Action Plans

1. National Bank of Moldova creates a dedicated team to accelerate PSD2 implementation
2. The National Bank assess additional resource need or additional external support requirements. They engage with Donor agencies for funding and technical support.
3. They accelerate the consultation process by forming a PSD 2 interest group, involving interested parties to support implementation.
4. Engage with banks to encourage them to open their data through API
5. Draft PSD2 legislation in the Moldovan context
6. Accelerate the promulgation of the new legislation through the legislative process.
7. Awareness campaign: National Bank can raise awareness of PSD2 and its benefits for e-commerce through Associations

Key Risk & Mitigation

1. Banks open their data because they are compelled to, but they deliberately make it difficult for third party payment providers to connect. National Banks must engage with third party providers and intervene where they see such behavior. The Open Bank Implementation Initiative recommended can also help to avoid such eventualities.

2. E-commerce merchants still do not use e payment channels because they want to avoid tax and VAT, or they do not want to invest in providing e-payment gateways on their website. Associations can educate SMEs on the significant benefits that e-payments bring, especially concerning expansion potential.
3. Consumers are unwilling to engage and continue to prefer cash on delivery. The National bank can launch an advertising campaign to send the message that e-payment is better and safer

Case Studies – PSD2 Compliant Third-Party Payment Providers:

1. Sofort reduces transaction costs to 0.9% of transaction amount + €0.25 per transaction
2. Trustly charges a standard fee of 1.5% and offers a lower rate for larger volumes.
3. Ideal offers merchants to collect payment through direct bank account transfers. It integrates directly with the bank and allows customers to make payments from their own bank environment. Payments can be effected using a button, OR Code, s a payment link or payment request.
4. Nuapay provides open banking option at payment gateway on merchant sites

Recommendation Number: NBM-02

Recommendation Name:
Launch of a Regulatory Innovation Hub

Primary Responsibility: National Bank of Moldova & National Commission for Financial Markets
Secondary Responsibility: Ministry of Economy & Infrastructure, National Payments Council

Oversight Responsibility: Economic Council

Priority: High Impact: High Effort: High

Problem & Background:
Moldova has a vibrant and developing entrepreneurial ecosystem. Like in other European countries, there is a surge in entrepreneurs and, indeed, incumbents innovating in the financial services sector to bring solutions that benefit consumers and e-commerce merchants. Evidence suggests that greater competition in financial services increases the breadth of the sector, thus presenting more choice for consumers, and the additional competition results in better, faster, and fairer solutions for consumers. Greater competition also increases the depth of the financial market, thus increasing levels of financial inclusion.

In Moldova, entrepreneurs (especially those coming from outside the financial system) find it challenging to navigate through the complex financial services regulatory system and are sometimes intimidated to approach the regulator for support. Often times, their innovative ideas may not clearly fit within the current financial services regulatory framework. At the start-up stage, entrepreneurs are unlikely to be able to afford expensive legal advice. Overseas entrepreneurs who may have a proven Fintech solution will find it equally challenging to engage with the National Bank or the National Commission.

The end result is that entrepreneurs are not inspired to innovate in the financial sector, leaving banks and card companies or large insurance players to dominate the sector, leaving fees high and acceptance of substandard or unfair products and services by consumers and merchants alike.

Many countries are adopting the creation of an Innovation Hub that provides regulatory support and guidance to Fintech entrepreneurs who are wishing to bring products and services that can make the lives of customers and e-commerce merchants better. Moldova has thus far chosen not to go down this route.

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Proposed Solution:
Aligned with international best practice, we suggest that the financial regulators launch and resource a Regulatory Innovation Hub to support innovators and encourage competition in the interest of e-commerce merchants and consumers. Innovation can come from any angle, impacting either the payment landscape or the micro-credit or insurance space. So, there are three options to launching an innovation hub that more broadly support financial services innovators:

1. Each regulator could develop its own innovation hub, leaving it to innovators to figure out which regulator is the most appropriate to approach for support.
2. The regulators could jointly develop a joint innovation hub that face-off to innovators. Once they decide which regulator is impacted, they could facilitate dialogue within the relevant regulator. If both regulators are involved (for example, a payment solution that also combines consumer lending and product insurance), then a joint mini team is formed to support the innovator.
3. The regulator could combine the innovation hub with an Accelerator or Incubation Hub for Fintech firms. The downside to this is that the Innovation Hub is only open to those in the Accelerator. There may also be conflicts of interest if the regulator gets too close to a commercial

accelerator. The other option is to align the Innovation Hub with a Fintech association (as recommended below). In this way, the Association can take care of all operational matters and running the hub. Regulators would need to ensure that qualified resources are available within the hub. With this solution, regulators only incur staff expenses.

If on a regular basis, the proposed innovation that is supported in the Innovation Hub does not fit within the current regulatory framework (for example, a digital currency based payment systems), then the regulators could consider the launch of a Regulatory Sandbox that allows controlled testing (of course only with relevant legislation in place empowering regulators to allow live testing outside the legal framework).

Justification & Desired Outcomes:

1. **More innovation & competition in the interest of e-commerce** – Whilst there are many third-party payment providers and e-money firms, the merchant still feels that Moldova does not have the e-commerce payment solutions (like Square, Stripe, etc.) in Moldova. PSD 2, when implemented, will bring greater interest from entrepreneurs who wish to develop PISL and AISP type cheaper payment and credit scoring models for point of sale credit, as we explored above. An Innovation Hub will create a supportive environment for entrepreneurs and innovators to comfortably approach the regulator for support. There may well already be entrepreneurs who are inspired by international developments to develop new digital finance solutions but who do not know how to approach the regulator for support. Likewise, the Innovation Hub will make it easier for international innovators to expand into Moldova, bringing proven solutions from their markets.

2. **Surfacing the grey market** – There may be entrepreneurs in Moldova who offer digital financial services to the e-commerce sector. They may do so without willingly applying for a license (because it is a significant burden), or they may inadvertently believe they do not need a license and continue to offer regulated services. Ease of engaging with the regulator will and with additional support. Such operators will be encouraged to get a license because a license brings credibility, investors are more interested in investing in regulated entities, and partners (like banks) will only partner with licensed operators.

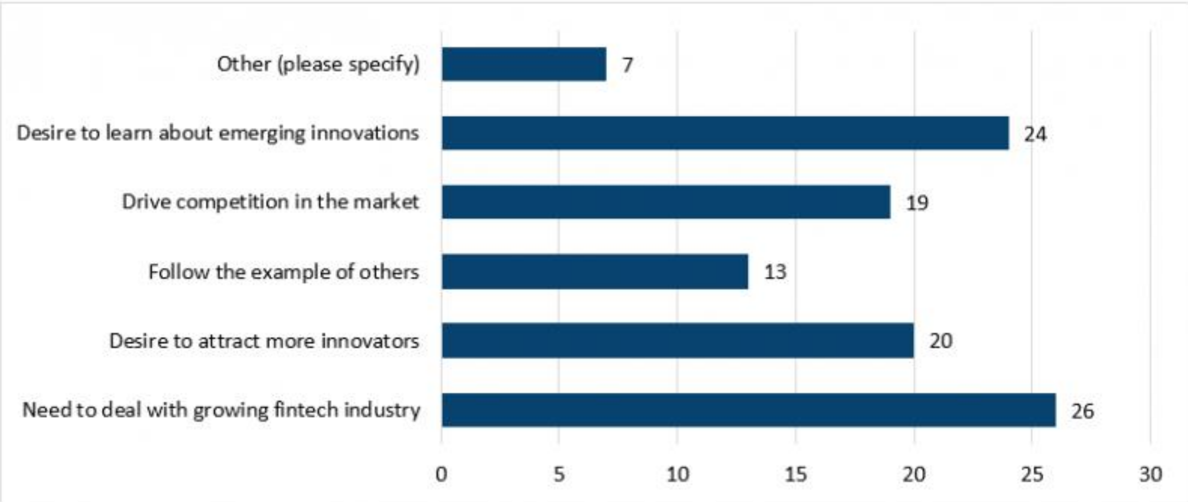
Cost Benefit Assessment

Benefits:

- More innovation and competition in financial services help to accelerate e-commerce. When existing banks and payment providers see successful new and innovative entrants that take up market share, they take proactive action to deliver a better product or service at lower prices. In the end, the merchant and end consumer benefits
- Engaging with innovators in the Innovation Hub, the regulators are more informed about new Fintech enabled business models and Fintech technologies emerging. Knowing what innovation is coming into the market, they can more readily tailor their licensing, supervisory, and enforcement framework to ensure consumers, SMEs, and the wider financial system is protected. Evidence suggests that the innovation hub is an ideal setting for regulators to build Fintech capacity.
- The innovation hub will encourage foreign Fintech innovators to enter the Moldovan payment and finance market, offering proven products and services to e-commerce merchants and consumers.
- By engaging early with innovators, and by offering a support structure, finance entrepreneurs actively seek to work in a regulated manner, rather than work in a grey market.

