

# Rethinking the Digital Transition from an Accessibility to a Capability Approach

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How could inclusive digital transitions be fostered in Southern Mediterranean countries (SMCs)? So far, the dominant approach for understanding the impediments to the emergence of thriving and inclusive digital economies in developing countries has been that of the digital divide, the unequal access to digital technologies, including the Internet, computers and smartphones, between nations, regions, groups, individuals, etc., excluded from the benefits of digital technology in either absolute or relative terms (Van Dijk, 2020; Heeks, 2022).

However, this vision, which still permeates policy thinking about the digital transition, is challenged by rapid digitalisation in developing countries, including those in the southern Mediterranean, a process that has further accelerated since the Covid-19 pandemic (El-Kadi, 2020; Tidjani, 2021). The overwhelming majority of the population in SMCs is now included in digital systems of some sort. While this digital inclusion has come with some economic gains, it has so far failed to boost processes of structural transformation, and it has, in some instances, been associated with increased inequalities (Gurumurthy et al., 2019). In fact, 60% of the EuroMesco survey respondents thought that the disruptive effect of the digital transformation bears a high or very high impact on continuous socio-economic disparities in SMCs.

This short paper puts forward the idea that, while the digital divide paradigm is still useful, a new approach is needed to understand and tackle stalled digital transitions in SMCs, one that conceptualises the digital transition in more structural terms. The paper starts by examining key inequalities that account for the long-lasting digital divide in SMCs, providing policy paths to bridging these gaps. It then suggests moving beyond the digital divide paradigm to think of inclusive digital transitions within a technological capability approach, highlighting a path for a transformative and inclusive digital agenda in the Euro-Mediterranean region.

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## The Digital Divide in the Southern Mediterranean

Building digital economies has become a high priority for Southern Mediterranean countries. In a context of chronic high youth unemployment and sluggish growth, governments in the region perceive the digital transition as an opportunity to escape the middle-income trap while creating jobs for millions of unemployed people in the region.

Significant progress can be noted in some aspects of the digital transition. For instance, internet connectivity, a crucial prerequisite for digital services in e-commerce, e-education, health care, and finance, has increased rapidly in recent years. As of 2023, Morocco's Internet penetration rate stood at 88% of the population, while Tunisia and Algeria reached 79% and 71% ratios, respectively (Datareportal, 2023). This growth in mobile broadband access is somewhat correlated with a surge in mobile phone subscriptions and an expansion in 3G and 4G network coverage in SMCs. At the same time, some SMCs witnessed the emergence of booming start-up scenes, with Egyptian start-ups attracting over \$517m in funds in 2022 (Daily News Egypt, 2023).

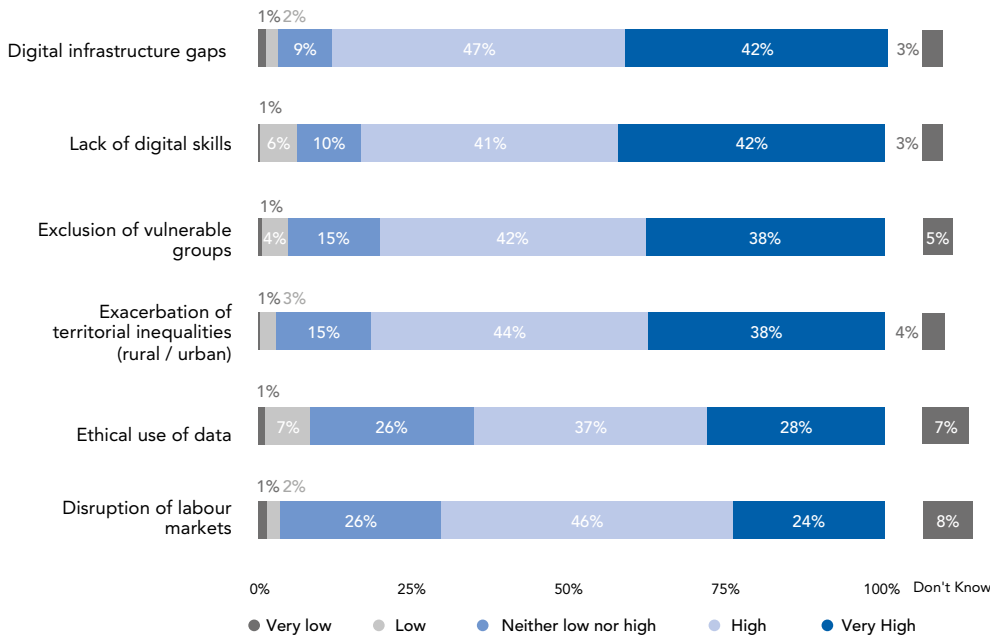
But despite progress, major barriers still hinder SMCs from leveraging the full potential of the digital economy. Some analysts perceived digital technologies, particularly the Internet, as radical tools that could produce inclusive growth and bridge inequalities within and across countries (Katz & Koutroumpis, 2012; Baldwin, 2017). However, it is now well-recognised that digital technologies are not magical tools that could erase entrenched disparities; but that these technologies are embedded in social, political, institutional, and cultural contexts that shape their developmental role. These problems are particularly acute in developing countries, like SMCs, where large segments of people still lack access to digital technologies.

