

CIÊNCIAS SOCIALMENTE APLICÁVEIS:

INTEGRANDO SABERES E
ABRINDO CAMINHOS

JORGE JOSÉ MARTINS RODRIGUES
MARIA AMÉLIA MARQUES

(Organizadores)

VOL VII



EDITORA
ARTEMIS

2022

CIÊNCIAS SOCIALMENTE APLICÁVEIS:

INTEGRANDO SABERES E
ABRINDO CAMINHOS

JORGE JOSÉ MARTINS RODRIGUES
MARIA AMÉLIA MARQUES

(Organizadores)

VOL VII



EDITORA
ARTEMIS

2022



O conteúdo deste livro está licenciado sob uma Licença de Atribuição Creative Commons Atribuição-Não-Comercial NãoDerivativos 4.0 Internacional (CC BY-NC-ND 4.0). Direitos para esta edição cedidos à Editora Artemis pelos autores. Permitido o download da obra e o compartilhamento, desde que sejam atribuídos créditos aos autores, e sem a possibilidade de alterá-la de nenhuma forma ou utilizá-la para fins comerciais.

A responsabilidade pelo conteúdo dos artigos e seus dados, em sua forma, correção e confiabilidade é exclusiva dos autores. A Editora Artemis, em seu compromisso de manter e aperfeiçoar a qualidade e confiabilidade dos trabalhos que publica, conduz a avaliação cega pelos pares de todos manuscritos publicados, com base em critérios de neutralidade e imparcialidade acadêmica.

Editora Chefe	Prof. ^a Dr. ^a Antonella Carvalho de Oliveira
Editora Executiva	M. ^a Viviane Carvalho Mocellin
Direção de Arte	M. ^a Bruna Bejarano
Diagramação	Elisângela Abreu
Organizadores	Prof. Dr. Jorge José Martins Rodrigues Prof. ^a Dr. ^a Maria Amélia Marques
Imagem da Capa	ciempies
Bibliotecário	Maurício Amormino Júnior – CRB6/2422

Conselho Editorial

Prof.^a Dr.^a Ada Esther Portero Ricol, *Universidad Tecnológica de La Habana “José Antonio Echeverría”*, Cuba
Prof. Dr. Adalberto de Paula Paranhos, Universidade Federal de Uberlândia
Prof.^a Dr.^a Amanda Ramalho de Freitas Brito, Universidade Federal da Paraíba
Prof.^a Dr.^a Ana Clara Monteverde, *Universidad de Buenos Aires*, Argentina
Prof.^a Dr.^a Ana Júlia Viamonte, Instituto Superior de Engenharia do Porto (ISEP), Portugal
Prof. Dr. Ángel Mujica Sánchez, *Universidad Nacional del Altiplano*, Peru
Prof.^a Dr.^a Angela Ester Mallmann Centenaro, Universidade do Estado de Mato Grosso
Prof.^a Dr.^a Begoña Blandón González, *Universidad de Sevilla*, Espanha
Prof.^a Dr.^a Carmen Pimentel, Universidade Federal Rural do Rio de Janeiro
Prof.^a Dr.^a Catarina Castro, Universidade Nova de Lisboa, Portugal
Prof.^a Dr.^a Cirila Cervera Delgado, *Universidad de Guanajuato*, México
Prof.^a Dr.^a Cláudia Padovesi Fonseca, Universidade de Brasília-DF
Prof.^a Dr.^a Cláudia Neves, Universidade Aberta de Portugal
Prof. Dr. Cleberton Correia Santos, Universidade Federal da Grande Dourados
Prof. Dr. David García-Martul, *Universidad Rey Juan Carlos de Madrid*, Espanha
Prof.^a Dr.^a Deuzimar Costa Serra, Universidade Estadual do Maranhão
Prof.^a Dr.^a Dina Maria Martins Ferreira, Universidade Estadual do Ceará
Prof.^a Dr.^a Eduarda Maria Rocha Teles de Castro Coelho, Universidade de Trás-os-Montes e Alto Douro, Portugal
Prof. Dr. Eduardo Eugênio Spers, Universidade de São Paulo
Prof. Dr. Eloi Martins Senhoras, Universidade Federal de Roraima, Brasil
Prof.^a Dr.^a Elvira Laura Hernández Carballido, *Universidad Autónoma del Estado de Hidalgo*, México



Prof.^ª Dr.^ª Emilas Darlene Carmen Lebus, *Universidad Nacional del Nordeste/ Universidad Tecnológica Nacional, Argentina*
Prof.^ª Dr.^ª Erla Mariela Morales Morgado, *Universidad de Salamanca, Espanha*
Prof. Dr. Ernesto Cristina, *Universidad de la República, Uruguay*
Prof. Dr. Ernesto Ramírez-Briones, *Universidad de Guadalajara, México*
Prof. Dr. Gabriel Díaz Cobos, *Universitat de Barcelona, Espanha*
Prof.^ª Dr.^ª Gabriela Gonçalves, Instituto Superior de Engenharia do Porto (ISEP), Portugal
Prof. Dr. Geoffroy Roger Pointer Malpass, Universidade Federal do Triângulo Mineiro, Brasil
Prof.^ª Dr.^ª Gladys Esther Leoz, *Universidad Nacional de San Luis, Argentina*
Prof.^ª Dr.^ª Glória Beatriz Álvarez, *Universidad de Buenos Aires, Argentina*
Prof. Dr. Gonçalo Poeta Fernandes, Instituto Politécnico da Guarda, Portugal
Prof. Dr. Gustavo Adolfo Juarez, *Universidad Nacional de Catamarca, Argentina*
Prof. Dr. Håkan Karlsson, *University of Gothenburg, Suécia*
Prof.^ª Dr.^ª Iara Lúcia Tescarollo Dias, Universidade São Francisco, Brasil
Prof.^ª Dr.^ª Isabel del Rosario Chiyon Carrasco, *Universidad de Piura, Peru*
Prof.^ª Dr.^ª Isabel Yohena, *Universidad de Buenos Aires, Argentina*
Prof. Dr. Ivan Amaro, Universidade do Estado do Rio de Janeiro, Brasil
Prof. Dr. Iván Ramon Sánchez Soto, *Universidad del Bío-Bío, Chile*
Prof.^ª Dr.^ª Ivânia Maria Carneiro Vieira, Universidade Federal do Amazonas, Brasil
Prof. Me. Javier Antonio Alborno, *University of Miami and Miami Dade College, Estados Unidos*
Prof. Dr. Jesús Montero Martínez, *Universidad de Castilla - La Mancha, Espanha*
Prof. Dr. João Manuel Pereira Ramalho Serrano, Universidade de Évora, Portugal
Prof. Dr. Joaquim Júlio Almeida Júnior, UniFIMES - Centro Universitário de Mineiros, Brasil
Prof. Dr. Jorge Ernesto Bartolucci, *Universidad Nacional Autónoma de México, México*
Prof. Dr. José Cortez Godinez, Universidad Autónoma de Baja California, México
Prof. Dr. Juan Carlos Cancino Diaz, Instituto Politécnico Nacional, México
Prof. Dr. Juan Carlos Mosquera Feijoo, *Universidad Politécnica de Madrid, Espanha*
Prof. Dr. Juan Diego Parra Valencia, *Instituto Tecnológico Metropolitano de Medellín, Colômbia*
Prof. Dr. Juan Manuel Sánchez-Yáñez, *Universidad Michoacana de San Nicolás de Hidalgo, México*
Prof. Dr. Júlio César Ribeiro, Universidade Federal Rural do Rio de Janeiro, Brasil
Prof. Dr. Leinig Antonio Perazolli, Universidade Estadual Paulista (UNESP), Brasil
Prof.^ª Dr.^ª Livia do Carmo, Universidade Federal de Goiás, Brasil
Prof.^ª Dr.^ª Luciane Spanhol Bordignon, Universidade de Passo Fundo, Brasil
Prof. Dr. Luis Fernando González Beltrán, *Universidad Nacional Autónoma de México, México*
Prof. Dr. Luis Vicente Amador Muñoz, *Universidad Pablo de Olavide, Espanha*
Prof.^ª Dr.^ª Macarena Esteban Ibáñez, *Universidad Pablo de Olavide, Espanha*
Prof. Dr. Manuel Ramiro Rodríguez, *Universidad Santiago de Compostela, Espanha*
Prof.^ª Dr.^ª Márcia de Souza Luz Freitas, Universidade Federal de Itajubá, Brasil
Prof. Dr. Marcos Augusto de Lima Nobre, Universidade Estadual Paulista (UNESP), Brasil
Prof. Dr. Marcos Vinicius Meiado, Universidade Federal de Sergipe, Brasil
Prof.^ª Dr.^ª Mar Garrido Román, *Universidad de Granada, Espanha*
Prof.^ª Dr.^ª Margarida Márcia Fernandes Lima, Universidade Federal de Ouro Preto, Brasil
Prof.^ª Dr.^ª Maria Aparecida José de Oliveira, Universidade Federal da Bahia, Brasil
Prof.^ª Dr.^ª Maria Carmen Pastor, *Universitat Jaume I, Espanha*
Prof.^ª Dr.^ª Maria do Céu Caetano, Universidade Nova de Lisboa, Portugal
Prof.^ª Dr.^ª Maria do Socorro Saraiva Pinheiro, Universidade Federal do Maranhão, Brasil
Prof.^ª Dr.^ª Maria Lúcia Pato, Instituto Politécnico de Viseu, Portugal