- CGAP (a World Bank organization) surveyed 31 regulators in 28 countries and found that a Sandbox (rather than just an Innovation Hub) brought the following benefits

Figure 12. Benefits of having a regulatory Sandbox



Source: CGAP

Costs:

- The costs of establishing an innovation hub will vary significantly depending on how it is set up.
- From experience, some regulators we have worked with have set up a small part-time team that works with innovators. In this case, there is no need to hire additional staff. However, it does mean that the 20 to 30% of the time of the designated individuals must be freed up so that they can work on activities related to the Innovation Hub. This may require some organizational realignment. Furthermore, these individuals will have to be trained in Fintech innovation and regulation, applying to new business models and technology.
- CGAP[28] released the results of their study on the launch of a Sandbox (rather than just an innovation hub) in August 2019 and found that
    - There is significant variance among regulators in terms of human resource commitment, ranging from 1 to 25 full-time employees
    - 73% (31 respondents in 28 countries) of respondents tapped internal resources rather than new hires.
    - Finance resources dedicated to the sandbox range from $25,000 to over $1million
- In 2016, Simplified discovered that as of November 2016, FCA had spent £1,853,840 since launching its Innovation Hub in October 2014[29].
    - £1.66 million went on staff costs and £184,439 on operational costs.
    - £119,660 of the operational costs went to an external consultancy and communications fees,
    - £31,794 on events and staff training,
    - £21,585 on travel, and
    - £11,399 on catering, printing, and publication subscriptions.

Moldova can start by designating 1 to 3 staff to man the Innovation Hub, spending no more than 30 to 50% of their time in this area. These staff could be relieved of non-essential duties and given the

[28] Running a Sandbox May Cost Over $1 million Survey Shows, CGPA, Bog, 1August 2019
[29] How much has Project Innovate cost the FCA to date? Simpifie Blog Post, Steve Coleman, 4 November 2016

training to engage with Fintech innovators. Some costs will have to be allocated towards communication with the market – to raise awareness of this hub.

The regulators can recoup the costs through increasing fees imposed on regulated firms. Alternatively, innovators approaching the Innovation Hub could pay a small fee. Development partners may also be able to support initial set up costs and annual operational costs.

Key Performance Indicators

1. Number of applicants applying for support
2. The trend in the number of applicants applying
3. Acceptance and Rejection rates (applicants must meet specific criteria to qualify)
4. Number of firms applicants progressing to the licensing stage as a proportion of the number of applicants

Proposed Action Plans

1. National Bank and National Commission to engage in dialogue to explore the feasibility of launching an Innovation Hub and deciding which option (suggested above) would work best in practice.
2. Each regulator assesses the risks of introducing an innovation hub to Moldova. The risk assessment will be carried out at the industry level as well as the risk that the regulator will face.
3. They will also carry out research to learn how other regulators have implemented the Innovation Hub. This may include calls or meetings with Innovation Hub leaders. Development partners could help in arranging these meetings.
4. The Regulators will need to assess whether they require special statutory powers to launch an Innovation Hub. If so, they proceed to engage with the legislature to acquire these powers.
5. Each regulator draws up a plan (if proved feasible) to implement the Innovation Hub and submit it to their Board for approval. The plan should include:
    a. International best practice.
    b. The benefits that an Innovation Hub could bring to the Regulator, the Financial System, the wider economy, and commerce.
    c. Potential risks and mitigation strategies
    d. Organizational realignment, recruitment, and staff training
    e. Costs and funding plans
    f. Eligibility criteria for accepting applicants in the Innovation Hub.
6. To limit costs and effort, the regulators could develop a thematic Innovation Hub. For example, they only accept applications from innovators that help to accelerate e-commerce in Moldova. Later the Innovation Hub could be opened to other types of innovation. In this case, the eligibility criteria will reflect this requirement.
7. Consultation with the industry and launch.
8. Once the Innovation Hub is working effectively, the Financial Regulators may wish to consider a cross Regulator Innovation Hub, where they team up with regulators in neighboring countries to facilitate Fintech innovators to expand outside their country. For example, if a Moldovan Fintech payment provider wanted to offer their services in Ukraine, then the Innovation Hubs in both countries would work together to facilitate the Moldovan Fintech firm gaining a license in Ukraine.

Key Risk & Mitigation

1. **Operational risk** – Regulators lack adequate human resources, and this initiative adds to the already heavy burden. This risk can be mitigated by recruiting specialized staff or using external

consultants in the beginning, until the new staff is recruited, and all staff is trained. A realignment of the organization may also be necessary to free certain people up to man the Innovation Hub.

2. **Lack of expertise** to engage with innovators. Regulators can face requests for support from any part of the financial system (unless they limit their applications to only one theme). They will need in-depth training and be able to keep up with new Fintech developments to be able to proactively engage with innovators.
3. **No interest or take up** from innovators for support. In other words, there is a risk that the Innovation Hub receives no applications. To mitigate this risk, the regulators must engage with the industry when carrying out their feasibility study to assess the demand. Then they must embark on an education and awareness campaign, informing entrepreneurs of this support structure. The regulators could start with information sessions held at IT park, Associations, and Accelerators.

Case Studies

1. See above – links to countries that have adopted Regulatory Innovation Hub
2. Financial Conduct Authority in the UK is the pioneer that conceived of and implemented the very first Innovation Hub. All other regulators followed their model and customized it to suit their specific circumstances. We recommend that the FCA's Innovation Hub is used as a model upon which to base the Moldavian Regulatory Innovation Hub.

Recommendation Number: NBM-03

Recommendation Name:
Lower licensing threshold conditions for small payment service providers and small e-money institutions with low volumes, making it easier to launch an innovative financial venture that benefits e-commerce merchants and end customers

Primary Responsibility: National Bank of Moldova
Secondary Responsibility: State Chancellery, Parliament of Republic of Moldova

Oversight Responsibility: Economic Council, National Payment Council

Priority: High Impact: High Effort: low

Problem & Background:
Whilst there are many alternative payment providers already in the market, new legislative changes such as PSD 2, new Fintech business model, and new technology allow for greater levels of innovation in the payment and financial services space that could benefit Moldova through greater use of non-cash payments and acceleration of e-commerce. More players will create greater levels of competition that will benefit the market because established players wake up and improve their service and pricing. When there are too many players in the market, eventually consolidation takes place with mergers and acquisitions or weaker players get weeded out.

Most likely, entrepreneurs will find the market pain and use new technologies and business models to develop new business ventures. However, barriers to entry are high. Licensing comes with hefty initial and ongoing capital requirements that would dissuade start-ups with great ideas but who lack funding.

Low volume payment service providers and e-money issuers pose a lower risk to the financial system, and therefore, should not be required to hold the same level of initial capital as more risky higher volume businesses.
Other EU countries have lower thresholds for low volume early stage payment service providers and e-money issuers. The capital requirement goes up proportionately as the business volumes grow.

Proposed Solution:
Lower licensing requirements for small payment service providers and e-money issuers. Monitor business volumes to assess when such firms should be subject to full capital requirements.

PSD 2 provides the individual EU Member States with a discretion to grant a waiver of the application of certain payment institution authorization procedures to small institutions. Such discretion is aimed at allowing smaller firms to become regulated whilst at the same time, not being constrained by onerous regulation.

Like in the UK, we propose that the National Bank of Moldova allow small payment institutions and small e-money issuers the opportunity to register rather than apply for full authorization and to lower capital adequacy requirements.

Justification & Desired Outcomes:

1. The high capital requirements dissuade start-ups from establishing payment service and e-money issuing business models.

2. Especially for E-money Issuers, the initial capital requirement is high at MDL 6,000,000. Without investment backing, it is impossible for bootstrapped start-ups to launch an E-money venture.
3. The initial capital does not factor in the lower risk of low volume start-ups that pose lower risks to the system.
4. International practice favors lower regulatory threshold conditions for smaller firms, allowing them to grow in a less constrained environment, until they scale, at which time, they have to apply for a full license.
5. There are many payments and e-money institutions in Moldova. However, non is narrowly focused exclusively on the e-commerce market. There is a need for a tailor-made payment service for micro and small e-commerce merchants. Payment and e-money forms that serve this market may well have a very small volume of business initially, and commercially, they will not be able to comply with the current regulatory regime, given the high-cost barrier to entry.

Cost-Benefit Assessment

Benefits:

1. Lower entry barriers will encourage more innovative Fintech ventures into the market, increasing competition and reducing payment fees for e-commerce merchants.

Costs:

1. Apart from the cost of amending the regulation, there is no real direct cost for the regulator.
2. The National Bank may need to seek expert technical assistance, and they may also want to visit other regulators that are lowering regulatory capital requirements for low volume businesses.

