Digital Economic Integration of MSMEs in the Global South Country Report: Argentina

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1.Introduction

This report presents the results of a study about digital integration of MSMEs into the tourism and agro-processing sectors in Argentina. Digital integration is understood as the digitally-led engagement of MSMEs with other firms on local/global networks or consumers for economic growth.

The main goals of the study were twofold:

i. Understand the extent to which the current pathways for digital integration and the existing policy, and regulatory and governance frameworks can support the equitable development of MSMEs in the Global South.

ii. Study the gendered impact of these developments with a specific focus on how women-led enterprises may be responding to the changing landscape, and the extent to which gender is mainstreamed in the policy discourse.

Argentina, a middle-income country, provides a good test-bed to explore these broad questions. The country is in Latin America's top positions in terms of access to digital infrastructure[1], with 94.3% of local companies being connected to the internet. However, companies' digital integration remains much lower: only 45.8% of companies in the country purchase inputs through digital channels and 18.2% receive electronic purchase orders[2]. There are even important differences across sectors and types of companies, with smaller ones lagging behind: in 2021, only 26% of micro firms intensified the use of the Internet, applications and digital platforms, compared to 34% of small firms, 40% of medium-sized firms and 92% of large firms.[3] [4]

Despite the availability of some indicators of usage of digital technologies, we lack knowledge about how firms, and in particular MSMEs, in Argentina are getting digitally integrated, how digital integration is impacting firms' economic and innovative performance, to what extent and how firms are supported in their digital integration and what challenges do remain for firms to better integrate digitally. This study aims to shed light on these issues.

The focus of the study on MSMEs is particularly relevant for the Argentinean case, since these types of firms are the backbone of the country's economy. In 2020, there were 545,722 MSMEs registered in the country, representing 99% of total companies and 64% of total employment (4 million workers). Despite MSMEs high economic relevance, these companies are experiencing a drop in productivity and profitability, largely due to their scarce digital capabilities, the impact of the pandemic and their low insertion into global value chains. Since the start of the pandemic in 2020 (and until mid-2021) half of the micro firms that participated in global value chains have withdrawn their business while only 3% of large firms did so.[5]

[1] In Argentina 90,4% of households have Internet access (in LAC, Internet penetration is 67% on average), 88.1% of the the overall population have mobile phones and 87.2% have internet access. Computer ownership among citizens over 4 years old is, however, relatively less widespread: only 42.3% of this population owns a computer.

[2] Source: CAF (2020) "El estado de la digitalización de América Latina frente a la pandemia del COVID-19".

[3] Albrieu, R., Basco, A. I., Brest López, C., De Azevedo, B., Peirano, F., Rapetti, M., & Vienni, G. (2019). Travesía 4.0: hacia la transformación industrial argentina.

[4] Observatorio PyME (2022) "Convergencia productiva entre PyME y grandes empresas: Transformación digital, educación técnica y eficiencia energética en cada nivel territorial"
https://www.observatoriopyme.org.ar/courses/convergencia-productiva-entre-pyme-y-grandes-empresas%3A-transformaci%C3%B3n-digital%2C-educaci%C3%B3n-t%C3%A9cnica-y-eficiencia-energ%C3%A9tica-en-cada-nivel-territorial

[5] Data from "COVID-19 Encuesta de Pulso Empresarial 2021" World Bank-Fundación Observatorio PyME.

Adopting a gender perspective to understand digital integration into Argentine MSMEs is also of great relevance since 1 out of 3 MSMEs in the country are led by women. Women's leadership is even higher in young companies, as women lead 39% of firms less than 7 years old, reflecting a growing momentum of women's participation in entrepreneurship. However, women-led MSMEs are also generally smaller in size, export less and supply less to large firms.[6]

Our empirical analysis is concentrated on two sectors: agro-processing and tourism. Agro-processing is a long-standing sector in Argentina, which amounts to 25% of the country's GDP, 55% of overall exports and 11.9% of the workforce. Agro-processing MSMEs tend to be concentrated in low-scale production and specialised market niches (organic, farm-to-table, regional or plant-based markets)[7] with high export and innovative potential.[8] Tourism accounts for 1.9% of Argentine gross domestic product and 6% of the country's employment. For this sector, MSMEs are key: 83.6% of tourism firms are microenterprises, 14.2% are small companies, 1.7% are medium-sized companies, and only 0.4% are large companies. A distinctive feature of this sector is high female participation: women account for nearly 40% of the total sectoral employment, reaching over 50% of employment in travel agencies and accommodation. [9]

The document is structured as follows: in Section 2 we provide an overview of digitized agro-processing and tourism in Argentina; in Section 3 we summarise the policy context in Argentina; in Section 4 we focus on the empirical findings of the two sectors studied, Section 5 analyses the main findings in terms of how digital integration of MSMEs is affecting its equitable development, and finally in Section 6 we provide policy recommendations.