Prof.ª Dr.ª Maritza González Moreno, *Universidad Tecnológica de La Habana*, Cuba
Prof.ª Dr.ª Mauriceia Silva de Paula Vieira, Universidade Federal de Lavras, Brasil
Prof.ª Dr.ª Odara Horta Boscolo, Universidade Federal Fluminense, Brasil
Prof. Dr. Osbaldo Turpo-Gebera, *Universidad Nacional de San Agustín de Arequipa*, Peru
Prof.ª Dr.ª Patrícia Vasconcelos Almeida, Universidade Federal de Lavras, Brasil
Prof.ª Dr.ª Paula Arcoverde Cavalcanti, Universidade do Estado da Bahia, Brasil
Prof. Dr. Rodrigo Marques de Almeida Guerra, Universidade Federal do Pará, Brasil
Prof. Dr. Saulo Cerqueira de Aguiar Soares, Universidade Federal do Piauí, Brasil
Prof. Dr. Sergio Bitencourt Araújo Barros, Universidade Federal do Piauí, Brasil
Prof. Dr. Sérgio Luiz do Amaral Moretti, Universidade Federal de Uberlândia, Brasil
Prof.ª Dr.ª Silvia Inés del Valle Navarro, *Universidad Nacional de Catamarca*, Argentina
Prof.ª Dr.ª Solange Kazumi Sakata, Instituto de Pesquisas Energéticas e Nucleares. Universidade de São Paulo (USP), Brasil
Prof.ª Dr.ª Teresa Cardoso, Universidade Aberta de Portugal
Prof.ª Dr.ª Teresa Monteiro Seixas, Universidade do Porto, Portugal
Prof. Dr. Valter Machado da Fonseca, Universidade Federal de Viçosa, Brasil
Prof.ª Dr.ª Vanessa Bordin Viera, Universidade Federal de Campina Grande, Brasil
Prof.ª Dr.ª Vera Lúcia Vasilévski dos Santos Araújo, Universidade Tecnológica Federal do Paraná, Brasil
Prof. Dr. Wilson Noé Garcés Aguilar, *Corporación Universitaria Autónoma del Cauca*, Colômbia

**Dados Internacionais de Catalogação na Publicação (CIP)
(eDOC BRASIL, Belo Horizonte/MG)**

C569 Ciências socialmente aplicáveis [livro eletrônico] : integrando saberes e abrindo caminhos: vol. VII / Organizadores Jorge José Martins Rodrigues, Maria Amélia Marques. – Curitiba, PR: Artemis, 2022.

Formato: PDF

Requisitos de sistema: Adobe Acrobat Reader

Modo de acesso: World Wide Web

Inclui bibliografia

Edição bilíngue

ISBN 978-65-87396-72-9

DOI 10.37572/EdArt_171222729

1. Ciências sociais aplicadas – Pesquisa – Brasil. 2. Abordagem interdisciplinar do conhecimento. I. Rodrigues, Jorge José Martins. II. Marques, Maria Amélia.

CDD 307

Elaborado por Maurício Amormino Júnior – CRB6/2422



APRESENTAÇÃO

O sétimo volume desta coleção continua a tradição de ser um livro de temáticas emergentes interdisciplinares e transdisciplinares no campo das ciências sociais aplicadas. Interdisciplinares porque cruzam várias disciplinas do saber e transdisciplinares pela diversidade de campos do conhecimento abrangidos.

À semelhança dos anteriores volumes, a metodologia seguida na organização deste volume, podendo ser discutível, privilegiou a relevância e atualidade dos artigos, o recurso a diferentes metodologias e técnicas de investigação em ciências sociais aplicadas; o estudo de casos internacionais e nacionais, bem como a multidisciplinaridade dos estudos.

Nesse quadro, o presente volume tem como tema Saúde, Cultura e Consumo e encontra-se em torno de quatro eixos: Saúde, Cultura, Finanças e Distribuição. Na construção da estrutura de cada eixo procurou-se seguir uma lógica em que cada artigo possa contribuir para uma melhor compreensão do artigo seguinte, gerando-se um fluxo de conhecimento acumulado que se pretende fluido e em espiral crescente.

Assim, a Saúde agrupa um conjunto de cinco artigos que se preocupam com o tema. A saúde é um bem comum transversal às sociedades, o que permite movimentos transnacionais dos pacientes, seja por motivos de esperança média de vida, tratamentos específicos geograficamente localizados ou experiências forçadas devido a pandemias.

A Cultura junta sete artigos relacionados. A cultura é um património imaterial das sociedades, que permite compreender os povos, sendo o resultado de paz e ações passadas e repensadas por aqueles, com implicações nas relações internacionais, culturais, patrimoniais, etnográficas e de trabalho, com impacto na economia dos países.

As Finanças juntam um conjunto de cinco artigos. Os projectos de investimento, na óptica puramente financeira deverão ser rentáveis. Esta avaliação privilegia os esforços efectuados em investigação, inovação e *design*, na geração de fluxos de tesouraria, sob pena de as organizações criadas entrarem em falência antes do termo do mesmo.

A Distribuição junta um conjunto de quatro artigos que exploram o estímulo ao consumo. Este estímulo passa pela publicidade e pelo uso de novas tecnologias, o que gera novas soluções para os canais de distribuição com impacto na economia.

Com a disponibilização deste livro e seus artigos esperamos que os mesmos gerem inquietude intelectual e curiosidade científica, procurando a satisfação de novas necessidades e descobertas, motor de todas as fontes de inovação.

Jorge Rodrigues, ISCAL/IPL, Portugal
Maria Amélia Marques, ESCE/IPS, Portugal

SUMÁRIO

SAÚDE, CULTURA E CONSUMO: DESAFIOS PARA A SUSTENTABILIDADE

SAÚDE

CAPÍTULO 1..... 1

EXPERIENCIAS DEL CONFINAMIENTO ENTRE JÓVENES UNIVERSITARIOS: LOS EFECTOS EMOCIONALES Y SOCIALES DE UN AÑO DE ENCIERRO POR LA PANDEMIA DE COVID-19