Key Performance Indicators

1. Number of new entrants in payment space.
2. Payment fees across different payment providers.
3. Trends in average payment fees.

Proposed Action Plans

1. Staff is dedicated in the National Bank to implement this recommendation if it proves feasible.
2. National Bank examines how other countries are reducing the licensing threshold for low volume payment and e-money start-ups and what benefits it brings them.
3. We are doing a risk assessment on this proposal.
4. We are developing a paper proposing this recommendation and getting Board approval.
5. Industry consultation
6. Draft amendment of legislation
7. Legislative process to promulgate the amendment

Key Risk & Mitigation

1. The lower thresholds allow less resilient players with a weak financial resource to enter the market. Weaker players are likely to fail, potentially eroding trust in the payments and e-e-money space. This risk can be mitigated in the following ways:

a. By keeping the volume of payment transactions low. Before the threshold is likely to be breached, the legislation will require the payment provider to apply for a full license.
b. Monitor the payment volumes regularly and create a firm compliance obligation on the small firm to report volumes monthly.
c. As part of due diligence process for licensing, the Regulators should ask for future capitalization plans and projected profit and loss and cash flow statements. An analysis of this information will allow the regulators to assess whether in future, the resource position will strengthen or growing the business will put financial stress in the firm

Case Studies – UK allows for Registration of Small Payment Institutions & E-Money Issuers:

- PSD 2 Directive allows the Member States to waiver authorization requirements for smaller firms.
- The UK's Financial Conduct Authority[30] has adapted this waiver by allowing small payment institutions and small e-money issuers the option to register instead of applying for full authorization.
- Small payment institutions can choose the less burdensome regulatory registration route, only if the average payment transaction turnover does not exceed €3 million per month. Such firms cannot passport to other EU countries and cannot provide AISP or PISP regulated services.
- Such small payment institutions have no ongoing capital requirements.
- Similarly, small e-money issuers can opt for the registration route to licensing. They are equally restricted from passporting and providing AISP and PISP services. Their monthly average turnover of payments must not exceed €3 million.
- Small e-money issuers are subject to initial capital adequacy requirements:
    - Where the firm generates on average outstanding e-money of less than €500,000, there is no capital requirement.
    - Where outstanding e-money exceeds €500,000, the capital requirements is at least equal to 2% of the average outstanding e-money of the institution.

[30] Payment Services and Electronic Money: Our Approach. The FCA's role under the Payment Service Regualtion 2017 and the Electronic Money Regulation 2011, June 2019, Financial Conduct Authority

MINISTRY OF FINANCE (3)

Recommendation Number: MOF-01

Recommendation Name:
Creation of an Open Banking Implementation Entity

Primary Responsibility:	Ministry of Economy,
Secondary Responsibility:	National Bank of Moldova, National Commission for Financial Markets. Ministry of Economy & Infrastructure, National Payments Council, State Chancellery/e-Governance Agency
Oversight Responsibility:	Economic Council, Banks' Association of Moldova

Priority: Medium Impact: High Effort: High

Problem & Background:
Once implemented, PSD 2 will force banks to open their data through Application Programming Interface (API) to stimulate more competition in banking and payments and to drive innovation.

Third-party payment providers informed us that even current payment-related APIs do not work efficiently, and the problem is likely to continue when PSD2 requires banks to open data and allow third parties to integrate. Without common and workable standards, third-party providers will struggle to integrate with banks. The cost of integration will also go up and dissuade third party providers from developing new and innovative solutions that benefit e-commerce merchants and consumers.

The UK reviewed the effectiveness of open banking one year after it was implemented, and found the following areas that needed improvement[31]:

1. A common standard APIs lacked some functionalities such as the possibility of refunds and the ability of customers to pre-approve payments for subscription services.
2. Variable recurring payments were not facilitated by the API functionality at banks.
3. Customers had to re-authenticate with their banks every 90 days rather than doing this with third party providers.
4. API's only connected to current accounts and not savings account, for example, so customers would have to transfer funds from their current account to savings account to ensure sufficient funds were available before purchase.

If API based integration does not function effectively, then the intended outcome of PSD 2 cannot be effectively achieved in practice.

Proposed Solution:
There is a need for common standards for API based data sharing between banks and third-party providers as well as between banks and e-commerce merchants directly. This requires coordinated effort and objective engagement, ensuring every stakeholder plays their part in a transparent manner and in a way that benefits financial innovation in the interest of e-commerce and consumers.

We propose that the Government establish, through statute, an Open Banking Implementation Entity to implement PSD 2 effectively.

[31] Open Banking, Preparing for Lift Off, Fingleton and Open Data Institute, July 2019

Justification & Desired Outcomes:

1. In spite of the willingness of banks to open their data (or being compelled to do so by legislative changes), third party providers and e-commerce merchants may still not be able to integrate to provide innovative services to e-commerce merchants and customers, because the APIs do not function effectively.
2. Without a common standard, each bank will develop API's in a way they think is most appropriate. In the end, only customers whose banks have more effective API's will benefit.
3. Banks who are not supportive of open banking, but are compelled to do so, may use substandard API's to block third-party providers, without breaching compliance.
4. Creating a common set of API standards will require objective and constructive cooperation among many stakeholders. Government is best placed to bring these parties together around a common aim.

Cost-Benefit Assessment

Benefits:

- Ready-made API standards that banks and third-party providers can readily apply to accelerate open banking.
- Guidelines and frameworks for implementation.
- This entity, if created, can support banks and third-party providers to implement useable APIs.
- Robust security standards associated with APIs, which increase merchant and consumer trust.
- The standards can also include criteria and processes for managing disputes and complaints.

Costs:

- Open Banking Implementation Entity could be funded entirely through fees levied at participating banks and third-party providers.
- Estimates suggest that UK's biggest banks poured a total of £81.1 million into the Open Banking Implementation Entity (OBIE)[32].
- Between October 2016 and 2017, the OBIE funding costs amounted to £28.1 million, rising to £38.1 million in 2018.
- These figures are not really comparable in Moldova if it were to implement a similar Entity, as the market size is much smaller and less complicated.

Key Performance Indicators

1. Number of open API integrations
2. Trends in API integrations

[32] The Cost of Open Banking: £81 million and counting Financial News, Ryan Weeks, 30 May 2019

Proposed Action Plans

1. Study visit the Open Banking Implementation Entity in the UK to assess how it works and its feasibility for Moldova's market.
2. Develop an open banking working group to start working on standards as soon as PSD 2 is implemented.
3. Create empowering legislation for Open Banking Implementation Entity.
4. Develop the Open Banking Implementation Entity in Moldova – this would be a registered company initially funded and controlled by the Ministry of Economy
5. Enlist members into the entity and create awareness and education campaign.
6. Launch of Open APIs

Key Risk & Mitigation

1. The Open Banking Implementation Entity proved not to be viable as a separate organization. In this case, one of the association's such as ATIC or Tekwell could implement a company under their organizational structure and under their supervision.

Case Studies –UK Implementation of Open Banking Implementation Entity[33]

1. The Competition and Markets Authority (CMA) established the OBIE in 2016 with the registered name Open Banking Limited.
2. This private entity is governed by the CMA and funded by 9 largest UK banks who are obliged, by law, to open their date under PSD 2.

[33] https://www.openbanking.org.uk/about-us/

Recommendation Number: MOF-02

Recommendation Name:

A unified & instant collection VAT rate of 10% to boost e-formalization of SMEs

Primary Responsibility: Ministry of Finance
Secondary Responsibility: Ministry of Economy and Infrastructure
Oversight Responsibility: Economic Council

Priority: High Impact: High Effort: Medium

Problem & Background:

The size of the informal economy is relatively overwhelming in comparison to the current size of the formal market. Such a situation is a challenge for the economy in general, and the impact is easily predictable – no taxes collected. Studies are showing the informal cash economy is ~$3 Billion, i.e., up to 25-30% out of $11.96 billion GDP in 2019(Source- Tradingeconomics.com / World Bank)

The issue of the informal economy has been confirmed by the tax authorities and different measures are in place, mainly from a monitoring perspective. There are initiatives, like establishing of a flat 3% tax on informal cash declaration.

