Editorial: Competitiveness in the digital economy: some lessons to learn

Introduction

Companies and governments struggle to create economic recovery and growth after the global shock and disruption caused by the COVID-19 pandemic. The pandemic is deeply transforming economies and societies around the world. Policymakers are working on how to organize the global economic recovery and some key issues are priority in their agendas. This transformation not only brings important challenges but also opportunities for companies, societies and nations.

As the "digital economy and society index 2021" report highlights, it is key to implement "reforms to facilitate the digital transition in areas such e-government, digital economy, digital infrastructure (broadband), e-health and digital skills" (European Commission, 2021, p. 9).

The acceleration of changes derived from the pandemic requires companies and nations offer training to their employees and citizens so that they acquire new skills, especially digital skills. It is important to invest in reskilling and upskilling human capital to build a sustained competitive advantage and advance towards the recovery of the economy, boost productivity, generate new jobs and prosperity (European Commission, 2016, 2020, 2021; OECD, 2019; Ordóñez de Pablos, 2004a, 2004b; Lytras and Ordóñez de Pablos, 2008; Zhao *et al.*, 2014). This ongoing training will allow people to access new career opportunities. The development of strategic human capital can impact the creation and deployment of other knowledge-based resources, like relational capital and structural capital. The creation of relations with employees, customers, suppliers and other relevant stakeholders, that is, relational capital, is critical for companies and organizations (Aaltonen and Turkulainen, 2018; Thi Mai Anh *et al.*, 2019). Furthermore, it is important to create and invest in strategic structural capital, that is, knowledge-based resources embedded in organizational culture, routines and norms that contribute to a sustained competitive position in market (Lin and Edvinsson, 2021; Matos *et al.*, 2017).

Transformational information technologies play a key role during the pandemic and in post-pandemic scenarios too. Health-care services and industry have benefited from transformation digital technologies to find innovative solutions to emerging problems (Ienca and Vayena, 2020; Lytras *et al.*, 2009; Ordóñez de Pablos *et al.*, 2022; Pretorius and Coyle, 2021; Wang *et al.*, 2020; Zhang *et al.*, 2015).

Contents of the issue

The last issue of 2022 presents a collection of ten papers that address key issues for companies and society, like entrepreneurship and biopharmaceutical companies, telemedicine, internal technology development and green information technology, among others, and covers countries like Ethiopia, India, Indonesia, Iran, Spain, UAE and Vietnam.

The first paper of issue 4 titled "Effect of private and public investment in R&D on innovation in Mexico's biotechnology firms" (Rubén Oliver-Espinoza and Federico Stezano) states that "in light of the controversy between the theoretical importance of financing biotechnology firms' research and development (R&D) and the firms' contradictory and

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ambivalent empirical results, this paper aims to contribute to the debate by providing empirical evidence from Mexico's case. Although a large proportion of the firms innovate and dedicate resources to R&D activities, neither private financing (different from the R&D portion of sales) nor public financing has an impact on innovation activity. The research results support the perspective that the theoretical relationship between the financing and achievements of innovation is not conclusive and point to relevant considerations for the public policy agenda of the case study".

The paper titled "State, institutional entrepreneurship, and the creation of the biopharmaceutical industry in a developing country" (Ali Babaee, Ali N. Mashayekhi and Rouholah Hamidi Motlagh) studies "the emergence and development of new industries, especially in the context of developing countries, by considering industry emergence and development as a large-scale institutional change or transition. The authors conducted an inductive case study research on the emergence of the biopharmaceutical industry in a developing country. The data on the emergence and development of Iran's biopharmaceutical industry during 1990 and 2018 were collected through semi-structured interviews, participation in meetings, visits to companies and analysis of archival texts. The data analysis was an inductive and iterative process. In the emergence and development of the biopharmaceutical industry, there have been a few key agents, institutional entrepreneurs (IEs), in both the state and private sectors, who played main roles. Moreover, the most important type of knowledge which has been crucial for the decision-making of IEs has been informal, tacit and institutional knowledge. Furthermore, the authors identified a mechanism, inter-institutional circulation, as being most effective in the transfer of institutional knowledge among IEs".

The paper titled "Study of awareness, adoption, and experience of telemedicine technology services; Perspectives during corona virus (COVID-19) pandemic crisis and associated economic lockdown in India" (Som Sekhar Bhattacharyya and Prasad Vidyasagar Mandke) analyses: "the phenomenon of abrupt shift by both doctors and patients to telemedicine during the coronavirus (COVID-19) pandemic and associated economic lockdown in India. The study explored various drivers of telemedicine technology awareness, adoption and usage. These drives were studied from both the doctors and the patients' perspectives using the push–pull–mooring (PPM) theoretical model. An exploratory qualitative research was carried out with 24 doctors and 32 patients. This research was conducted in major urban cities of India. It was carried out during the economic lockdown due to the COVID-19 pandemic. The data was collected based upon a semi-structured open-ended questionnaire using telephonic interviews. Once thematic saturation was achieved, thematic content analysis was conducted. Finally, the themes were classified and analysed using the PPM theoretical model. The data analysis indicated that there was the presence of all three factors, namely, push, pull and mooring. For the doctors, pull and push factors were more substantive than mooring factors. Although for the patients push and mooring factors were more important and pressing than pull factors".

The paper titled "Innovating with government digital platforms in low-income countries: the dynamic capabilities of Woredas in Ethiopia" (Debas Senshaw and Hossana Twinomurinz) explores "the dynamic capabilities of government organisations in Woredas of Ethiopia that digitally innovate on the existing government digital platform, the WoredaNet. The study adopted a qualitative interpretive case study strategy using three government administrative regions in Ethiopia (called Woredas), which digitally innovate using the government digital platform, the WoredaNet. A structured interview protocol was implemented for data collection. In total, five respondents representing users, information and communication technology (ICT) staff and management were selected from each of the Woredas (districts), yielding a total of 15 respondents. Drawing from the dynamic capabilities literature, the findings reveal that the digital platform governance model plays the strongest role in digital government innovation.