José Guadalupe Rivera González

 https://doi.org/10.37572/EdArt_1712227291

CAPÍTULO 2..... 29

LÍTIO – UMA HISTÓRIA DESDE A GOTA À PSIQUIATRIA

Joaquim José Oliveira de Sá Couto

Joana Filipa Cavaco Rodrigues

Bruno Afonso da Luz

Tiago Ventura Gil Pereira

 https://doi.org/10.37572/EdArt_1712227292

CAPÍTULO 3..... 35

DESASTRE DEMOGRÁFICO EN PERÚ OCASIONADO POR EL COVID-19

Luis Alberto Meza Santa Cruz

 https://doi.org/10.37572/EdArt_1712227293

CAPÍTULO 4..... 50

CENTRO INTEGRAL DE AYUDA PARA LA MUJER MALTRATADA EN TEPIC, NAYARIT, MEXICO

Bertha Alicia Arvizu López

Rosalva Enciso Arámbula

Gabriel Zepeda Martínez

Juana Evangelina Duarte Reynoso

Nicolás Daniel Lora Ledón

Mayra Elena Fonseca Avalos

 https://doi.org/10.37572/EdArt_1712227294

CAPÍTULO 5..... 69

ESTUDOS DE CASO COM APLICAÇÃO DO MODELO DINÂMICO DE AVALIAÇÃO E INTERVENÇÃO FAMILIAR

Dora Margarida Ribeiro Machado

Maria Cristina Pinto Mendes

 https://doi.org/10.37572/EdArt_1712227295

CULTURA

CAPÍTULO 6..... 83

DISCURSOS DE PAZ DEL NOBEL JUAN MANUEL SANTOS

Liliana Gómez

 https://doi.org/10.37572/EdArt_1712227296

CAPÍTULO 7 100

PENSAMENTO, CRIAÇÃO ARTÍSTICA E CRIAÇÃO HUMANA

António Manuel Rodrigues Oliveira

 https://doi.org/10.37572/EdArt_1712227297

CAPÍTULO 8.....107

ECONOMÍA Y GEOPOLÍTICA: LA RELACIÓN ENTRE CHINA Y ASIA CENTRAL

Javier Fernando Luchetti

 https://doi.org/10.37572/EdArt_1712227298

CAPÍTULO 9..... 120

TOWARDS REGENERATIVE CULTURES AND METANARRATIVES IN GIRONA: A TRANSITION NARRATIVE-DESIGN CASE STUDY

Jan Ferrer i Picó

Bas van den Berg

 https://doi.org/10.37572/EdArt_1712227299

CAPÍTULO 10.....139

IMAGEN DE VALPARAÍSO, PATRIMONIO DE INMIGRANTES DEL SIGLO XIX Y PRINCIPIOS DEL XX


Hernán Alejandro Elgueta Strange

 https://doi.org/10.37572/EdArt_17122272910

CAPÍTULO 11.....147

INDIGENAS EN LA CARCEL: LA ARAÑA TEJIENDO SU RED

Enrique Hugo García Valencia

 https://doi.org/10.37572/EdArt_17122272911

CAPÍTULO 12 166

TRABAJO DOMÉSTICO Y SU IMPACTO EN LA ECONOMÍA MEXICANA

Noemi Alejandra Armenta Sevilla

Gabriel Tapia Tovar

Melissa R. Melgarejo Valdéz

Ramiro González Asta

 https://doi.org/10.37572/EdArt_17122272912

FINANÇAS

CAPÍTULO 13.....175

EL FLUJO DE CAJA COMO HERRAMIENTA PARA LOS PROYECTOS DE INVERSIÓN

Pablo Edison Ávila Ramírez

Alexandra Auxiliadora Mendoza Vera

Martha Margarita Minaya Macías

Rubén Hernán Andrade Álvarez

Angélica María Indacochea Vásquez

Gina Gabriela Loor Moreira

Janeth Virginia Intriago Vera

Tito Alexander Cedeño Loor

Jhonny Antonio Ávila Ramírez

Henry Marcelino Pinargote Pinargote

Luis Andrey Aguilar Tapia

Milton Geovanny Zambrano Rivera

 https://doi.org/10.37572/EdArt_17122272913

CAPÍTULO 14..... 189

GENERADOR BINARIO PSEUDOALEATORIO, FORMADO POR LA COMBINACIÓN DE REGISTROS DE DESPLAZAMIENTO CON RETROALIMENTACIÓN NO LINEAL

Andrés Francisco Farías

Germán Antonio Montejano

Ana Gabriela Garis

Pablo Marcelo García
Andrés Alejandro Farías

 https://doi.org/10.37572/EdArt_17122272914

CAPÍTULO 15.....204

PROJETO DE MICROTURBINAS EÓLICAS: OPORTUNIDADES E DESAFIOS

Silvana dos Santos Ramos
Luis Henrique Alves Candido

 https://doi.org/10.37572/EdArt_17122272915

CAPÍTULO 16.....217

VALORES CRÍTICOS DE POLINOMIOS HOMOGÊNEOS DE GRADO TRES SOBRE LA
ESFERA UNIDAD

Julio Cesar Barros
Victoria Navarro

 https://doi.org/10.37572/EdArt_17122272916

CAPÍTULO 17229

FALÊNCIA EMPRESARIAL, ANÁLISE DISCRIMINANTE E SCORING - UMA VISÃO
GERAL

Cândido Jorge Peres Moreira
Mário Alexandre Guerreiro Antão
Domingos Custódio Cristóvão
Hélio Miguel Gomes Marques
Pedro Miguel Baptista Pinheiro
João Manuel Afonso Geraldés
Catarina Carvalho Terrinca

 https://doi.org/10.37572/EdArt_17122272917

DISTRIBUIÇÃO

CAPÍTULO 18.....247

ESTÍMULO AO CONSUMO: UMA INCITAÇÃO PUBLICITÁRIA COM TRAÇOS
INVEJOSOS NO COMPORTAMENTO HUMANO

Karen Muzany
Janaina Vieira de Paula Jordão

 https://doi.org/10.37572/EdArt_17122272918

CAPÍTULO 19258

THE ROLE OF MOBILE BANKING IN THE NEW DIGITAL FINANCIAL FRAMEWORK: A LITERATURE REVIEW

Maria Cristina Quirici

 https://doi.org/10.37572/EdArt_17122272919

CAPÍTULO 20 276

EXPLORING PHYSICAL STORES IN OMNICHANNEL RETAIL STRATEGY. HOW INTERACTION DESIGN IS CHANGING IN-STORE BEHAVIOR

Francesca Fontana

Manuel Scortichini

 https://doi.org/10.37572/EdArt_17122272920

CAPÍTULO 21288

THE IMPACT OF ECONOMIC POLICY UNCERTAINTY ON UNEMPLOYMENT IN THE UNITED STATES

Dejan Romih

Amir Fekrazad

 https://doi.org/10.37572/EdArt_17122272921

SOBRE OS ORGANIZADORES303

ÍNDICE REMISSIVO 304

THE ROLE OF MOBILE BANKING IN THE NEW DIGITAL FINANCIAL FRAMEWORK: A LITERATURE REVIEW

Data de submissão: 30/10/2022

Data de aceite: 18/11/2022

Maria Cristina Quirici

University of Pisa, Italy

Department of Economia e Management

Pisa, C. Ridolfi, 10, 56124 Italy

<https://orcid.org/0000-0003-1682-7099>

ABSTRACT: The impacts of FinTechs (Financial Technology) and digitalization on the financial sector, and on the banking industry in particular, are more and more consistent, almost disruptive. Progress in mobile device development, with the actual diffusion of smartphones, with a cheaper and widely-spread Internet have led to a growing number of Mobile Banking users all over the world. The present research wants to analyze the role of Mobile Banking in the present financial digital framework according to the banking perspective. To reach this aim the paper starts with a literature review regarding the significance of Mobile Banking, being difficult to find a relative univocal definition in literature, with no consensus for example in its definition and role in developed and developing countries. Then the paper investigates how FinTech and Digitalization can impact on Banking Industry, considering

also the effects of Covid-19 crisis. The work wants also to explore the various channels through which Mobile Money Services affect bank performances. The analysis is able to point out that the actual disruptive changes in mobile financial services and payments can represent also a great opportunity for banks to reduce their marginal costs and to increase their productivity, giving them the possibility to leverage innovative and less costly business models too. The paper in its final part indicates also some critical issues concerning the development of Mobile Banking and, finally, some topics for further researches regarding these subjects.

KEYWORDS: Mobile Banking. Mobile Payments. Digitalization. FinTech. Covid-19 crisis.

1 INTRODUCTION

The introduction and successive growth of Internet, more and more cheaper and widely-spread, and of mobile technologies have transformed many branches of industries, including the banking one, changing markets and ways of competition. Technology-driven innovation in financial services – known as *FinTech*, resulting from *Financial Technology* – is increasingly reshaping the financial landscape, and the banking one in a particular

way, as never before (Asongu and Nwachukwu, 2018; Sironi, 2016; Disse and Sommer, 2020; Ky *et al.* 2019). Considering that every innovation creates changes and these changes translates into risks, it's evident that FinTech can create the risk to disrupt the existing banking model. And mobile banking, combined with Internet diffusion, is today one of the biggest technological change agent, being among the latest in a series of recent mobile technological wonders.

But all these important changes can represent also an extraordinary way to progress and to reach new and better frontiers for banks. In other terms, the deep development of modern technologies can represent one of the biggest allies in order to redirect and to redesign banking activities. In fact, banks can use these technological innovations to create new communication channels to reach every kind of client, also the less accessible ones.

In their evolution from phone banking, through internet banking until mobile banking, banks have had a primary goal: to simplify their business model, going out of a rather conservative way of doing banking, offering new and less expensive distribution channels for their services. Consequently, it is important to monitor mobile banking, within the *FinTech* phenomenon, since, according to information system experts, it is surely a key for banking innovative activities in the future.

To analyse the role of mobile banking in the new digitalized framework and to investigate how it can represent an instrument to reshape the banking landscape, it's necessary to start with a literature review concerning the same definition of mobile banking. After this, the work continues with an analysis, based on a review of the relative existing literature, of the impact of Fintech and digitalization on the banking industry, considering also the various and important effects of the Coronavirus pandemic crisis on the diffusion of digitalization all over the world. Then the author wants to study the various channels through which Mobile Money Services, that of FinTech are a considerable part, affect bank performances, considering in a particular way the opportunities for banks deriving from the development of these mobile services. Some final considerations regarding the possible critical issues connected to the mobile payment services and M-banking diffusion close the work, with the indications of some elements for further researches.

2 MOBILE BANKING: THE DEFINING APPROACHES IN LITERATURE

Mobile banking enables users to have all financial resources “in their hands”, via mobile devices, mobile phones and personal digital assistants. Although automated teller machine (ATM), telephone, and Internet banking offer effective delivery channels for

traditional banking products, considering the newest delivery channel established by retail and microfinance banks in many developed and developing countries, mobile banking is likely to have significant effects on the market (Ashta and Biot-Paquerot, 2018).

The evolution of 3G phones, smartphones, and new 4G/5G technologies has surely widen the spectra of new and improved models of mobile banking. Smartphones and tablets are becoming new hardware devices present in everyday life, which will drive a bigger and faster supply of mobile solutions (DBResearch, 2012). In particular, the expanded use of smartphones has increased demand for mobile banking services, prompting many more banks, microfinance institutions, software houses and service providers to offer these innovative services together with new sets of products and applications, designed to reach more and more clients (including unbanked populations), improve customer retention, enhance operational efficiency, increase market share, providing new employment opportunities too (Dupas *et al.*, 2018).