2. Digitalization in the agro-processing and tourism sectors in Argentina

In this section we provide general trends regarding digitalization in the agro-processing and tourism sectors in Argentina. The analysis draws on available datasets, reports and press releases, given that there are no official statistics about digitalization by sector in the country.

In Argentina, eCommerce has been growing in the last years becoming an increasingly common shopping habit among consumers: in 2022, eCommerce grew by 87% compared to the previous year. Tourism is the fourth most important online shopping category, while food and beverage was the third most important in 2021, and sixth in 2022.[10]

In the case of agro-processing companies, the location of firms in rural territories or small towns affects their ability to benefit from the growth of the digital market and also to engage digitally with other firms (suppliers, partners, etc.). Thus, only 45% of households located in rural areas and 40.2% of small rural towns in the country (with less than 1,000 inhabitants) have Internet access.[11]

[6] Rojo, S.; Benitez, N.; Schteingart, D.; y Laham, S. (marzo de 2022). Mipymes lideradas por mujeres. Serie Investigaciones en Red, documento N° 3. Centro de Estudios para la Producción XXI, Secretaría de la Pequeña y Mediana Empresa y los Emprendedores, Gabinete de Género - Ministerio de Desarrollo Productivo de la Nación.

[7] Accordig to the Argentinean National Agricultural Census (2018, 2020): 35% of Argentine agricultural land belongs to medium and low-scale farmers.

[8] See:https://www.argentina.gob.ar/noticias/el-plan-potenciar-una-estrategia-integral-de-generacion-de-empleo-genuino-agregado-de-valor

[9] Statistics for 2021 published by Sistema de Información Turística de la República Argentina (SINTA), Subsecretaria de Desarrollo Estratégico, Ministerio de Turismo y Deportes de la Nación. https://www.yvera.tur.ar/sinta/

[10] CACE (2022) "Los argentinos y el eCommerce ¿Cómo compramos y vendemos online?", https://cace.org.ar/estadisticas/
[11] Sources: INDEC, ENACOM and INTA.

In addition, only 35% of farmlands use computers in their activity. The lack of digital infrastructure, coupled with low levels of digital literacy in rural territories, negatively affects the digital integration of MSMEs dedicated to agro-processing.[12] Incorporating higher levels of digitalisation is key in this sector not only to reach the market, but also to increase productivity and comply with international traceability standards.

Data on digitalization of tourism companies in Argentina is very poor. There is, however, recent data on local travel agencies based on a survey to 1,121 local agencies in Argentina (22% of total registered travel agencies) in 2019[13] which suggest that digitalization has increased in this sector, led by the largest companies. Thus, 66.2% of travel agencies have a web page, 36% use it to provide information and 33.8% also include the possibility to purchase online. However, online sales are more frequent among the largest companies: 61% of travel agencies with more than 100 employees sell online whereas 29% of companies with less than 5 employees do so. Social networks are a communication and promotion tool widely used by the entire sector, due to their low costs, ease of use, rapid updating of information and impact. The social network most widely used by travel agencies is Facebook (86.9%); followed by WhatsApp (71.1%) and Instagram (58.4%). WhatsApp is chosen by companies with fewer employees, while Instagram is mostly used by large companies.

3.Policy context: interventions to boost digitalisation in MSMEs

The Digital Agenda Argentina 2030, established in 2018, is the most recent and most comprehensive policy effort to boost digitalization in Argentina encompassing support in terms of infrastructure, regulatory framework, digital talent, digital government and SMEs digital transformation. This program established specific support for the digital transformation of SMEs. The SME Digital Transformation programme was launched in September 2018 as a pilot initiative by the Secretariat of Entrepreneurs and SMEs (SEPYME) of the Ministry of Production and Labour. The programme aimed to boost the adoption of digital technologies in SMEs through three main aspects: (i) awareness-raising about the use of digital technologies; (ii) training; and (iii) technical support provision in the creation of firms' digital plans.

Later on, in 2020, the government presented the Productive Development Plan 4.0 and the MSME digital transformation agenda. The plan's actions are structured in four dimensions:

● Awareness-raising and training: dissemination of 4.0 technologies and their practical application to the development of skills and competences in the productive network.

● Technical assistance: advice on the development of 4.0 technologies and their practical application.

● Investment support: financing for the adoption or development of 4.0 solutions.