However, not enough is being done to reverse the trend towards formalization, as the threats of formalization still outweighs the benefits of going formal. Informal cash holders tend to buy from informal sellers because the prices are more competitive

Proposed Solution:

Unification of a VAT, where is possible

a) Increase most part of reduced VAT rates from 8% to 10% (except for low VAT for social goods & services)
    a. Additional VAT collection to be calculated
b) Increase zero* rated VAT to 10% for Gaming & Gambling (and other)
    a. Additional VAT collection to be calculated
c) Remove VAT registration threshold of MDL 1.2 million
    a. Will give good VAT habits from day one to entrepreneurs
    b. Will capture missed VAT from a great number of companies
    c. Will formalize and increase income tax (VAT = Revenue benchmark)
    d. Reduces informal price competition from non-VAT registered companies
d) Systemize Postal collection of import VAT on B2C foreign imports
    a. Increases in import VAT collection.
    b. Reduces informal B2C foreign e-commerce providers competition
e) Recent application of VAT to foreign services/digital provision
    a. New VAT revenue stream
    b. To be enhanced by Real-Time VAT reporting (API activation)
f) Savings in reporting, auditing & customer support
    a. Savings for businesses (one single rate of 10% eases bookkeeping & reporting)
    b. Savings for Tax Authorities in terms of HR and classification of goods/services

Justification & Desired Outcomes:

Many countries have managed to bring down the informal economy to a level below 10% of the GDP. For instance, in Switzerland, the informal economy is estimated to about 6% of the GDP. While we are conscious that reaching a 0% informal economy is utopic, Moldova, through comprehensive and efficient digitization and formalization strategy, could very well bring the informal economy to not more than 10%-15% equivalent of GDP, which would still create an increase in tax collection

Based on the 2018 Fiscal revenue statistics and using a "rule of thumb" rapid estimation, we believe that the overall tax collection would increase by two figures even though the VAT rate is reduced to a single 10% rate. And this is due to the new fiscal revenues that would generate out of the formalization of the informal transactions. An illustration below shows a graphic representation of this calculus.

Cost-Benefit Assessment

Benefits:

1. Increase the e-commerce turnover, and reduce the informal economy
2. Increase in taxes collection

Costs:

1. Efforts on assessment the case of reducing and unification of VAT
2. If positive decision (p.1) will be taken – a deployment the changes into the Tax code

Key Performance Indicators

1. Informal economy value decrease – to 15%
2. Taxes collected growth – by 25%
3. E-commerce revenue growth (TBD)

Proposed Action Plans

1. Ministry of Finance, with the Ministry of Economy and Infrastructure, to initiate the assessment and detailed case estimation for the case of decrease and unification of VAT.
2. As a separate subcase to estimate (together with the recommendation to set the definition of the e-commerce and respective KPIs), establish a lower VAT on e-commerce transactions.

Key Risk & Mitigation

1. **Lack of capacity.** The Ministry of Finance could request support from development partners to conduct the analysis by international and local experts. Based on the findings and detailed case to draft the relevant amendments.
2. **Taxes volumes falling down.** Ministry of Finance to make a thorough analysis of the case for unveiling the part of the informal economy, defining and preventing the ways for fiscal evasion, jointly with the proposed measures of the economic stimulation for moving unformal businesses and non-registered cash transactions into legal loop.

Recommendation Number: MOF-03

Recommendation Name:
Extension of the successful IT Park fiscal package to Fintech & SMEs from other sectors

Primary Responsibility: Ministry of Finance
Secondary Responsibility: Ministry of Economy and Infrastructure
Oversight Responsibility: Economic Council

Priority: High Impact: High Effort: Medium

Problem & Background:
We have identified that the IT Park is very popular and rapidly grow, limited only by Moldova's internal workforce resources. Though, the fiscal offer is potentially being abused by certain companies who are not purely IT related but who manage to qualify for the program.
Such a situation highlights two interesting points:

1. The IT Parc fiscal offer is a success
2. The other sectors (i.e. BPO services) want to benefit from it too and are ready to adapt to get it

Proposed Solution:
Ministry of Finance, with the Ministry of Economy and Infrastructure, to initiate the study and prepare the business cases to apply the Moldova IT Park fiscal offer to other sectors, primarily related to e-commerce.

Justification & Desired Outcomes:
The Moldovan landscape of companies is dominated by SMEs or Micro SMEs, who have very little accounting capacity and who would greatly benefit from the simplified calculation and reporting based on revenues. Also, most of these small entities tend to have one or family shareholders and, to a certain extent, complain about a perception of a "double taxation" of their already small income.

In aggregation with the single VAT rate of 10%, which the last step also applies to revenue, to propose a 15% single tax rate on revenue, inclusive of "everything":

- ✓ VAT
- ✓ Corporate Income Tax
- ✓ Personal Income Tax
- ✓ Employment Contributions – for Social Taxes

This single "all-inclusive" 15% tax on all revenue could greatly simplify the reporting, pricing, and marketing activities. A figure of 15% (10% for VAT + 5% for IT specified fiscal taxes) is psychologically acceptable, especially by small stakeholders, and would offer nearly no excuse to formalize.

The reason for the rate of 7% offered to IT park brought down to 5% is because other sectors who deal with logistics costs and physical goods usually have fewer margins than IT companies who once they have broken-even from development costs, may benefit from perpetually higher margins on their digital products or services.

From a tax collection perspective, the seemingly lower rate of 15% may be perceived as creating an opportunity cost, but the following arguments could be considered:

1- A lower rate applied on revenue "guarantees" the collection and gives predictable figures
2- A high tax rate on gross profit may yield less taxes due to invoicing and deduction practices

Cost-Benefit Assessment

Benefits:

1. An increase in the turnover for the sectors where new, similar to IT Park, fiscal offer is applied
2. Taxes growth from the specified sectors, perhaps, focused on e-commerce as an effective way to perform the

Costs:

1. Efforts & budget for the initiation, identification of the potential sectors, and study conduct
2. Efforts & budgets for establishing new 'Parks', including amendments of regulation and their launch and operations.

Key Performance Indicators

1. No. of sectors, with the updated fiscal mode(offer)
2. SME turnover growth, incl. e-commerce indicators
3. Taxes volumes growth, due to including part of the informal economy into the economy

Proposed Action Plans

3. Ministry of Finance, with the Ministry of Economy and Infrastructure, based on the Moldova IT Park business case, to initiate a study for identification of the preferable sectors (with high e-commerce potential), where the same offer can be applied
4. Based on the results of the analysts, take the decision, supported by the detailed action plan for deployment

Key Risk & Mitigation

1. **Lack of capacity.** The Ministry of Finance, Ministry of Economy, and Infrastructure could request support from Moldova IT Park administration and their residents, as well from for development partners to conduct the analysis. Based on the findings to draft the relevant deployment action plans.
2. **Fiscal evasion, taxes fall down.** The Ministry of Finance, to study the current state of Moldova IT Park and estimate the new fiscal offer for other sectors, estimating potential losses vs an increase of taxes collection through turnover growth

SECTORIAL ASSOCIATIONS: ATIC, APCFA… (1)

Recommendation Number: ASO-01

Recommendation Name:
Launch a Focused Fintech Association

Primary Responsibility:	Private Companies Associations (ATIC, APCFA...), Development Partners
Secondary Responsibility:	National Bank of Moldova, National Commission for Financial Markets
Oversight Responsibility:	Economic Council, National Bank of Moldova

Priority: High Impact: High Effort: Low

Problem & Background:
There are many initiatives to bring interested Fintech parties together. For example, Tekwill and ATIC focus on Fintech firms that provide technology solutions to financial services firms. The Alternative Financial Services Association of Moldova also has a Fintech focus; however, this is only geared towards non-bank fintech innovators.

.
From experience gained in other countries, Regulators and Government find it challenging to engage with individual Fintech firms, especially in relation to matters that impact the wider industry – for example, lobbying against regulation or new policy changes, etc. Regulators and Government is resource constraint to engage with individual firms, and more importantly, they want an objective view that represents the common view of all the members in the sector. Individuals may bring their own views that are self-serving and biased, and regulators cannot rely on such views.

The Fintech sector is not very visible in Moldova because of disjointed initiatives. Without a coordinated association, Fintech has a weak voice and therefore, cannot bring about the changes they wish to see, either within the industry of the regulatory landscape.

Proposed Solution:
We recommend the creation of a strong and well-coordinated Moldova Fintech Association.

Justification & Desired Outcomes:

1. Fintech is not very visible in Moldova. Without Fintech visibility, greater levels of financial inclusion are harder to achieve, because it is Fintech firms that find innovative ways to include those that were excluded in the past or choose to be excluded.
2. Without Fintech visibility, the financial services sector continues to be dominated by banks and card companies. Lack of competition results in higher fees for consumers, and existing players can get away with substandard services.
3. Fintech association will bring the needed focus and help to make Fintech more visible and, therefore, able to bring about transformative change in the financial services sector.

Cost Benefit Assessment

Benefits:

1. Strong voice for the Fintech sector so they can more effectively engage with Government, Regulators, and Incumbents to bring about positive change.
2. A coordinated Fintech association can also more effectively support Fintech firms and innovators through various capacity building initiatives.

Costs:

The usual costs associated with establishing an Association, which is fully recovered from its membership fees, or it can initially be subsidized by a development partner.