Academic research has started to analyze the role of m-banking in today's economy almost recently but, according to the findings indicated by Shaikh and Karjaluo, who proposed a literature review on mobile banking adoption, "*existing research is fragmented, constituted by various theoretical frameworks, with relatively small sample sizes (average N=365) drawn from both developed and developing countries*" (Shaikh and Karjaluo, 2015, p. 14) Moreover, according to the same authors, "*the existent literature appears limited by its narrow focus on SMS banking in developing countries (...)*" (*Ibidem*, p.1) .

It's necessary to underline that there is no consensus in the definition of mobile banking between North and South: in industrialized (or developed) countries, mobile banking refers to an extension of banking and financial services provided on mobile phones by financial institutions (Lin, 2011); by contrast, in developing countries, mobile banking is a broader form of banking that includes, for example, payment services (m-payments), transfer of funds, and deposits (Fall *et al.*, 2020; Jack and Suri, 2014; Suri and Jack, 2016).

The difficult in finding a univocal definition of mobile banking in literature derives also from the fact that researchers have used various terms to refer to mobile banking: branchless banking (Ivatury and Mas, 2008); m-payments, m-transfers, m-finance (Huili *et al.*, 2013); pocket banking (Amin and Ramayah, 2010). Some authors identify the difference between mobile banking (or m-banking) and mobile payment (or m-payment) and argue that, if a bank is not directly involved in the instrumental gratification of a service offered, it can be called "m-payment" and examples of such services include payments through overhead-priced SMS, prepaid account loading, or a charge made to the subscriber's account (e.g., credit card or invoice based payment mechanism). (Cruz *et al.*, 2010).

According to Ndiwalana and Popov (2016), m-payments are financial transactions actuated by users through the help of mobile devices, in our context the growing number of mobile phones. M-payments can be considered a subset of m-banking, which refers to accessing various banking services via mobile devices, so m-payments may be one of the services provided by a financial institution. On the other hand, mobile commerce (or m-commerce) refers to monetary transactions conducted and facilitated via mobile networks. All the above services can be considered subsets of their electronic counterparts: m-payments are a subset of electronic payments (e-payments), m-banking is a subset of electronic banking (e-banking) and m-commerce is a subset of electronic commerce (e-commerce). The distinction is their reliance on mobility. Being an important component of e-banking, m-banking usually constitutes an alternative delivery channel (ADC) for financial transactions (Shaikh and Karjaluo, 2015).

According to Bank of Uganda, instead, *“Mobile money, along with “mobile banking”, pertains to the larger area of “mobile financial services”. “Mobile money” is e-money available to a user to conduct transactions through a mobile phone. The mobile money wallet/mobile money account is an electronic money (e-money) account which receives electronic value either after the account holder deposits cash via an agent or receives a payment/remittance from elsewhere. “Mobile banking”, on the other hand, refers to the use of a mobile phone to perform transactions on one’s account in a licensed institution (including balance inquiries, mini-statements, statements and cheque books requisitions, forex rates enquiries and funds transfer to other nominated bank accounts). The term “mobile financial services” encompasses both “mobile money” and “mobile banking”* (Bank of Uganda 2017, p.1).

Some studies (Akturan and Tezcan, 2012; Masrek *et al.*, 2012) cite m-banking as an innovative communication channel that allows the customer to interact with a bank through a portable device. According to Tomic and Stojanovic (2018) *“M-banking is one of the application that came out from mobile commerce (M-commerce). It is a channel through which banks interact with clients by using mobile devices in the most simplified form. Banks use m-banking, i.e. SMS services to send clients updated information”*. At the same time, according to these authors, the most adequate definition of mobile banking has been given by Luo *et al.* (2010): *“Mobile banking is an innovative method to access to banking services through a channel, whereby the users interact with the bank via mobile devices (e.g. a mobile phone or a personal digital assistant)”*. In literature, also other researcher consider m-banking as an application of m-commerce, that enables customers to access bank accounts through mobile devices to conduct transactions,

such as checking account status, transferring money, making payments, or selling stocks (Alafeef *et al.*, 2012; Wu and Wang, 2005).

However, the dynamic markets for mobile devices and mobile banking suggest the need for a definition able to capture recent advances in the field. Previous definitions have not, for example, explicitly stated which mobile devices may be qualified for m-banking use: accessing banking services from a laptop should not be considered m-banking, because laptops are aligned with the online/Internet banking category rather than with m-banking.

According to Shaikh and Karjaluo (2015), mobile banking can be defined as “A product or service offered by a bank or a microfinance institute (bank-led model) or MNO (non-bank-led model) for conducting financial and non-financial transactions using a mobile device, namely a mobile phone, smartphone, or tablet”.

According to these authors, the digital mobile ecosystem comprises several applications, channels and methods for conducting m-banking, as well as major services offered through m-banking channels. “In fact, retail and microfinance banks, located both in developed and in developing countries, typically offer four points of access to m-banking services:

- (1) mobile applications, that can be downloaded to a smartphone;
- (2) mobile browsers, that can be used with any mobile or smartphone having a Web browser;
- (3) applications, that can be downloaded into a tablet;
- (4) short messaging services (SMS), that provide notifications of account information” (Shaikh and Karjaluo 2015, p. 5).

“Other authors underline that communication due to the constant development of mobile communication technology can be defined as every direct or also indirect monetary transaction made by a wireless telecommunication network (...)” (Moro Visconti, Quirici and Borroni, 2020, p. 97). Considering this network perspective, it’s possible to see, among others, also Mallat *et al.* (2004), Sharma and Al-Muharrami (2018), Dwivedi *et al.* (2017), Shih, Hung and Lin (2010). Fall *et al.* (2020), in particular, point out that mobile banking can be defined “as a platform accessed by a mobile phone to make payments, transfer funds, make deposits (withdrawals are unnecessary), and borrow money (overdraft allowed)”.

So, according to these previous definitions, “it is possible to consider M-banking as a network based on digital platforms (...) in which several stakeholders (banks, microfinance institutions, mobile network operators, and, obviously, users) can play interdependence roles.” (Moro Visconti, Quirici and Borroni, 2020, p. 97). In other terms, networking

platforms may be represented by bridging nodes like Mobile banking hotspots (Moro Visconti, 2020).

3 FINTECH AND DIGITALIZATION: A DEFINING APPROACH AND SOME EFFECTS OF THE COVID-19 PANDEMIC CRISIS

Mobile banking is surely a considerable part of FinTech, a complex phenomenon that can be defined in various ways. In literature, it's relevant the definition given by the Financial Stability Board, that adopted a rather broad definition of FinTech due to the rapidly and fluidity of its developments, considering it as *"technologically-enabled financial innovation that could results in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services"* (Financial Stability Board, 2017, p. 7).

The terminology "FinTech" can be alternatively used for various financial technologies and for their providers: in the first meaning, the FinTech ecosystem features a variety of business propositions which can span from peer-to-peer lending to digital payments (as mobile payments), or Big Data analytics, or blockchain technology; in the second one, FinTechs are all start-up companies which appeared between 2008 and 2010 particularly in the USA, but fast spreading out to the East Coast, Europe, Hong Kong, Singapore, Australia and much part of Asia (Sironi, 2016). Yet, according to Sironi, looking at the business philosophy and aspirations of their founders, *"FinTechs are a global phenomenon, born at the intersection between financial firms and technology providers, attempting to leverage on digital technology and advanced analytics to unbundle financial services and harness economies of scale by targeting long-tail consumers"* (Sironi, 2016, p. 5). Instead, FinTech can be described also as *"the employment of information technology to provide innovative and improved financial services"* (Disse and Sommer, 2020, p. 18).

Clearly, digitalization plays in this contest a key role, because just digital tools allow the creation of captive customer experiences as weapon to tear down the barriers to entry in financial services, fostering borderless competition against established institutions (Anagnostopoulos, 2018; Basel Committee on Banking Supervision, 2018).

FinTech innovations can disrupt existing industry structures and boundaries but, at the same time, they can democratize access to financial services, causing significant privacy, regulatory and law enforcement challenges (Carbò-Valverde, 2017, p. 134). In fact, the structural change in technology happens in parallel to competitive changes in the banking industry. So significant welfare gains from improvement in financial services are technologically feasible but unlikely to happen without the entry of new firms in the financial sector.

This complex combination of technological and competitive changes can be understood only if the features of the new financial activities are properly addressed. Many of the new services and activities related to digitalization and FinTech, often provided by multi-sided platforms, cannot be observed through the lens of the standard/traditional approach. So, regulators and supervisors have to monitor these technological challenges and to develop appropriate financial stability policies, taking into account the new ways of operating of these platforms. (Carbò-Valverde, 2017).