● Institutional infrastructure: creation and/or strengthening of institutional spaces that have a leading role in training and diffusion of 4.0 technologies and/or in providing technical assistance services for the adoption and development of 4.0 technologies.

The MSME digital transformation agenda includes the following initiatives:

- the INDTech SMEs 4.0 hub project, a public-private collaborative initiative, which aims to: i) link industry demand with digital transformation solutions and ii)promote innovative R&D&i projects.

[12] Sotomayor Echenique, O., Ramírez, E., Martínez, H., & Europea, U. (2021). Digitalización y cambio tecnológico en las mipymes agrícolas y agroindustriales en América Latina.

[13] Source: Anuario del Observatorio Económico de Agencias de Viajes de la República Argentina 2018 (OEA.TUR, 2019).

- the digital assistance network for SMEs, which is a public-private collaboration space to offer technological solutions and tools for the digitalisation of SMEs.
- the Competitiveness Support Programme (PAC), whichoffers non-refundable contributions to finance digital transformation projects, either for technical assistance, acquisition of capital goods or to cover legalisation or certification costs. Also, as part of the PAC, non-refundable funds of up to 85% are offered to finance Industry 4.0 ventures.

Initiatives listed above are aimed at all Argentinian companies, regardless of the sector. It should be remarked, however, that no initiatives do not include gender aspects.

Specific support for digitalization targeted to agro-processing companies is concentrated, at national level, in the provision of infrastructure. The National Communications Entity (ENACOM) has been implementing investment programs to expand Internet connectivity in rural areas. For example, ENACOM funds, together with other organisations, the construction of the ARSAT-SG1 satellite[14]. This initiative would allow more than 200,000 rural homes to have high-quality internet connectivity[15]. At provincial level, the Ministry of Agriculture and the Innovation and Entrepreneurial Agency of the Cordoba province, are jointly carrying out an initiative to foster the adoption of new digital technologies among farmers[16]. This initiative includes tax benefits for those farmers that implement digital solutions developed by local entrepreneurs.

In the case of Tourism, Argentina participates in international agreements to foster digitalization of local companies. The country is part of the working committee of the 'Ibero-American Strategy for Tourism of the Future', initiative developed by the World Tourism Organisation (UNWTO) and the Union of Ibero-American Capital Cities (UCCI), which aims at strengthening the tourism model of cities, based on innovation and sustainability, supported by new technologies and data-driven decision-making. At national level, initiatives based on training and the provision of technical assistance are coordinated by the National Ministry of Tourism and Sports[17] as well as the Ministry of Science, Technology and Innovation through the program "Technological Support to the Tourism Sector".[18]

Interestingly, the National Ministry of Tourism and Sports together with the National Ministry of Women, Gender and Diversity created a joint program named the Equality Seal in order to promote gender mainstreaming and diversity within tourism companies.

The programme provides a manual to help tourism companies implement a set of measures aimed at improving access, permanence and working conditions for all people regardless of their gender identity and sexual orientation, promoting equal opportunities in the occupation of hierarchical positions, promoting wage parity, preventing gender-based violence, generating violence-free spaces, promoting work environments based on participatory and inclusive management and encouraging the use of inclusive language inside and outside the organisations.[19]

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[14] See https://www.argentina.gob.ar/jefatura/innovacion-publica/telecomunicaciones-y-conectividad/conectar

[15] The launching of this satellite is expected by the end of 2023.

[16] See https://bpa.cba.gov.ar/

[17] See, for example: https://www.argentina.gob.ar/noticias/herramientas-digitales-para-las-pymes-turisticas, https://www.argentina.gob.ar/noticias/concluyo-el-ciclo-de-capacitacion-herramientas-de-google-para-la-transformacion-digital-del

[18] https://www.argentina.gob.ar/ciencia/cofecyt/financiamiento/asetur

[19] https://www.argentina.gob.ar/noticias/sello-igualdad-una-propuesta-para-promover-la-perspectiva-de-genero-y-diversidad-en-el#:~:text=Se%20trata%20de%20una%20iniciativa,a%20las%20mujeres%20y%20LGBTI%2B.