## The Digital Infrastructure Gap

Digital technologies, particularly the Internet, as radical tools that could produce inclusive growth and bridge inequalities within and across countries.

SMCs still lag other emerging regions in terms of digital infrastructure. Expanding connectivity is a prerequisite for new digital services in e-commerce, e-education, health care, and finance. SMCs countries in the region must focus on expanding broadband internet access to the millions of citizens that are still unconnected. While access to the Internet has improved in recent years, internet speed in SMCs remains poor, largely due to a lack of digital infrastructure (El-Hamidi, 2020). Too few people across the region have access to fast, affordable internet (World Bank, 2019). Accordingly, about 88% of respondents in the EuroMeSCo survey assessed the infrastructural gap to be a major factor slowing inclusive digital transitions across the region, with respondents from SMCs giving slightly more weight to the infrastructural gap than respondents from the EU.

**Graph 1: Q.17 To what extent are the following elements a challenge for an inclusive digital transition?**



The lack of internet access or slow internet speed discourages local content hosting and the deployment of higher-value-added digital services.

Source: Compiled by the IEMed based on the results of the 13<sup>th</sup> Euromed Survey

Creating jobs in cities set to become service-oriented hubs depends closely on developing a cloud-based, high-speed digital infrastructure. Furthermore, cutting-edge digital infrastructure will be vital for rolling out 5G networks and using emerging technologies, such as the Internet of Things (IoT), artificial intelligence (AI), blockchain and robotics. As it stands, the lack of internet access or slow internet speed discourages local content hosting and the deployment of higher-value-added digital services.

Investments in ICT equipment could help reduce the latency and reduce costs. For instance, Internet exchange points (IXPs) are a critical type of infrastructure with the potential to improve the quality and affordability of the Internet in SMCs. Currently, Algeria, Tunisia and Libya do not count IXPs, which means that their domestic internet traffic is exchanged through points outside their national borders, passing through several international hubs to reach their destination.<sup>1</sup> This results in reduced internet speed and discourages hosting data content locally. Similarly, SMCs suffer from low capacity to localise data. More data centres can reduce SMCs' consumption of international bandwidth, speed up the Internet and boost the resilience of their national networks.

EU-Med cooperation should support infrastructural catch-up to enable developing Mediterranean countries to expand and upgrade existing infrastructure, ensuring interoperability across both sides of the Mediterranean.

1. See the global IXP map: <https://www.internetexchangemap.com/>

Closing the infrastructural gap in SMCs would require large investments. While private sector-led investments are needed, SMCs in the region should avoid overreliance on this model for its inherent shortcomings, dismissing 'last-mile' telecommunications connections in remote areas, as these are not profitable. EU-Med cooperation should support infrastructural catch-up to enable developing Mediterranean countries to expand and upgrade existing infrastructure, ensuring interoperability across both sides of the Mediterranean.

## Exclusion of Marginalised Groups

Women are particularly exposed to digital exclusion. Without equal Internet access, women cannot participate equally in the digital economy and take advantage of its opportunities.

Digital inequalities also intersect with other types of inequalities, such as those related to gender, geography, income, and levels of education. Major gaps exist between those who can and those who cannot access cyberspace. According to the EuroMeSCo survey, 80% of respondents thought that the exclusion of vulnerable groups was a key cause behind the digital divide (see graph 1).

Women are particularly exposed to digital exclusion. Gender-disaggregated data from Arab countries reveals a notable difference in internet usage between males and females, ranking the region second, after sub-Saharan Africa in terms of gender-based disparity in internet access (ITU, 2023). For instance, as of 2019, 73% of Tunisian men used the Internet compared to only 61% of women. There are several causes behind the digital gender divide, including hurdles to access, affordability, lack of skills, and discriminatory socio-cultural norms (Hilbert, 2011; OECD, 2018). Without equal Internet access, women cannot participate equally in the digital economy and take advantage of its opportunities.