Surely, a deep impact on digitalization can be lead back to the Coronavirus global pandemic that has rapidly spread all around the world in 2020, demanding for social distancing measures as a strategy to soften contagions. The World Health Organization (WHO) on March 11, 2020, declared the coronavirus (Covid-19) outbreak – first identified in December 2019 in Wuhan, the capital of China's Hubei province - a global pandemic. The coronavirus crisis has had multiple deep effects all over the world, but according to our analysis one of the most important effect of this terrible crisis is that it has accelerated the digital transformation. In fact, the pandemic led to wider recognition of the importance of the digital transformation, particularly in the European Union. *“Until recently, the implementation of digital technologies was considered important for market success and was usually associated with the most innovative and modern companies. Now, however, the pandemic has made the digital transformation integral to firms’ survival. Many of the changes associated with digitalization – services provided remotely, teleworking and online meetings – are likely to stay. Investments in digitalization is vital to preventing business disruption, organizing work remotely, improving communications with customers, suppliers and employees and selling products and services online.”* (European Investment Bank, 2022, p. 2)

During the Covid-19 crisis, firms put more complex digitalization processes on hold. Beyond the short-term response to this crisis, a structural element for the digital transformation of the EU economy is the implementation of advanced digital technologies such as 3-D printing, advanced robotics, the Internet of Thing (IoT), Big Data analytics and artificial intelligence (AI), drones or digital platforms. Just platforms and advanced robotics are the most widespread digital technologies (Croxson *et al.*, 2022). The crisis forced firms and financial intermediaries to find more efficient ways of working with these new technologies, just considering that digitalization can transform business dynamics, work organization, education, health and government services. It's also necessary to point out that *“Some EU firms are at risk of being left behind, in particular in regions where digital infrastructure is lacking. One in six EU firms consider access to digital infrastructure to be a major obstacle to investment, but there are differences across EU countries and among*

regions within the same country. Significant investments in digital infrastructure is needed across the European Union to support a broad-based economic recovery” (European Investment Bank, 2022, p. 1)

In this context, technology has a tool called Mobile Banking services (M-banking) for all the payment and receipts transactions to maintain social distance and stay safe during Covid-19. In other term, M-Banking applications are fully consistent with distancing prescriptions of pandemic crisis, allowing for 24/7 operativity too (Moro Visconti, Quirici and Borroni, 2020, pp. 96-97; Ashta, 2021; Ojong and Asongu, 2021; Davidovic *et al.*, 2020). The pandemic fosters a fast increase in digital payments and a sharp rise in mobile app adoption (Bianchi *et al.*, 2022), even if advanced and developing countries favor different mobile payments solutions (Han and Wang, 2021). But these elements will be consider better successively.

4 HOW FINTECH AND DIGITALIZATION CAN RESHAPE THE BANKING INDUSTRY

In other terms, also considering the pandemic crisis effects, a new financial intermediation framework is growing, with huge amounts of information processing (*big data*) and new delivery channels, to improve the access to credit or other services from different types of clients. A new business, where the distance between households, small firms and their lenders will be increasing, as communicating in more impersonal ways (Sy *et al.*, 2019).

However, banks will interact with new players into this new *FintTech* business in various ways, from fierce competition to cooperation. Regulators will need to check whether regulation offers a level-playing field for such interaction and the necessary tools to preserve financial stability. Therefore, the implications of digitalization in the financial sector, and in the banking one in particular, seem to be enormous. The locality and physical reality of financial services have been transformed, the same methods and customer expectations of delivering them have profoundly changed and they are continuing to change.: in developed countries, digital distribution of data and networked systems driven by convenience and cost reduction are prevalent (De Almeida *et al.*, 2018), while in developing countries there has been increasing access to inclusion in financial services (Wieser *et al.*, 2019).

In other terms, consumers will continue to need financial services, but they will embrace more decentralized solutions, as it is happening also in other industries. The sharing economy is foreseen to become embedded in financial products, including peer-to-peer lending, cashless and payment integrated services (such as Uber and Amazon). The

World Energy Forum and Deloitte identified 11 disrupting clusters of innovations related to digitalization and these innovations will exert pressure on the traditional financial services model in the near future. Traditionally, banking systems were largely impenetrable for new entrants. With the digital transformation, small and agile new suppliers have appeared in large numbers, and incumbents are losing leverage unless they adapt to the new financial ecosystem (McWaters, 2016).

FinTech disruptors are usually fast-moving, start-up companies that generally focus on a particular innovative technology or process. They have been invading various services, from mobile payments to insurance, and have more than tripled annual global investments in the last five years. The banking industry has recently seen the introduction of numerous online only or direct banks (N26), many of which offer worldwide access. Data and analysis are becoming key to revenues and profitability. Customer intelligence based on *big data*, but then translated to tailored services, is predicted to shape the future of service requirements. Financial services and technology companies more and more will use artificial intelligence to explore social and emotional intelligence, natural language processing, logical reasoning, pattern assessment, sensors, or mobility, and more. The services created are expected to grow, supplying a more personalized treatment (TWI2050-The World in 2050, 2019).

The current transformations of infrastructure will become the norm. Many banks already use cloud-based software-as-a-service (SaaS) applications for non-core processes, but shortly these will be the main (perhaps only) platforms for all business activities. On the customer side, mobile and online services will become the norm. In light of this, cyber-security is becoming a critical threat to be overcome.

So, it's possible to point out that online banking has won its place in the traditional bank transactions sector. In fact, digital innovations provide opportunities for banks to enhance their customer-interactions, improve their decision-making, and implement new business models in a more cost-effective and innovative way. Transactions are easily done by personal computers from home or office. Real-time transaction monitoring enables users to track their money flow and driving from one part of a town to another becomes obsolete, as well as waiting in bank queues. Transactions are fast and easily done, around the clock, from anywhere in the world. These activities are more and more important for people who want to get information on their bank account or make a transaction as soon as possible (Moro Visconti and Quirici, 2014). Rapid development of mobile technologies enables clients to do these bank operations from their mobile phones. Therefore, mobile banking “go” towards clients’ growing needs for more convenient and easier managing of

their bank accounts and transactions, in a continuous progress from simple bank account checking to today's mobile on-the-spot payments in stores.

5 THE ROLE OF MOBILE FINANCIAL SERVICES: THE OPPORTUNITIES FOR BANKS IN THEIR PARTNERSHIP WITH MOBILE NETWORK OPERATORS (MNOS)

Mobile money technology allows users to conduct financial operations through mobile networks where cash-in cash-out services are provided by small business outlets better known as agents. Although mobile network operators are the most active actors, banks play a crucial role in mobile money provision. Specifically, to launch mobile money services, mobile network operators have to build partnership with banks or other financial institutions having a banking license (Aron 2017). In this case, banks play the role of custodians for mobile money users by holding a “trust” or “escrow” account deposits that match the full extent of e-money in the name of mobile network operators. Banks can use these additional funds to increase their lending and this is not different from the way banks use ordinary deposits.

Bank involvement in the mobile money scheme includes simply holding a trust/escrow account (passive), building partnership to launch mobile money services (active), or both. To exploit other potential benefits associated with mobile money, some banks build partnership with *Mobile Network Operators* (MNOs) to increase the number of their ATM users: these interest and fee-generating activities constitute new sources of income that may potentially enhance bank profitability. In addition, banks can leverage mobile money platforms to reach more people in traditionally underserved areas at much lower cost. And being bank presence often limited to urban or highly populated areas, MNOs' extensive network may enhance bank efficiency in traditionally underserved areas at much lower cost (Ky et al, 2019, p. 6-7). In fact, if traditionally, banks provide cash-in/cash-out services via ATMs and bank branches, these solutions are too expensive to set up in markets that have low-income or low-density populations (Moro Visconti and Quirici, 2014).

Therefore, Bank-MNO partnership in mobile money provision may enable banks to leverage mobile money agent networks to reach those areas with limited population size or economic activities, catering to new segments of customers and so diversifying further their income streams. In a similar vein, banks' partnership with MNOs may allow customers to perform their banking transactions without visiting banks' agencies. Exploring channels through which mobile money affects bank performance, it's possible to find that improved access to retail deposits and income diversification are possible candidates (Ky *et al.*, 2019).

Consequently, it is possible to underline that *“A well-designed mobile payments solution has the potential to benefit all interested stakeholders: Network Mobile Operators will increase traffic on their networks and hence profits from usage fees; banking institutions may get the opportunity to service a larger population, many of whom were unreachable before because of the costs of serving them exceed expected return on investment.*

It is possible also to point out the usefulness of M-banking services for banking and microfinance clients that are complementary between the banking and microfinance services, on one part, and the M-banking services, on the other. This result is also observed because of the greater maturity of customers of the banking system, compared with those who are not mature. Such customers have a better understanding of m-banking services because their financial knowledge is higher than that of others, which explains their greater propensity to adopt the technology.” (Moro Visconti, Quirici and Borroni, 2020, p. 99).

In terms of bank stability, the literature purports that financial technology can potentially strengthen financial stability by fostering financial inclusion, increasing diversification and transparency as well as allowing better risk assessment. According to Ahamed and Mallick (2019), financial inclusion improves financial stability by accessing cheap retail deposits from a large clientele base, reducing financing constraints of SMEs and mitigating the post-lending moral hazard. Also Ky *et al.*, considering the results of their analysis to know whether mobile money adoption enhances or worsens bank performance, *“show that enhanced income diversification and broadened access to deposits are possible channels through which banks involved in mobile money improve their performance. Overall, our finding highlight the bright side of cooperation between banks and mobile network operators in the provision of mobile money”* (Ky *et al.*, 2019, p. 1).