Key Performance Indicators

1. Number of members
2. Trends in the number of members joining and leaving
3. Number of initiatives

Proposed Action Plans

1. Plan a workshop involving all interested parties such as ATIC, Tekwill, APCFA, Moldova Microfinance center, Banking Association, etc., to discuss the merit of launching a Fintech Association. We suggest a strong independent body lead such an initiative (for example, a development partner), to avoid politics driving the decision.
2. Launch the association
3. Awareness campaign
4. Recruit members
5. Develop a plan for the year.

Key Risk & Mitigation

1. Larger players form the association and set high requirements (financial and criteria) as a way to keep smaller firms out, thus avoiding competition. This can be avoided by allowing all members and keeping fees to an acceptable level. Perhaps fees can be pegged to the revenue of member firms.
2. Dominant players politic to drive the Agenda, crowding out the views of smaller players. This could be averted by a development partner chairing discussion, for example.

Examples of Activities that Fintech Association can embark upon:

1. **Direct Connection to Mastercard and Visa -** Negotiate favorable terms for payment service providers to connect directly with Mastercard and Visa.

2. **Payment Experience Survey** - Carrying out a survey among e-commerce merchants to understand how existing alternative payment providers, e-money issuers, and banks can improve payment services for e-commerce merchants. They can develop a report for payment providers and make a recommendation for improvements. Improvements could see more e-commerce merchants allowing electronic payments on their website.
3. **KPI Development** - The Association can agree a set of Key Performance Indicators specific to a sector (for example, payments, point of sale credit, and point of sale insurance). These KPI's could be made public, thus gaining the trust of merchants and consumers, and attracting the attention of investors and banking partners.
4. **Fintech Accelerator** – The Association could launch a Fintech Accelerator as a separate company under its governance. The Accelerator will help support Fintech innovators and entrepreneurs and may result in a greater number of solutions open to e-commerce merchants and consumers. The Fintech Accelerator together with a Regulatory Innovation Hub could increase the level of much-needed competition in the financial services sector, in the interest of e-commerce merchants and consumers.
5. **E-commerce SME Accelerator** – Partnering with banks and Fintech firms, the Association can launch an accelerator for e-commerce SME that provide them with end to end services for going online and taking payments online.
6. **Educational Initiatives** –
    a. Facilitate educational campaigns involving banks and Fintech firms to educate e-commerce SME's on
        i. The benefits of electronic payments
        ii. Other financial services products (such as point of sale credit and insurance) that e-commerce can combine with their offering
        iii. Educate SMEs on setting up e-commerce payment portals on their websites
    b. Partnering with regulators, the Association can facilitate regulatory training for Fintech firms, educating them on licensing, applying for Innovation Hub Support, and ongoing compliance once authorized.
    c. Partnering with Government, Banks, and Fintech firms, the Association can facilitate educational campaigns and advertising to teach consumers about the benefits of online payment versus cash.
7. **Tax Incentives for Angel Investors who invest in Fintech and E-commerce**. The UK is a good example, where investor tax incentives has led to a thriving start-up ecosystem and particularly a fintech start-up ecosystem. The UK launched the Seed Enterprise Investment Scheme and Enterprise Investment Schemes that provide up to 50% personal tax rebate (with various conditions and thresholds) if they invest in early-stage start-ups that meet certain criteria. The Association could lobby and engage with Fiscal Authorities to introduce a similar scheme.

Case Studies – Fintech Association in Neighboring Countries:

1. Ukraine Association of Fintech and Innovation Companies
2. Romania Fintech Association
3. Fintech Lithuania
4. Fintech Poland

NATIONAL BUREAU OF STATISTICS (1)

Recommendation Number: STA-01

Recommendation Name:
Develop & deploy an e-commerce specific data collection framework

Primary Responsibility: National Bureau of Statistics
Secondary Responsibility: Ministry of Economy and Infrastructure, National Bank of Moldova
Oversight Responsibility: Economic Council

Priority: High Impact: High Effort: Medium

Problem & Background:
There are few data able to be collected in Moldova about e-commerce, one of the only reliable data can be found on the payments, taking the NBM reports on card payments (i.e. for card-not-present transactions), we can have some estimations.

Based on the existing available figures mentioned earlier in Chapter 3, considering in total e-commerce value as 7.44 billion on card-not-present transactions (as per 3.15 billion local transactions + 4.29 considered abroad ones), or 448 mln USD (rate 1/16.5960) /379 mln EUR (rate 1/19,6057), or 12.01% of e-commerce share out of total card payments;
The very rough estimation is e-commerce in Moldova still is not exceeding 1-2%, taking in account the fact of the grey market and, what's even more important, the absence of e-commerce data and key performance indicators that would allow measuring the progress of e-commerce in the country. For the moment, there is no reliable benchmark on the volume and types of e-commerce transactions; there is no information about the number of e-merchants.
The unique information available is the # of web sites for the enterprises, but, surely, it's not up-to-date

Legal entities that have web pages by Districts/Regions and Years

	2019
Whole country	2,645

Footnotes

Starting with 2017, research includes public institutions public institutions-exhaustive, enterprises with 10 or more employed; The information is presented without the data on districts from the left side of the river Nistru and municipality Bender

Information

Contact
Transportation, Tourism and ICT Statistics Division, tel. +37322 403028, 728474 laura.munteana@statistica.gov.md

Unit
Number

Source
National Bureau of Statistics, statistical report '1-inf'

Proposed Solution:
National Bureau of Statistics, with the Ministry of Economy and Infrastructure to develop and deploy a framework for collecting the data on e-commerce, including fintech, and other 'new', digital economy businesses: e-health, e-insurance, e-consulting, include e-government services), etc. With the clear indicators (i.e. what to be defined as e-commerce, by areas, by # of transactions, volumes, deliveries, etc.)

Justification & Desired Outcomes:
As the commercial economy structure is dramatically changing, there is a need to treat e-commerce as a strategic country area and asset.

The most important characteristics for e-commerce are to be defined by the Ministry of Economy, Ministry of Finance, and National Bureau of Statistics to start the collection asap:

- definition of the on-line transaction (i.e., completely with on-line payments, or only online orders, with a wire transfer, or even cash payment)
- # of companies with the on-line business (i.e. merchants), active ones.
- by category: retail(B2C), wholesale(B2B), or segregation by the transactions (i.e. same company can practice both categories.
- by economic area: constructions, light industry (i.e., textile, etc.), ICT, medicine, agriculture, tourism, etc)

The satisfactory outcome will be the real statistics on the e-commerce business, abilities to measure it, and the plans for its stimulation and growth.

The solution conceptually is quite 'technology-ready' to be implemented – as the business to measure is the on-line one, there is no issues to collect the necessary information on-line from various sources: companies' register, on-line and wire payments, fiscal electronic invoices, etc.

Cost-Benefit Assessment

Benefits:

1. A clear set of e-commerce definition and relevant statistics and KPI.
2. Ability to plan the strategic and operational plans for e-commerce development and measure the real progress.

Costs:

1. Efforts on developing e-commerce statistics data and the framework development
2. Costs for development and deployment of the developed framework, with necessary on-line reporting and statistics

Key Performance Indicators

1. Implemented framework for data collection
2. Statistical data and reports available

Proposed Action Plans

1. Ministry of Economy, Ministry of Finance, and National Bureau of Statistics to initiate a feasibility study for e-commerce data framework development
2. National Bureau of Statistics, based on the feasibility study, develop the technology solution and relevant regulatory amendments for the deployment.

Key Risk & Mitigation

1. **Lack of capacity.** National Bureau of Statistics, Ministry of Economy, and Ministry of Finance could request support from development partners, incl. EU Commission, to conduct the analysis by experts

CHAPTER 9: CONCLUSION

It is encouraging to find that most of the building blocks are in place within the e-commerce ecosystem accelerate online commerce and thus boost GDP and improve tax collections. E-Commerce success also has the potential to bring in foreign direct investment though greater export. Furthermore, with well performing merchants, there is a possibility of job creation and improving the prosperity of all Moldovans.

Whilst the building blocks are evident, e-commerce in Moldova grows at snail's pace. The key reason for this is that the various initiatives supported by government, development agencies, donors and the private sector, are not well coordinated nor is their oversight, governance and accountability to ensure things get done. Efforts are disjoint and whilst everyone has an interest in furthering e-commerce, individual initiatives pull in different direction, achieving very little in the end.

At the granular level, key areas of concern remain the weak logistics infrastructure and expense and difficult to implement non cash payment systems. The tax system incentivizes a grey market and merchant's are not very savvy when it comes to digital marketing.