The disparity in Internet access between urban and rural areas is also noteworthy. The survey indicates that 82% of the respondents thought that urban-rural inequalities represented a serious challenge towards an inclusive digital transition (see graph 1). While there are fewer internet users globally in rural areas than in metropolitan agglomerations, the gap is more acute in poorer countries. According to 2020 International Telecommunication Union (ITU) data, over 80% of Egypt's urban citizens were regular users of the Internet, against only 60% of rural Egyptians. In Spain, the difference between the ratios of internet access in urban and rural areas is less than 3%, while in France, the gap is around 2% (ITU, 2023). Rural citizens' lack of access to the Internet in SMCs further exacerbates existing inequalities as it excludes them from the potential economic and social gains associated with internet usage (Gerli & Whalley, 2022).

Furthermore, many still suffer from poor digital skills even with the right digital infrastructure. Large chunks of the population are excluded from using the Internet due to a lack of basic digital skills such as searching online, online communication, as well as the capacity to use work-related online platforms. Substantial skills gaps have deepened existing inequalities between households, firms, and countries, especially during the Covid-19 pandemic when most economic and social activities were brought online.

Overall, expanding digital access will require targeted efforts focusing on women, rural citizens, and other marginalised groups. Developing more training content in Arabic for the millions of people across the region who are not proficient in other languages is a necessary step towards closing the existing skill gap. Regulatory changes, mainly those that foster competition in the telecom sector, can drive down internet prices, increasing affordability and promoting greater access.

This being said, while expanding access is central to just digital transitions, empirical evidence indicates that, despite a significant narrowing of the digital divide in terms of internet access within SMCs and across the two shores of the Mediterranean, the expected economic growth from the so-called “digital revolution” has not yet materialised. This assessment calls for new conceptualisations of the region’s barriers to building inclusive digital economies.

## Adverse Digital Inclusion and the Need to Strengthen Technological Capabilities

Understanding the digital divide in terms of inclusion and exclusion from digital systems in developing Mediterranean countries was particularly useful in the first decade of the 21<sup>st</sup> century, when the bulk of the population could not access or use computers, mobile phones, and the Internet. As highlighted above, millions across SMCs were connected to the digital space over the past decade, significantly reducing disparities in digital access.

But in most cases, digitisation experiences in SMCs led to limited efficiency and productivity gains but without producing transformative economic outcomes. For instance, rural women in SMCs are already taking advantage of the Internet’s opportunities. In Morocco, home-based female weavers now sell rugs online, and in Egypt, a young women’s start-up is marketing healthy homemade meals (World Bank, 2019). Although, in both cases, women managed to cut intermediaries by selling products directly online, enabling them to keep a larger share of the profits, the women running these businesses have not fundamentally altered their socio-economic status.

A similar story appears at the macro level. Small and Medium Enterprises (SMEs) in different sectors, including agriculture, manufacturing, and finance, have digitalised segments of their activities, with clear benefits. Results from a firm-level dataset of 466 Tunisian SMEs indicate that digitalisation positively correlates with the firms’ performance, allowing them to develop their activities, boost their sales, and have a greater presence within foreign markets (Mouelhi & Bellakhal, 2019). While increased digitalisation has allowed smaller firms and entrepreneurs to become more networked and efficient, it has often enabled only limited technological upgrading, leaving Tunisian firms, like other firms in the southern Mediterranean, at the lower end of global value chains (also Murphy & Carmody, 2015; Foster et al., 2019 for a broader discussion).

Sustained and inclusive economic development requires more than just producing the same goods and services more efficiently, but engaging in producing more