An other factor that equally matters when it's investigated the potential impact of m-banking adoption on firm performance is bank size. According to Ky *et al.* cited analysis, small banks involved in mobile money show a strong association with both their profitability and efficiency in relation to their degree of involvement in a partnership with an MNO.

These results are consistent with those of Ahamed and Mallick (2019), who notice that for small banks the length of involvement in mobile money does not matter, being sufficient this kind of involvement to realize an improvement in bank performance. Scott *et al.* (2017), then, show that the effect of technological innovations on profitability are higher on small banks than on larger ones and this because the former can adapt faster to them compared to the second ones, that may be sluggish to respond due to their stable market position and legacy systems. According to these authors, the positive relationship shown between banks' involvement in mobile money and their performance is expected to be more pronounced for banks with low retail deposit funding or low income diversification.

The failure of the experience in Kenya of M-Kesho (launched in March 2010) vs. the spectacular success of its successor M-Shwari (launched in November 2012) can illustrate how decisive the sizes of the bank and MNOs involved in a partnership might be. In fact, M-Kesho and M-Shwari are digital credit products similar in every aspect except that Safaricom partnered with the largest bank in Kenya (Equity Bank) to launch the former, while for the later, the partner, CBA bank, was a small largely-unknown bank. A frequently cited reason behind the failure of M-Kesho mobile money service is that Equity Bank and Safaricom perceived each other as main competitors and failed to define the partnership in a way that satisfied both companies. This phenomenon has propelled some to ask whether cooperation between equals in this area was even desirable (Cook and McKay, 2017).

Thanks to an increased use of mobile banking, banks have transferred certain aspects of their business from branches, that were a traditional form of the bank-client interaction, and can offer cheaper and more affordable services, due to their lower costs (of human resources and offices). If all these advantages have led to a pronounced increasing trend of the number of users of m-banking, it's necessary to point out that the costs per transaction are lower not only for the clients, but also for the bank: KPMG (2015), in its cost analysis, shows transactions cost 43 times more when made in the bank than when made through distribution channels of mobile banking.

Consistent with the very notion that at the core of *FinTech* is the use of technology to provide new and improved financial services, mobile money technology allows banks to offer to their users financial services - such as money transfers, payments, savings, insurance and digital credit - that are cheaper and easier, saving their own coast (Ky et al., 2019).

“Over the last decade, mobile money has been disrupting traditional financial services and transforming the lives of hundreds of millions of people across developing countries. Today, with over \$1.3 billion a day processed by over 866 million registered accounts in 90 countries, mobile money has evolved into a broader payments platform that provides access to life-enhancing services, such as healthcare, education, employment, transportation and social protection. At a macro level, mobile money fuels economic growth by facilitating savings and investments, creates employment, drives business productivity and entrepreneurship, helps formalize the economy and provides stability during economic downturns. Mobile money is a key driver of socio-economic growth and is becoming a gateway to the digital economy. As national economies become increasingly dependent on digital technology, the power of mobile money to harness digital finance for sustainable development is strengthening” (GSMA 2019).

6 SOME FINAL CONSIDERATIONS

Today, mobile money is set to become the backbone of payments in the digital economy, facilitating platform solutions and driving innovation and economic growth (UNCTAD, 2019). Mobile money is positioned to be one of the leading forces of digital finance in order to achieve the Sustainable Development Goals (SDGs) by UN 2030 Agenda, connecting more than five billion individuals around the globe, providing access to essential communications and life-enhancing services and transforming business models across industries and societies. To harness this power, partnerships and cross-sector collaborations with other stakeholders are required (United Nations Secretary-General's Task Force on Digital Financing of the SDGs, 2019). These elements can have positive effects on banks, becoming, in their disruptive force, a great opportunity to seize.

But there also some critical aspects that it is necessary to control and to solve. *“The development of M-banking presents two critical issue from a regulatory point of view: first of all, it is necessary to strengthen safeguards for the protection of users of financial services accessible through online channels (cyber-attacks, misleading news, misleading behavior by producers, etc.). Many mobile phone owners are financially “at-risk”, due to a somewhat limited, if not completely absent, awareness of the operating mechanisms of even the simplest financial services (World Bank, 2017) (...) Secondly, the development and diffusion of FinTechs offering financial services like those offered by banks can generate confusion among users, leading them to equate these services with those traditionally provided by banks. However, it should be borne in mind that while credit institutions are subject to strict regulation and supervision, FinTechs operate in a much ‘softer’ regulatory environment (...).”* (Moro Visconti, Quirici and Borroni, 2020, p. 105).

So, considering the role of mobile payments and M-banking in a financial services network, there are many necessary policy and regulatory implications. If this network have to work successfully, multiple stakeholders with varying interests need to work together (banking institutions, MNOs, payment processors, regulatory agencies, government departments, and so on). So there is the need for a high-level guidance in order to realize a national strategy within which various players may interact. Besides, the numerous different laws and regulations that are related to financial institutions, on one-hand, and MNOs , on the other, had to be analysed and synchronized to enable a successful implementation of mobile banking servives.

Then, besides creating an enabling regulatory environment, there is also the need to experiment different business models to identify the most appropriate one that can accommodate all the multiple players, even competitors from the same sector. And all

this considering that the Covid-19 pandemic surely has deeply reshaped the relationship among all the interacting stakeholders, with long-term effects that will be able to survive the emergency.

Finally, it's possible to share Carbò-Valverde's conclusions on the possible impacts of Digitalization and FinTechs, and of m-banking too, on banking activities:

- i) The digitalization change has been around for decades but today, its impact and the speed of diffusion and change seem unprecedented. In line with other industries, this is transforming the competitive structure of the banking sector, with new entrants from the FinTech industry. It also implies a revolution for bank delivery channels and information processing systems, and change in the jobs and skills that are required in financial services. From an academic perspective, understanding the economics of banking currently requires a shift from the standard buyer-seller model of standard industrial organization to models based on network externalities and multi-sided platforms with several related prices and cross-subsidies;*
- ii) Digitalization and FinTech are also an opportunity to reduce marginal costs and increase productivity in financial services. However, there are also financial stability concerns associated with these processes as they imply a massive accumulation of intangible capital which is not always appropriately valued in capital markets, and they also blur the industry boundaries and create significant privacy, regulatory and law enforcement challenges.*
- iii) Giving its systemic nature, the new activities and players in the financial sector cannot be regulated (or unregulated) the same way that other industries are enforcing regulation (e.g. taxi cab industry, social media etc.). One potential solution would be to regulate each innovation according to its specialization. That is, regulating activities rather than the players.*
- iv) Another important challenge for regulators is to ensure a level playing field between bank and non-bank providers, as well as an adequate level of control and oversight over them. There have been some regulatory initiatives in this direction – particularly in Europe – but they are still far from ensuring that level-playing field” (Carbò-Valverde, 2017).*

It is also possible to specify some topics for further researches: becoming the mobile industry an instrument to achieve the SDGs, the financial inclusion and the reduction of gender gap in developing countries, connected to the development of mobile banking services, may represent an interesting research topic. In a similar way, very

interesting can be considered the cyber-security necessary in mobile payments and also the critical aspects of personal data ownership to understand interoperability both of data and mobile payments.

7 ACKNOWLEDGEMENT

The author wants to thank the anonymous referees of the ESD Conference 2020, held in Aveiro (Portugal) on 02-03 July, 2020, for their useful indications regarding the author's paper, titled "How Mobile Banking in the Digital Era Can Reshape the Banking Landscape: A Literature Review", paper now updated in the present work just to consider the effects of Covid-19 pandemic crises too.

REFERENCES

- Ahamed, M.M., Mallick, S.K. (2019). Is financial inclusion good for bank stability? International evidence. *Journal Economic Behaviour Organization*, 157: 403–427. <https://doi.org/10.1016/j.jebo.2017.07.027>.
- Akturan, U., Tezcan, N. (2012). Mobile banking adoption of the youth market: Perceptions and Intentions. *Marketing Intelligence & Planning*, 30(4): 444–459.
- Alafeef, M., Singh, D., Ahmad, K. (2012). The influence of demographic factors and user interface on mobile banking adoption: A review, *Journal of Applied Sciences*, 12(20): 2082–2090.
- Amin, H., Ramayah, T. (2010). SMS banking: explaining the effects of attitude, social norms and perceived security and privacy. *The Electronic Journal on Information Systems in Developing Countries*, 41(2): 1–15.
- Anagnostopoulos, I. (2018). Fintech and regtech: Impact on regulators and banks. *Journal of Economic Business*, 100: 7-25.
- Ashta A. (2021). The effects of Covid-19 on Financial Inclusion Strategy in Rural France. *Cost Management*, 35 (Sept/October): 36-44.
- Ashta A. - G. Biot-Paquerot (2018), Fintech evolution: Strategic value management issues in a fast changing industry, in *Strategic Change*, 27(4): 301-311.
- Asongu S.A., J. Nwachukwu (2018). Recent Finance advances in information technology for inclusive development: a systematic review. <https://mpr.aub.uni-muenchen.de/91531>.
- Bank of Uganda (2013). *Mobile Money Guidelines 2013*.
- Basel Committee on Banking Supervision (2018). *Sound Practices: Implications of fintech developments for Banks and Bank Supervisors*. Bank International Settlements, Basel.
- Bianchi M., Bouvard M., Gomes R., Rhodes A., Shreeti V. (2022), Mobile Payments and Interoperability: Insights from the Academic Literature. Hal-03629513 (Hal Open Science).
- Carbò-Valverde S. (2017). The Impact on Digitalization on Banking and Financial Stability. *Journal of Financial Management Markets and Institutions*, 5(1): 133-140.