Specifically, the Woredas exhibit highly developed adaptive capabilities through learning from the affordances offered by the digital platform. Also, in spite of the collaborative nature of their absorptive capabilities, there are no clear organisational structures to manifest these capabilities (integrating new learnings). The innovative capabilities (creating digital government products or service innovations) are constrained by the governance model, which is centralised in one ICT unit".

The paper titled "Intellectual property rights policies of higher education Institutions (HEIs) in India: a cross-sectional study" (Vijay Kumar Sattiraju, Ravi Pandey, Ramjee Pallela, Anindya Sircar, Virendra S. Ligade, Pradeep M. Muragundi and Manthan D. Janodia) studies: "the intellectual property (IP) policy and innovation practices of higher education institutions (HEIs) and to understand the impact of national IP rights (IPR) policy at the ground level. It identifies the barriers of HEIs in the generation of IP, its commercialization and technology transfer. This cross-sectional study aims to understand the innovation practices and IP policy framework of HEIs in India. It was studied in a qualitative approach with a structured questionnaire tool deployed to the top management of HEIs (targeted respondents), using convenience sampling methods. The results imply that IP policies and innovation practices of HEIs in India are evolving and need to align with the global standard as envisaged in the national IPR policy. Lack of commensurate incentives to the inventors, linkages with industries and facilities were found to be major barriers among HEIs and research institutions. Institutional IP policy shall be framed to promote industry linkages with universities resulting in successful IP generation and technology transfer".

The paper titled "Is foreign technology acquisition to complement or substitute for internal technology development? A case of manufacturing enterprises in Vietnam" (Ngoc Minh Nguyen, Huong Thu Dang, Minh Khac Nguyen and Mai Lan Mai PHung) analyses "whether foreign technology acquisition is complementary to internal technology development in the context of a developing country. The selection model developed by Heckman (1979) was applied with the balanced panel data of manufacturing enterprises from the Annual Enterprise and Technology Surveys from 2012 to 2016 conducted by the Vietnamese General Statistics Organization. The results indicate that foreign technology acquisition and internal technology development are complementary innovation options. Particularly, the number of patents granted for manufacturing enterprises positively affects the probability that enterprises acquire foreign technologies. This effect is stronger in cases of high-tech industries than in cases of low-tech industries".

The paper titled "Why firms stop introducing innovations in the great recession: Aggregate demand, financial constraints and risk" (Javier Ortiz and Vicente Salas-Fumás) uses the Spanish Community Innovation Survey data and "tests two main hypotheses as explanation of the fall in business innovation output in the Great Recession: the aggregate demand effect (firms have lower propensity to initiate innovation projects in recession than in contraction from demand-pull and profit expectations effects) and the risk effect (a greater proportion of the initiated projects fail in recessions than in expansions). The empirical results support the two hypotheses. They also indicate that the sensitivity of the decision to initiate innovation projects to the aggregate demand is more pronounced among financially constrained firms than among unconstrained ones, whereas the risk effect appears to be independent of the financial situation of firms".

The paper titled "Drivers and outcomes of green information technology adoption in service organizations: an evidence from emerging economy context" (Samar Mouakket and Mohamed Aboelmaged) explores "the technology–organization–environment predictors of green information technology adoption in an emerging economy, namely, the United Arab Emirates

(UAE), and their impact on work performance among UAE organizations. A paper-based survey was carried out by engaging employees in different organizations in the UAE. The "partial least squares" method was used to test and analyse the measurement and the structural research models. The analysis shows support to all the hypotheses, with the exception of the influence of competitive force. The results can be valuable for practitioners and decision makers in the emerging economy context as the results will help them validate their adoption decisions and effectively contribute to sustainability strategies".

The paper titled "Cloud doctrine: impact on cloud adoption in the government organizations of India" (by Kshitij Kushagra and Sanjay Dhingra) states that the "government is the biggest spender on cloud computing technology, but a very limited study and data sets are available to assess the cloud adoption trends in government organizations in India. As India is ushering towards "Digital India", it becomes essential for the government to embrace the cloud to enhance governance and meet the citizen expectations. This paper aims to discuss the evolution of cloud computing (Meghraj) in government organizations by examining the various information technology and cloud policies, thereby focusing on the policy gaps. The second part of this study assesses the cloud adoption trend by analysing adopted cloud services, deployments models, leading sectors in cloud adoption and cloud approach. Eventually, in consultation with experts, a conceptual framework for cloud adoption in the government organizations of India is developed for wider cloud adoption".

Finally, the last paper of the issue is titled "Safety first: extending UTAUT to better predict mobile payment adoption by incorporating perceived security, perceived risk, and trust" (by Hanif Adinugroho Widyanto, Kunthi Afrilinda Kusumawardani and Helmy Yohanes. It presents a study to analyse "the antecedents of behavioural intention to use (BIU) mobile payment in Indonesia by extending unified theory of acceptance and use of technology with user privacy constructs, namely, perceived security (PS), perceived risk (PR) and trust (Tr). This is a quantitative research using the covariance-based structural equation modelling method, whereby the researchers conducted an online survey and distributed online questionnaires to users of mobile payment from all over Indonesia to obtain the data. The sample in this study consisted of 358 respondents. This study found that social influence, facilitating conditions, PS, performance expectancy and Tr have a significant and direct influence on BIU mobile payment. PR was not found to have a significant and direct relationship with BIU, but it was indirectly affecting the latter through Tr as the mediating variable".

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Further reading

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