There is inconsistent interpretation of the law which places additional burden on consumers or ecommerce merchants. Consumers lack trust in the financial system, and therefore prefer transacting only by cash. Merchant's bootstrap their e-commerce businesses and do not take advantage of financial services products such as equity or debt financing for growth or buying insurance and hedging protection for damaged good in transit or risks to the business. Merchants also do not offer point of sale for large ticket items.

The results are the even if merchants go online, they only end up building micro businesses that will never scale sufficiently to truly make an impact the economy, or tax collection or indeed job creation.

To address the friction in the ecosystem, a centralized and robust Governance and implementation mechanism is crucial. In addition, all participants within the ecosystem must work well together and in a coordinated and properly sequenced way.

Addressing the main recommendations in this report, will help to ensure the acceleration of e-commerce in Moldova.

APPENDIX A. OTHER DOCUMENTS & REFERENCES

THE CHALLENGE OF E-FACTURA AND E-INVOICES FOR SMES

Regulatory framework:
The operation of the e-Invoice service is regulated by following normative acts and decisions such as:
- Tax Code of the Republic of Moldova no. 1163/1997;
- Decision no. 294/1998 on the execution of the Decree to the President of the Republic of Moldova no. 406/1997 (point 3 par. Introduced by Government Decision no. 461/2014.
- Order of the Ministry of Finance no. 115/2010 on the approval and completion of the standard from the primary document with special regime Fiscal Invoice.
- Order of the Ministry of Finance no. 47/2010 on the approval of the standardized form by primary document with special regime Invoice.
- Order of the Main State Tax Inspectorate no. 317/2020 on the approval of the Regulation on the automated information system of creation and circulation of electronic tax invoices "e-invoice"

Background:
For signing invoices in the e-Invoice service, all digital certificates related to the electronic signature available in the Republic of Moldova can be used, namely: mobile signature, issued by mobile phone operators, digital signature, issued by STISC, and the electronic authentication signature - issued by the "Fiscservinform".

API (Application Programming Interface) is a reusable programming interface for the interconnection and automated communication between e-Invoice and accounting systems (e.g. "1C", "WIZCount", other ERP systems). The API functions allow suppliers to interact with e-Invoice using their own accounting systems without manually accessing the services.fisc.md website. Web created services (API) allow the user's accounting systems to receive data about the current status of invoices created in the accounting systems, series, number, and QR code of the invoice.

When generating the fiscal invoice within the SIA "e-Invoice" the following scenarios can be followed:

1. the tax invoice is generated within the deliveries of goods/services, and both participants of the transaction are users of the SIA "e-Invoice" - the "Long Cycle" of the tax invoice is to be used.
2. the tax invoice is generated within the delivery of goods/services, but the "Buyer" has not expressed his acceptance to receive tax invoices in electronic form in relation to the respective "Supplier" - the "Short Cycle" is to be used;
3. the tax invoice is generated within the delivery of goods/services, but the "Buyer" is not registered in the SIA "e-Invoice" - the "Short Cycle" is to be used.

Long cycle - the life cycle of the electronic tax invoice in which it obtains the status "finished" after its signing with an electronic signature by the Buyer.

Short cycle - the life cycle of the electronic tax invoice in which it obtains the status "finished" after signing it with the second signature of the Supplier.

When using the "Short Life Cycle" of the tax invoice, if only "Supplier" is registered in the SIA "e-Invoice," as well as if other participants are registered in the system but have not expressed their acceptance of to receive tax invoices in electronic form in relation to the respective "Supplier", the tax invoice will be created and signed in electronic form by the "Supplier," after which he will print it on paper, sign it with a handwritten signature and will send to the other parties (Carrier, Buyer) for acceptance and handwritten signature. In the case of delivery of services, the handwritten signature on the supplier's copy is not mandatory. The original of the tax invoice issued by the "short-cycle" is considered to be the document printed on paper, which will contain the handwritten signature of the "Supplier", who signed electronically to obtain the series and number of the tax invoice.

The electronic tax invoice, generated, signed electronically and transmitted through the "Long Cycle" by the Supplier via the SIA "e-Invoice", subsequently printed for the transport of goods to the destination by the Supplier's own transport, is not mandatory to be signed handwritten and applied the Supplier's stamp on the paper of the document.

Problems:
The software has non-functional elements. This research has found that some operating systems or antivirus programs perceive billing software as a danger (virus) to your computer and block its activity.

USB sticks are not working. To be logged into the e-billing system, accountants and users must insert a USB stick provided by the state. The problem is that this stick works randomly, sometimes it is not "seen" by the computer or different operating systems. "We need to call an IT specialist to make the invoice." Following the discussions, the accountants told us that sometimes they have to call an IT specialist in order to log in with the stick and send the invoice.

THE CHALLENGE OF "BON FISCAL" FOR OPERATORS

The Government had made huge steps in the direction of digitization of electronic cash receipts with the approving the Government Decision no. 141/2019 on the application of cash and control equipment and transaction clearance.

Under this regulation, electronic devices such as phones or tablets, which have a dedicated and identifiable application program, will be accepted as having cash equipment and control functions.

Cash and control equipment are cash registers and control machines with fiscal memory, other computer systems, with or without electronic devices (such as payment terminal, cash-in terminal, currency exchange device, as well as others that have a dedicated and identifiable application program), with cash register and control functions intended for the registration of cash transactions (in cash and/or through another payment instrument), storage, printing, encryption and transmission to the server of the State Tax Service of managed financial information, which ensures the protection of working algorithms and data recorded by the unsanctioned change.

Cash and control equipment includes the following elements: cash and control machines with fiscal memory, fiscal printers, hardware platforms, software programs and/or applications, electronic devices (such as cash payment terminal, cash-in terminal, currency exchange device, as well as others that have a dedicated and identifiable application program).

Modular home and control equipment are:

1. computer systems including fiscal devices and printers.
2. computer systems with electronic devices intended for the registration of cash operations, without fiscal printers.
3. computer systems without electronic devices intended for the registration of cash operations, without fiscal printers.

Cash receipt (fiscal voucher)/fiscal document is the primary document generated in electronic form and/or issued by the cash and control equipment on paper when making cash clearance and/or through another payment instrument certifying the economic operation and payment, mandatory issued to the payer or viewed - in case of registration in the system or on the electronic management platform, accessing the web address received by the payer within the electronic management system or platform, or transmitted electronically to the telephone number or e-mail address - in case of presentation, until the moment of payment by the payer, of the data regarding the telephone number or the electronic address.

Modular Cash and control equipment without electronic devices must be hosted on servers located in the Republic of Moldova.

For ensuring the enforcement of this Regulation, the Government had to approve the Technical Concept of the Automated Information System "Electronic Sales Monitoring". (SIA MEV). The Concept was approved in the Government on the 6th of February 2020.

SIA MEV shall create a unique information resource (Register of sales recorded by cash and control equipment), which ensures the receipt of information about transactions made through cash and control equipment, sales monitoring, and risk analysis.

SIA MEV will be an automated information system that combines several technologies and information resources. It aims to integrate existing solutions on the market of sales records with the Information System of the State Tax Service, as well as to solve technical problems and organizers.

This will be a predominant G2B type system. It will facilitate the interaction between the Government and the business community. According to the authorities, the system will allow the provision of services to entrepreneurs, public authorities, and citizens, and will cover all organizational, functional, and technical aspects in the field of sales tracking and monitoring.

The system will be integrated with common government services such as MPay, MSign, MPass, MConnect, and will be placed on the MCloud government platform.

BREAKDOWN OF PAYMENT FEES (FINANCE & FINTECH)