- Cook W., McKay C. (2017). Banking in the M-PESA age: lessons from Kenya, *Working Paper Washington D.C.*, CGAP.
- Crosson K., Frost J., Gambacorta L., Valletti T. (2022). *Platform-based business models and financial inclusion*, Bank for International Settlements (BIS) Working Papers, n. 986, January.
- Cruz, P., Neto, L.B.F., Muñoz-Gallego, P., Laukkanen, T. (2010). Mobile banking rollout in emerging markets: evidence from Brazil, *International Journal of Bank Marketing*, 28(5): 342–371.
- Davidovic S., Nunhuck S., Prady D., Tourpe H. (2020). Beyond the COVID-19 Crisis: a framework for Sustainable Government-to-Person Mobile Money Transfers. *International Monetary Fund (IMF) Working Paper WP/20/198*.
- De Almeida P., Fazendeiro P., Inácio P.R. (2018). Societal risks of the end of physical cash. *Futures*, 104: 47–60.
- DBResearch (2012), *Homo biometricus. Biometric recognition systems and mobile internet services*, Vol. *Current Issues*, Deutsche Bank, Frankfurt am Main.
- Disse, S., Sommer, C. (2020), *Digitalisation and its Impact on SME Finance in Sub-Saharan Africa. Reviewing the Hype and Actual Developments*, Discussion Paper n. 4, Bonn: German Development Institute (D.I.E).
- Dupas, P., Karlan, D., Robinson, J., Ubfal, D. (2018). Banking the Unbanked? Evidence from three countries. *American Economic Journal: Applied Economics*, 10 (2): 257-297.
- Dwivedi Y.K., Rana N.P., Jeyaraj A., Clement M., Williams M.D. (2017). Re-examining the unified theory of acceptance and use of technology (UTAUT):Towards a revised theoretical model. *Information Systems Frontiers*, 21: 719-734.
- European Investment Bank (EIB) (2022). *Digitalisation in Europe 2021-2022. Evidence from the EIB Investment Survey*. EIB Economics Department, in <http://www.eib.org/eibis>.
- Fall F.S, Orozco L., Akim Al-M. (2020). Adoption and use of mobile banking by low-income individuals in Senegal. *Review of Development Economics*, 24(2): 569-588.
- GSMA (2019), *Harnessing the Power of Mobile Money to achieve the Sustainable Development Goals*, GSMA Report, London (UK).
- Han P., Wang Z. (2021). Technology Adoption and Leapfrogging: Racing for Mobile Payments. *Working Paper Series 21-05*, Federal Reserve Bank of Richmond, <http://www.richmondfed.org/publications>.
- Huili, Y., Shanzhi, L., Yinghui, Y. (2013). A study of user adoption factors of mobile banking services based on the trust and distrust perspective. *International Business and Management*, 6(2): 9–14.
- Ivatury, G., Mas, I. (2008). The early experience with branchless banking. *CGAP Focus Note*, n. 46. Available at <http://ssrn.com/abstract=1655257> .
- Jack, W., Suri, T. (2014). Risk Sharing and Transactions costs: Evidence from Kenya's Households Welfare: Panel Evidence from Rural Uganda, *World Development*, 79: 127-137.
- Ky, S., Rugemintwari, C., Sauviat, A. (2019), *Is Fintech good for bank performance? The case of mobile money in the East African Community*, hal-02155077, in <https://hal.archives-ouvertes.fr/hal-02155077>.
- KPMG (2015). *Mobile Banking Report 2015*. <https://www.kpmg.com>

- Lin, H.F. (2011). An empirical investigation of mobile banking adoption: The effect of innovation attributes and knowledge-based trust. *International Journal of Information Management*, 31(3): 252–260.
- Luo, X., Li, H., Zhang, J., Shim, J.P. (2010). Examining multi-dimensional trust and multifaceted risk in initial acceptance of emerging technologies: An empirical study of mobile banking services. *Decision Support Systems*, 49(2): 222–234.
- Mallat N., Rossi M., Tuunainen V.K. (2004). Mobile banking services. *Communications of the ACM*, 47(5): 42-46.
- Masrek, M.N., Omar, N., Uzir, N.A., Khairuddin, I.E. (2012). The impact of technology trust on mobile banking utilization. *Science Series Data Report*, 4(12): 27–36.
- McWaters, J. (2016). The Future of Financial Infrastructure. *World Economic Forum*.
- Moro Visconti R. (2020). Corporate Governance, digital platforms and network theory: Information and risk-return sharing of connected stakeholders. *Management Control*, 2: 179-204.
- Moro Visconti R., Quirici M.C. (2014). The impact of innovation and technology on microfinance sustainable governance. *Corporate Ownership & Control*, 11 (3-2): 420-428.
- Moro Visconti R., Quirici M.C. and Borroni M. (2020). Matching Financial Closeness with Social Distancing: Networking Digital Platforms within a Corporate Governance Ecosystem. *Corporate Ownership & Control*, 18 (1): 96-109.
- Ndiwalana A., Popov O. (2016), *Mobile Payments: a comparison between Philippine and Ugandan context*, in <https://www.researchgate.net/publication/228846415>.
- Ojong N., Asongu S.A. (2021). COVID-19 Global Pandemic, Financial Development and Financial Inclusion. *African Governance and Development Institute (AGDI) Working Paper WP/21/078*.
- Scott, S.V., Reenen, J. Van, Zachariadis, M. (2017). The long-term effect of digital innovation on bank performance: An empirical study of SWIFT adoption in financial services. *Res. Policy*, 46: 984–1004. <https://doi.org/10.1016/j.respol.2017.03.010>.
- Shaikh, A., Karjaluoto, H. (2015). Mobile banking adoption: a literature review. *Telematics and Informatics*, 32 (1).
- Sharma S.K., Al-Muharrami S. (2018). Mobile banking adoption: Key challenges and opportunities and implications for a developing country, in Y. Dwivedi et al. (Eds), *Emerging markets from a multidisciplinary perspective. Advances in theory and practice of emerging markets*, <https://doi.org/10.1007/978-3-319-75013-2-7>.
- Shih K.H., Hung H.F., Lin B. (2010). Assessing user experiences and usage intentions of m-banking service. *International Journal of Mobile Communications*, 8(3): 257-277.
- Sironi P. (2016), *FinTech Innovation. From Robo-Advisors to Goal Based Investing and Gamification*, The Wiley Finance Series, West Sussex, UK, Wiley.
- Sy, A.N.R., Maino, R., Massara, A., Perez-Saiz, H., Sharma, P. (2019). FinTech in Sub-Saharan African Countries: a Game Changer?, *IMF, Department Paper*, 19/04.
- Suri, T., Jack, W. (2016). The Long-Run Poverty and Gender Impacts of Mobile Money. *Science*, 354 (6317): 1288-1292.

The Financial Stability Board (FSB) (2017), *Financial Stability Implications from Fintech: Supervisory and Regulatory Issues that merit Authorities' Attention*.

Tomic, V., Stojanovic, D. (2018), *Trends and innovations in mobile banking*, (Chapter book) In book: *Digital transformation: new challenges and business opportunities*, Publisher: London: Silver and Smith Publishers (290-310).

TWI2050 - The World in 2050 (2019). *The Digital Revolution and Sustainable Development: Opportunities and Challenges*. Report prepared by The World in 2050 Initiative. International Institute for Applied Systems Analysis (IIASA), Luxenburg, Austria, <https://www.twi2050.org>.

UNCTAD. (2019). *Digital Economy Report 2019 - Value Creation and Capture: Implications for Developing Countries*.

United Nations Secretary-General's Task Force on Digital Financing of the Sustainable Development Goals. (2019). *Executive Summary: Harnessing Digitalization in Financing of the Sustainable Development Goals*.

Wieser C., Bruhn M., Kinzinger J., Ruckteschler C., Heitmann S. (2019), The Impact of Mobile Money on Poor Rural Households. Experimental Evidence from Uganda, *Policy Research Working Paper 8913*, World Bank Group and IFC-Mastercard Foundation Partnership for Financial Inclusion, June.

Wu J.H., Wang S.C. (2005). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. *Information & Management*, 42(5): 719-729.