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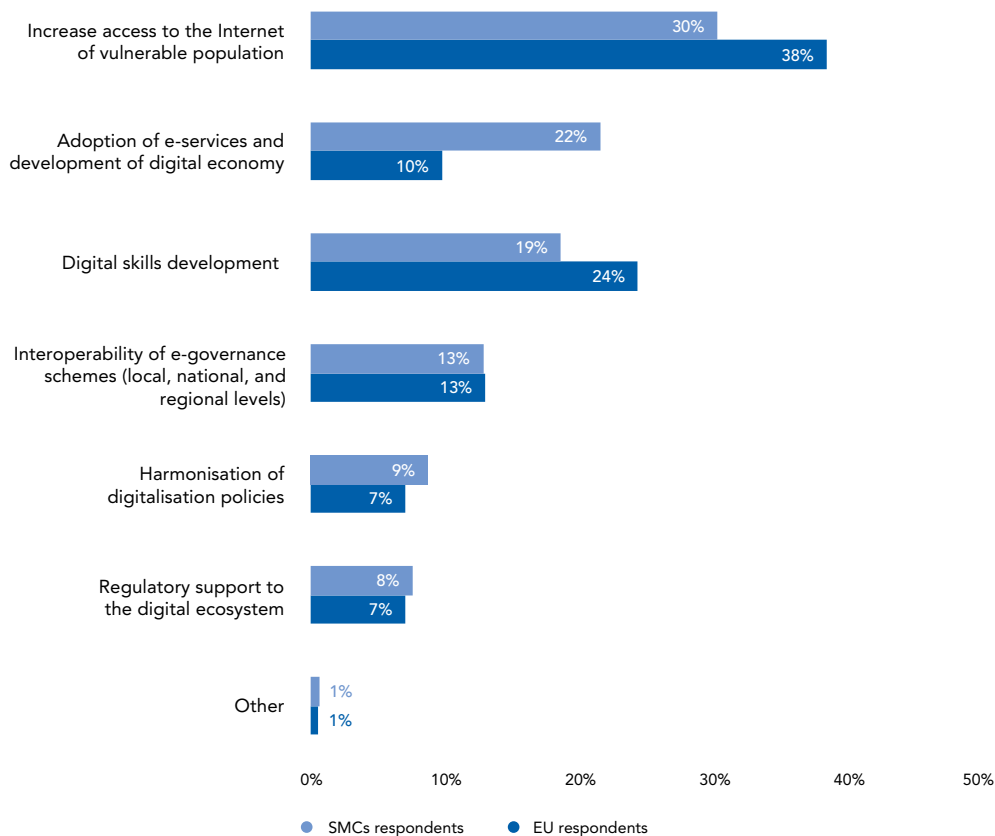
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technologically-intensive products and services. For the digital transition to drive inclusive development in SMCs, it will need to be embedded within broader efforts for structural transformation and the move from low-tech, low returns activities to activities with higher-technology intensity and greater returns (Kaplinsky, 2005; Rodrik, 2013). Such structural transformation is crucial for long-term, inclusive growth because, over time, specialisation in low-value-added products suffers from price volatility and declining terms of trade (Mann & Iazzolino, 2019).

When it comes to digital transitions in SMCs, the most important question is no longer whether or not countries, firms and individuals are incorporated into digital systems but rather *how* they are incorporated. Arguably, SMCs, like other developing regions, don't suffer from digital exclusion as much as they suffer from adverse digital incorporation. In this context, **the key to success is in strengthening domestic technological capabilities** to allow people, firms, and countries in the Southern Mediterranean to best leverage digital technologies for inclusive development. Below are a few measures that could help support the digital transformation.

**Graph 2: Q.18** What should be the main EU-SMCs cooperation priority for an inclusive digital transition?



Source: Compiled by the IEMed based on the results of the 13<sup>th</sup> Euromed Survey

First, SMCs governments need to consolidate national strategies focused on upgrading digital skills. Investing in people and building human capital is essential to respond to rapid technological change and protect citizens in the southern Mediterranean from digital disruptions. This would require moving beyond training in basic digital skills to emphasising more advanced skills such as data analytics, software development and original content creation, as global markets are increasingly demanding workers with higher levels of skills, including better cognitive and socio-behavioural skills. University programmes in SMCs, often outdated and underfunded, need to be reconfigured to train graduates in cutting-edge technologies and match market needs. The EU can support SMCs governments in promoting national digital training programmes, boosting inter-university partnerships and joint research and development (R&D) initiatives.

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Second, at the firm level, policies ought to support firms in upgrading their digital capabilities. Similarly to the East Asian experience, SMCs can evolve as “learners” by borrowing and improving digital technologies that had already been commercialised by experienced firms in the EU. This can be achieved by designing fresh EU-Med partnerships that promote technology transfer and boost innovation while considering the fast-changing nature of the digital industry.

The goal of such policies would be to push domestic firms in SMCs to acquire key technologies and then to localise and adjust them to support industries on both shores of the Mediterranean. The EU could further support this process by introducing mechanisms that would allow Southern Mediterranean firms to be more easily integrated into its suppliers’ value chains and facilitate technological learning and upgrading within value chains.

Finally, data regulations can play a crucial role in fostering local digital capabilities and securing inclusive digital transitions. The lack of adequate safeguards for internet users may cause people, governments, and businesses to avoid using digital tools and services, which could have serious developmental repercussions. All of the SMCs have passed some cybersecurity laws, although these are incomplete regarding privacy and data protection. But as digital data increasingly becomes a strategic asset, SMCs governments ought to adopt more systematic approaches to truly leverage the value of data and help digital transformation.

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This may entail requirements for data processing and analysis to be undertaken by local firms and institutions to allow learning and reinforcing capabilities. By assisting SMCs countries in shaping their emerging digital frameworks, the EU member states can ensure the diffusion of its General Data Protection Regulation (GDPR) in the region, a framework that is increasingly challenged in the region by alternative data-governance models such as the one promoted by China.

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