Table 18. Moldovan Payment Processing fees breakdown

	Moldova 2018*		Moldova 2020**		Romania 2020**		Ukraine 2020**	
Operation type	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Account opening	0 MDL	50 MDL	0 MDL	200 MDL	0	10 EUR	0	30 EUR
Account closing	0 MDL	50 MDL	0 MDL	300 MDL	0	5 EUR	0	15 EUR
Account handling	0 MDL	7 MDL/month	0 MDL	100 MDL/month	0	2 EUR	0	5 EUR
Fees for payment transaction, within the same bank	1 MDL/transaction	4 MDL/transaction	0 MDL/transaction	10 MDL/transaction	0	1.5 EUR	0	1.5 EUR
Fees for payment transaction, between banks	2 MDL	10 MDL	1 MDL	40 MDL	0	10 EUR	0.2%/transaction	20 EUR
Fees for money transfers, between banks	1.5 EUR/transaction	56 EUR/transaction	1.5 EUR/transaction	165 USD/EUR	2.5 EUR/transaction	30 EUR	1 EUR/transaction	150 EUR/transaction
Cash top-up			0	1.5 %, min 1 EUR/ transaction	0	7.5 EUR	0	2%/transaction
Card issuance	0 MDL	50 MDL	0 MDL	450 MDL	0	2.5 EUR	0	25 EUR
Annual card maintenance fee	36 MDL/year	90 MDL/year	0 MDL/year	9000 MDL/year	0	15 EUR	0	360 EUR
Internet banking	0 MDL	100 MDL/month	0 MDL	50 MDL/month	0	1 EUR/Month	0	5 EUR/month
ATM cash withdrawals	0 MDL	1 MDL/transaction	0 MDL	20 MDL/transaction	0(most 0.2%/transaction amount)	4 EUR/transaction		4%/max 120 EUR
ATM cash withdrawals from other banks	1 MDL/transaction	1.5 %, min 1 EUR/ transaction	0 MDL/transaction	1.5 %, min 2.5 EUR/ transaction	0,5%/transaction amount)	1.5 %, min 4 EUR/ transaction	0.2%/transaction	4%/max 250 EUR
Maximum daily withdrawal limit	4,000 MDL	Unlimited	5,000 MDL	10 000 EUR/Unlimited	400 EUR	100 000 EUR	300 EUR	8000 EUR(250 000 UAH)
SMS service			0	10 MDL/month	0	1 EUR/Month	0	2 EUR/month
Payment by card at POS (by the end-user)	0 MDL	5 MDL	0 MDL	2.5%/transaction, min. 2.5 MDL	0	0	0	0.7%/trans in some cases for credit card
Acquiring bank payment gateway fee	0 MDL	0 MDL	0 MDL	0.3%/transaction	0	0.2%/trans for debit card; 0.3%/trans for credit card	0	0.1%/trans for debit card; 0.2%/trans for credit card
Interchange fees, between acquiring banks and issuing banks in Moldova	1.2%	2%	1%	2.25%	0.9%	1.2%	0.7%	1.0%
Merchant service fees for card usage (domestic)	1.5% /transaction	3% / transaction	1.8% /transaction	3.5% / transaction	0.6-0.8%/transaction	2.4%/transaction	1.6%/transaction	2.5%/transaction
Services fees for card usage (transborder)	4% / transaction	6% / transaction	1.5% / transaction, min 3 EUR	5% / transaction, min 3 EUR	0.2% / transaction	1% / transaction, min 4 EUR	0.3% / transaction	4% / transaction, min 3 EUR
POS terminal lease	160 MDL/Month	240 MDL/month	100 MDL/Month	360 MDL/month	0	12 EUR/month	0	12.5 EUR/month

* Source: Various Moldova commercial bank websites and September 2018 stakeholder interviews, Report MOLDOVA'S ENABLING ENVIRONMENT FOR DOING BUSINESS IN THE DIGITAL ECONOMY, November 2018

** Source: Moldova, Romania and Ukraine commercial bank websites and stakeholder interviews, July-August 2020, converted into EUR at official rates on 20.08.2020

UKRAINE E-TRANSFORMATION CASE STUDY

Ukraine has a three-tier coordination structure for the implementation of the e-transformation agenda:

1. e-Transformation Forum. Strategic monitoring of national reforms and development progress. Chaired by Prime-Minister of Ukraine.
2. e-Transformation Platform. Strategic coordination between the priorities of the Government and information transformation agenda (ITA) in line with the EU integration and national development commitments. Chaired by the Members of the Cabinet and Heads of Parliament Committees.
3. Sectoral working groups. Coordination of ITA with the sectoral reform priorities and ministerial action plans. Chaired by Prime-Minister.

At the implementation level, there are 2 branches, legislative and executive, as follows:

Legislative: Digital Transformation Committee of the Verkhovna Rada (Parliament of Ukraine) is responsible for drafting the legislation on digitalization.

Executive: Former Agency for e-Governance of Ukraine was re-organized into the Ministry of Digital Transformation, MDT (Decree of the Cabinet of Ministers 856, September 18, 2019). The Minister of Digital Transformation was appointed as Vice Prime Minister. The MDT is the central certification body in the sector of electronic trust services. Apart from that, within the Ministry's competence is the development of broadband access to the Internet, telecommunications networks, and the IT industry.

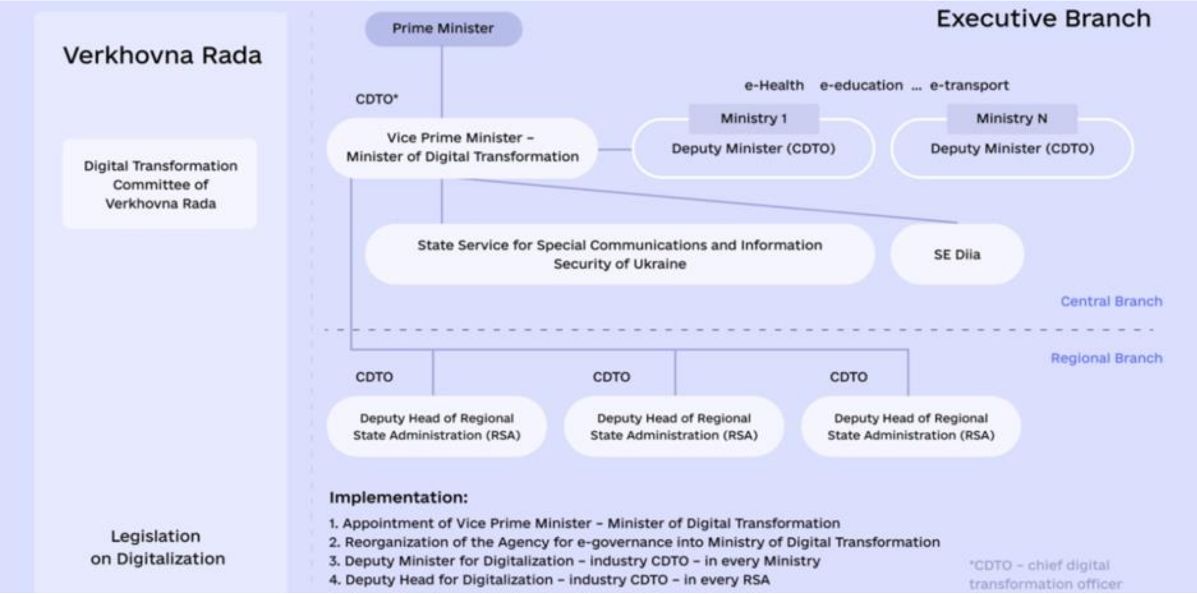
Every ministry should have (Decree of the Cabinet of Ministers 194, March 3, 2020) a Deputy Minister for Digitalization – industry Chief Digital Transformation Officer (CDTO).

CDTOs are responsible for:

1. Digital Transformation: audit of the projects, processes, and services; determining of the strategies and priorities; solutions architecture development.
2. e-Resources management: IT systems, registers, websites, and other informational resources, online services, digitalization structural units.
3. Support: ITA projects, legislative acts, and decisions projects expert assessment, budgeting.
4. Control and implementation: cybersecurity, information protection, open data, e-governance of informatization programs.

Every regional state administration (RSA) should have a Deputy Head for Digitalization – industry CDTO. Ministry of Digital Transformation appointed a number of Digital Transformation Program Managers (DTPMs), responsible for the coordination of the activities with every Ministry.

Figure 13. Ukraine digital transformation model



Source: MSRP team desk research

There are two governing laws on e-transformation:

1.On approval of the action plan for the implementation of the Concept of e-government development in Ukraine

https://zakon.rada.gov.ua/laws/show/617-2018-p?fbclid=IwAR1rBSZUBWKMIm5JoPXY_NzBZY98n_eeeVxRCFHiS22nZyDAbOievt7IIF0#n10

2. On approval of the Concept of e-democracy development in Ukraine and the action plan for its implementation

https://zakon.rada.gov.ua/laws/show/797-2017-p?fbclid=IwAR1QI0nbnFukqgFxD9Qun41gKUMmvUjJ14pwUFuaufXTynMaHP0Ohpv77T0#Text

DiA System: State that helps, not bothers

The ultimate goal of e-Transformation in Ukraine: by 2024, 100% of all public services should be available online, 20% of services should be provided automatically, without interference from officials and only one online form to apply for any service package in any life situation will be needed. Digital Power (DiA) project was launched on February 6, 2020, which will progressively unite all departments into a single convenient and effective online system.

DiA (Derjava i Ia/State and Me) is:

1. Unified one-stop-shop portal for all state services where everything is fast, clear and understandable. All online services will be connected to DiA via Trembita exchange platform (based on X-Road).
2. Mobile Application with e-documents and available data about the persons and legal entities from state registers.
3. Business portal for small and medium enterprises

4. Education platform with online courses on digital literacy and online safety
5. Unified portal for TSNAPs (Centers for Administrative Services). Will be transformed in DiA Centers in the future.

Ukraine is developing the e-State in close cooperation with Estonia: MDT is implementing the Estonian-origin (X-Road) secure data exchange system Trembita for inter-governmental data exchange and empowering administrative service centers (TNAPs) with a modern information system (Vulyk system).