SOBRE OS ORGANIZADORES

Jorge Rodrigues é economista. Licenciado, mestre e doutor em Gestão (ISCTE-IUL), com Agregação (UEuropeia). Mestre e pós-doutorado em Sociologia – ramo sociologia económica das organizações (FCSH NOVA). Professor coordenador com agregação no ISCAL – *Lisbon Accounting and Business School* / Instituto Politécnico de Lisboa, Portugal. Exerceu funções de direção em gestão (planeamento, marketing, comercial, finanças) no setor privado, público e cooperativo. É investigador integrado no Instituto Jurídico Portucalense. Ensina e publica nas áreas de empresa familiar e família empresária, estratégia e finanças empresariais, gestão global, governabilidade organizacional, marketing, planeamento e controlo de gestão, responsabilidade social e ética das organizações.

Maria Amélia Marques, Doutora em Sociologia Económica das Organizações (ISEG/ULisboa), Mestre em Sistemas sócio-organizacionais da atividade económica - Sociologia da Empresa (ISEG/ULisboa), Licenciada (FPCE/UCoimbra), Professora Coordenadora no Departamento de Comportamento Organizacional e Gestão de Recursos Humanos (DCOGRH) da Escola Superior de Ciências Empresariais, do Instituto Politécnico de Setúbal (ESCE/IPS), Portugal. Membro efetivo do CICE/IPS – Centro Interdisciplinar em Ciências Empresariais da ESCE/IPS. Membro e Chairman (desde 2019 da ISO-TC260 HRM Portugal. Tem várias publicações sobre a problemática da gestão de recursos humanos, a conciliação da vida pessoal, familiar e profissional, os novos modelos de organização do trabalho, as motivações e expectativas dos estudantes Erasmus e a configuração e dinâmica das empresas familiares. Pertence a vários grupos de trabalho nas suas áreas de interesses.

ÍNDICE REMISSIVO

A

Análise Discriminante 229, 230, 231, 234, 235, 236, 241, 243

Arte 86, 100, 101, 147

Asia Central 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119

B

Brecha de género 166, 173

C

Caída del Nivel de Mortalidad 35

Case studies 69, 120, 277, 280, 284, 285

China 9, 10, 39, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 151, 165, 246, 264, 280, 281, 283, 287

Clave 1, 25, 26, 35, 52, 87, 107, 111, 147, 166, 189, 190, 198, 199, 217, 289

Comunicação 73, 77, 79, 80, 81, 212, 247, 248, 256, 257

Confinamiento 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 19, 21, 23, 26, 28

Consumo 23, 101, 114, 116, 170, 171, 247, 248, 249, 250, 251, 252, 256, 257

Continuidade 230, 239, 241, 244, 246, 253

COVID-19 1, 3, 4, 5, 6, 8, 9, 10, 11, 18, 20, 21, 22, 23, 27, 35, 36, 37, 38, 39, 41, 42, 43, 44, 45, 46, 48, 49, 67, 127, 137, 258, 263, 264, 265, 271, 272, 273, 274, 277, 289, 293, 294, 298, 299, 300

Covid-19 crisis 258, 264, 273

Criação 100, 101, 102, 103, 104, 231, 237

D

Decisiones de inversión 176

Democracia 83, 85, 87, 88, 91, 92, 98

Desarrollo 8, 36, 44, 53, 57, 63, 67, 85, 90, 93, 111, 112, 114, 117, 118, 139, 140, 141, 142, 148, 150, 151, 152, 154, 164, 166, 167, 169, 171, 172, 173, 177, 180, 183, 202

Design 120, 121, 122, 123, 124, 128, 129, 130, 133, 134, 135, 136, 137, 138, 204, 205, 206, 207, 208, 209, 210, 213, 215, 216, 276, 279, 280, 284

Design de país 204, 205

Digitalization 258, 259, 263, 264, 265, 266, 271, 272, 275, 283, 285

Discursos 83, 84, 86, 87, 88, 89, 91, 92, 96, 97, 116

E

Economía 5, 6, 36, 49, 50, 90, 96, 107, 109, 112, 114, 116, 117, 142, 148, 166, 168, 171, 172, 173, 174, 188, 229, 258

Economic policy 288, 289, 290, 291, 292, 293, 298, 299, 300, 301, 302

Energia eólica 204, 205, 210, 214, 215

Enfermagem 69, 70, 71, 80, 81, 82

Enfermagem Familiar 69

Espacio público 10, 139, 140

Esperanza de Vida al Nacer 35, 41, 44, 47, 48

Estudo de caso 69, 71

Etnografía 4, 5, 27, 28, 147, 150, 155, 164

European Cultures 120

Excitação psicótica 29

Experiential Retail 276

F

Falência 229, 230, 231, 232, 233, 234, 236, 241, 243, 244, 245, 246

Feminismo 68, 166, 167

FinTech 258, 259, 263, 264, 265, 266, 269, 271, 272, 273, 274

Flujos de caja 175, 176, 177, 179, 180, 181, 182, 183, 187

G

Geopolítica 107, 110, 113, 114, 118, 119

Global change 120, 124

Gota 29, 30, 31

H

Horizonte de evaluación 176, 178, 179, 186

Humano 100, 101, 102, 105, 106, 116, 247, 248, 250, 256

I

Imagen urbana 139, 140

Inmigrante 139, 140, 142, 146

Interaction design 276, 279, 280

Inveja 247, 248, 249, 250, 251, 252, 254, 256, 257

J

Juventudes 1, 3, 7, 9, 18, 26, 28

L

Lítio 29, 30, 31, 32, 33, 34

M

Mania 29, 30, 31, 32, 33

Microturbinas 204, 205, 206, 207, 208, 210, 211, 212, 213, 214

Mobile Banking 258, 259, 260, 261, 262, 263, 265, 266, 269, 270, 271, 272, 273, 274, 275

Mobile Payments 258, 263, 265, 266, 268, 270, 272, 273, 274

Modelos de assistência à saúde 69

Mujeres 2, 35, 39, 42, 43, 44, 45, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 64, 65, 66, 67, 68, 166, 167, 168, 169, 170, 171, 172, 173, 174

N

Natureza 100, 101, 235, 238, 248

Nivel de mortalidad 35

NLFSR 189, 190, 191, 192, 193, 194, 195, 196, 198, 202

O

Omnichannel 276, 278, 286

P

Pandemia 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 18, 20, 21, 24, 26, 27, 28, 35, 36, 38, 39, 40, 41, 44, 45, 46, 47, 48, 67, 74, 81

Parâmetros de projeto 204, 208

Patrimonio 52, 139, 140, 146, 184

Paz 56, 83, 84, 85, 86, 87, 89, 91, 92, 93, 94, 95, 96, 97, 99, 109, 251, 253

Pensamento 100, 101, 102, 103, 104, 105, 106, 249

Período 2, 3, 4, 8, 11, 12, 21, 25, 26, 33, 36, 37, 45, 84, 88, 115, 141, 144, 145, 167, 172, 177, 178, 179, 180, 183, 189, 190, 193, 202, 239

Poder 10, 13, 17, 18, 19, 20, 23, 24, 26, 48, 51, 52, 53, 54, 55, 74, 78, 83, 87, 88, 90, 91, 92, 93, 96, 98, 107, 118, 147, 150, 151, 154, 159, 161, 162, 163, 164, 166, 168, 170, 233, 238, 248

Polinomio homogéneo 217

Polinomio primitivo 189, 190

Política 9, 27, 40, 83, 85, 87, 88, 90, 96, 97, 98, 99, 101, 107, 108, 109, 113, 116, 117, 118, 148, 160, 168, 178, 288, 289
Precarização 166
Previsão 230, 231, 233, 234, 235, 236, 238, 241, 242, 244, 245, 246
Proyectos de inversión 175, 176, 187
Pruebas de aleatoriedad 189, 190, 202
Publicidade 247, 248, 252, 256

R

Retail Design 276, 279
Retórica 147, 150, 160, 161, 162

S

Scoring 229, 230, 241, 242, 243, 245, 246
Sección normal 217
Secuencia binaria 189
Shopping experience 276, 278, 279, 280, 283, 284, 285
SINADEF 35, 36, 38, 40, 41
Sistema carcelario 147, 148, 151
Sistema jurídico 147, 148, 154, 161

T

Tortura 147, 149, 153, 154, 157, 159, 162
Trabajo doméstico 166, 168, 169, 170, 171, 172, 173, 174
Transitions design 120

U

Uncertainty 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302
Unemployment 288, 289, 290, 291, 292, 295, 296, 297, 298, 300, 302
United States 107, 108, 165, 288, 289, 290, 292, 293, 294, 298, 300

V

Valores críticos 217, 218, 219, 220, 222, 225, 228
Vector autoregressive model 288
Victimas 50, 51, 53, 54, 55, 56, 57, 58, 64, 65, 66, 67, 68, 83, 90, 92, 95, 96, 149, 150, 155, 162
Violencia intrafamiliar 50, 51, 53, 54, 55, 56, 61, 65, 66