In November 2019, in Tallinn, in the presence of President of Ukraine Volodymyr Zelensky and President of the Republic of Estonia Kersti Kaljulaid, the **Memorandum of cooperation in the field of digital transformation** was signed between the Ministry of Digital Transformation of Ukraine and the Ministry of Economic Affairs and Communications of the Republic of Estonia.

The purpose of the Memorandum is to create and develop collaborative mechanisms to facilitate actions aimed at defining a common vision and joint action for sustainable digital development, building a digital economy, implementing digital innovations, building e-mobile governance, developing e-democracy, information society, digital skills, and digital rights of citizens, national electronic information resources, broadband Internet and telecommunications infrastructure, electronic commerce and IT industry. In addition, the document aims to improve the electronic and administrative service delivery system, develop e-trust services and electronic identification services, build an effective cybersecurity management model and related IT infrastructure, as well as its connection with European cyber centers, ensure citizens' rights to access public information. **Digital Society Sandbox Initiative** is part of the Memorandum.

ESTONIA DIGITAL DRIVE CASE STUDY

The development of information society and implementation of the digital agenda is managed by a Council coordinated by the Ministry of Economic Affairs and Communications.

The Information Society Council consists of the representatives of governmental authorities and key private and third sector organizations involved in the development of information society and implementation of the digital agenda. Thematic or task-based working groups and networks, for example, the document administration council and interoperability expert group, are used to coordinate the implementation of the digital agenda; the network of IT managers of governmental authorities also plays an important role. The digital agenda provides for the launching of the vision network and initiation of the intra-ministerial co-operation group. The purpose of these units is to ensure stronger links between the ICT policy and other national policies that influence the development of the information society (e.g., entrepreneurship and education policy). Apart from the forms of co-operation listed above, the Ministry of Economic Affairs and Communications also participates in the work of the workgroups of the Information Technology and Telecommunication Association and the e-governance Academy.

Government Chief Information Officer (CIO) / Deputy Secretary-General for IT and Telecom

THE Government CIO of Estonia, also titled as Deputy Secretary-General for IT and Telecom, is in charge of digital government and society, also telecommunications and post areas. His role is to set the strategy and policies, to launch and steer strategic development initiatives and regulation, to represent the government in EU and other international organizations or collaboration in his domain.

CIO Office priorities

1. Control of the majority of development funding when it comes to IT plans and projects. Other agencies need to apply for funds from CIO office. CIO office can attach conditions to funds and make sure that what others are building makes sense and is aligned with the overall architectural framework.
2. Work on the strategy and roadmap to set the overall goals in the sector
3. CIO office has regulatory powers to force the priorities through rules, standards, and regulations. This approach was used in an interoperable way when Estonia built the principles, framework and legal requirements and made sure that they were implemented. CIO office creates a lot of the architectural framework upfront and coordinates views and development in many areas.
4. People skills. As Estonia is a small country, there is a need to work on relationships and good partnerships. CIO office work with different networks and formations to make sure that all know each other and have positive and productive discussions in the network. The human element of collaboration is crucial to ensure the most positive results.

Government e-transformation roadmaps

The Government CIO office brought bright minds and business stakeholders together into one room to decide how to move forward. This was a very inclusive approach, and it included everyone who had anything useful to say on the topic. This approach resulted in the top-down roadmap.

Today, Estonia is much more decentralized. The Government CIO's job is to keep the whole of the Government picture and roadmap together. Ministries and departments have their own roadmaps because they can digitalize the entirety of their departments. There are general directions at a government level and then individual sector-specific roadmaps. To put the entire government on the same page requires putting all the bright minds together. CIO office decides who needs to be on board in terms of implementation. CIO role is to ensure there is a common strategy and roadmap, and that delivery happens in line with these.

Digital Agenda 2020 for Estonia

In November 2018, the Government of Estonia reviewed and approved the strategy for e-Estonia, the Digital Agenda 2020. The general objective of the strategy is the development of a mature and secure environment for the widespread use and development of smart ICT solutions.

The strategy is supposed to help Estonia to achieve the strategic goals laid out in the competitiveness agenda, Estonia 2020, and the sustainable development strategy, Sustainable Estonia 21: improving the competitiveness of the economy, improving the welfare of people, and contributing to more effective governance. Four goals were set for supporting the development of Estonian information society:

1. ICT infrastructure that supports economic growth, the development of the state, and the welfare of the population
2. More and higher value-added jobs, improved international competitiveness, and higher quality of life
3. Smarter governance and pro-active services
4. Export promotion and awareness of Estonian e-government

Estonian digital agenda 2020: https://www.mkm.ee/sites/default/files/digitalagenda2020_final.pdf

Funding

In 2014–2020, a contribution was mainly made to the implementation of the digital agenda; more than 200 million euros have been allocated for that purpose, including the EU funds and own contribution. The funding mechanism is based on evaluating the costs and benefits of the proposed IT projects. In the middle of the 2000s, when Estonia had the first roadmaps and platforms implemented, there was a desire to digitize everything, potentially taking things too far without assessing the benefits for each case. So, investments could have been more optimal. CIO office only goes in if there is a cost-benefit or value to development, new system, or re-design, doing this for all initiatives; thus, the government is getting more value-for-money in digital investments.

The projects do not only bring benefits to the government but also for the end-users. As an example, Estonia now has state digital signatures which are built on top of the digital ID. They not only allow for the optimization of government bureaucracy by reducing the need for signatures on paper, but they also benefit the whole economy. Now all b-2-b and b-2-c transactions can be handled digitally in an end to end way. Everybody has benefited and become more efficient, not just the government. These examples, on a national scale, illustrate just why you should re-design your processes – they are where the greatest gains in both cost-effectiveness and efficiency can be made.

Early success factors

1. Clear prioritization by political and administrative leadership. This allowed us to commit limited resources. In the beginning, the top-down configuration was run by the Prime Minister's office – aka Government Office.
2. Listening to technology experts. Estonia was able to move quickly because Estonia trusted the subject matter experts, such as engineers. Usually, government work is driven by lawyers, but that is not how the country approached this development. For example, when it came to privacy and safety, Estonia first listened to what the engineers and tech-experts suggested and then tried things out – within legal bounds. This kind of experimentation and risk-taking became the spirit of the development and helped to push the law into being more accepting and enabling of digitization.
3. Building the core components early. Estonia has a shared platform (X-Road) for different agencies that they could use to digitalize their services. All agencies need to authenticate their users anyway. The problem was solved just once and made it available for everybody, because we don't have money or skilled people to constantly duplicate work.
4. Changing laws and practices. In digital transformation, Estonia was ready to change whatever the current practice of law is. This is the core factor in being able to experiment and change how we do things. It's important to consider change management and how we get people on-board; and, most importantly, how we communicate. "It's never been about technology. It's always about how we re-design, how we transform, and how we operate as a Government."

Key Findings of Estonia's Digital Journey

1. Leaders need to be bold and not be afraid if things don't work out at the first attempt. Try things out, try different things to see if they work. If things do work, then progress from there.
2. Instead of thinking and designing, start building things and innovate faster. Fail faster – like in the start-up scene. You do not have to have a perfect solution or design to build a few lines of code and go live with it. Iterate and build faster. Nowadays, there seems to be more talking than doing, especially among the governments of the world.
3. Invest in new services. We need to have people looking at trends and thinking about where they lead and how things can be done differently. This does not come from people who are engaged with other duties. We need special resources and talents to enable that to happen – and that is something worth investing in – because they will be the change-makers.

E-Estonia Council

E-Estonia Council directs the development of Estonian digital society and e-governance, especially the implementation of the national digital agenda. Five experts and ICT sector representatives and four ministers (Minister of Economic Affairs and Infrastructure is the Vice-Chairman, Minister of Entrepreneurship, Minister of Public Administration and Minister of Education and Research) are members of the Council. It is chaired by Prime Minister. Other government institutions and experts are involved in the work upon need. The Council can also set up expert committees and working groups or commission studies in the field of ICT Policy. The work of the E-Estonia Council is organized by the Strategy Unit of the Government Office.

Tasks of E-Estonia Council

1. Directs the implementation of the Estonian digital agenda, including initiates and gives an opinion on agenda review proposals, approves the action plan for the agenda and the progress reports of its implementation, gives an opinion on proposals to evaluate agenda implementation and the evaluation results, guides collaboration between government institutions and sectors;
2. Forms and gives opinions in matters related to digital society development in Estonia, elsewhere in Europe and the world, including as input for Estonian positions in European Union and other international organizations.
3. Makes proposals for preparing of policy documents to steer the development of digital society, reviews and gives san opinion on relevant draft proposals.
4. Acts as sectoral monitoring committee for European Union Structural Funds measures in ICT policy field.