4.Empirical findings

In this section we present the empirical findings of the study, which is guided by the following questions:

i What are the emerging models of digital integration and pathways of impact for MSMEs in the agro processing and tourism sectors in Argentina?

ii. What are the main motivating factors for digital integration?Is digital integration of MSMEs happening by choice or under duress, i.e., does the larger economic climate force the hand of MSMEs into adopting expensive digital integration upgrades and modalities or risk obsolescence?

iii. What kind of dependencies exist for MSMEs in the agro-processing and tourism sectors in Argentina with regard to large platforms for access to market and digital integration pathways? Can there be ways to reduce this dependence?

iv. What scope exists for autonomy and agency of MSMEs in the agro-processing and tourism sectors in Argentina over digital integration choices across a broad spectrum (platform choice, software choice, and access and connectivity choices)?

v. What are the ways by which barriers to digital integration can be eliminated, with a view to covering the last mile/most vulnerable MSME in the agro-processing and tourism sectors in Argentina? What role can state-supported digital public goods/infrastructure play towards this?

Results are first presented for the agro-processing sector, and then for the tourism sector.

4.1. Agro-processing sector

a.Methodology and data

The agriculture-food value chain is made up of upstream and downstream links as well as field activities. The upstream includes the provision of inputs for field production - e.g., seeds, herbicides, machinery, equipment, etc. - and the downstream is made up of industrial processing activities as well as logistics and marketing. We focus on field production and downstream activities of the agro-processing value chain in Argentina.

To identify the firms to include in our sample, we conducted 9 exploratory interviews with key informants (see Table A in the Appendix for the list of key informants interviewed), who were of help to identify 25 MSMEs, as potential case studies. These MSMEs included three types of stakeholders that participate in field production and downstream activities: independent farmers, agro-food processing MSMEs (i.e., vertically integrated firms), and food-processing cooperatives.

The fieldwork study covered 20 MSMEs -7 of them led by women-. These enterprises are not “born-digital”, rather they are enterprises that “use” digital technologies to support some part of their business. Table 1 below summarises main firms’ characteristics (more detailed firm-level data is included in Appendix A, such as firms’ names, location, foundation year, whether firms are led by women, and type of products offered). Case studies encompassed 6 independent farmers, 9 agro-food produced in vertically integrated MSMEs and 5 cooperatives of producers. Most of these firms were recently created (two thirds being less than 10 years old) and small-sized firms (14 enterprises are micro-companies, 5 are small and only 1 can be regarded as medium)[20] which deploy strategies to add value and differentiate their production (13 firms have organic certifications whereas 5 have agro ecological certifications).

[20] According to the Argentinean classification by firms’ size, micro-enterprises are those with no more than five employees, small firms with no more than ten employees, and mid-sized firms with less than fifty employees. See for more details https://www.argentina.gob.ar/produccion/registrar-una-pyme/que-es-una-pyme#1

Studied firms are located in different Argentine provinces (allowing us to gather the experience of firms that are embedded in different geographical contexts in terms of public infrastructure, internet access and type of agricultural production). These firms pursue business strategies both of “business to business” (B2B) and direct sales to consumers (B2C) types. Most independent farmers and agro-processing MSMEs’ business models combined B2B and B2C business strategies (4 out of 6 independent farmers and 7 out of 9 agro-food processing companies have a combined business model) whereas agro food-processing cooperatives are only focused on B2C business models.

Only a few companies were able to export their products (five out of twenty). These were well-established companies, all belonging to the agro food-processing MSMEs group, showing a high level of digital capabilities and highly skilled owners. Despite exports headed to regional markets, some companies also reached clients in distant economies -e.g., Japan or Germany.

Interviews were all conducted by phone, lasting, on average, sixty minutes. We transcribed all the interviews and then coded the collected answers according to the topics covered in the study.

Table 1. Sample summary

Business type	Total Interviews	Women led business	Main business model	Company Size	Number of exporting firms
Independent farmers	6	3	B2C & B2B	Micro (5), Small (1)	0
Agro-food processing MSMEs	9	2	B2C & B2B	Micro (5), Small (4)	5
Agro and food-processing cooperatives	5	2	B2C	Micro (4) Medium (1)	0
Total	20	7	-	-	5

b.Level of digital integration in firms

We can identify two levels of digital integration among MSMEs analysed for the agro-processing sector in Argentina: MSMEs connecting digitally (e.g., mobile phone, WhatsApp, and email) (4 MSMEs), and MSMEs on B2B and B2C platforms (16 MSMEs). These are not mutually exclusive categories though, because the 16 MSMEs that use altforms also connect digitally through other modes such as email and WhatsApp. In terms of types of MSMEs analysed, except for 4 agro and food-processing cooperatives studied, all the other firms are integrated digitally through B2B and B2C platforms, which they use for advertising and commercial transactions with upstream linkages (both end consumers and grocery shops and supermarkets) (see Table 2).

Table 2: Level of digital integration, by type of MSME

Level of digital integration	Type of MSME		
	Independent farmer	Agro-food processing MSMEs	Agro and food-processing cooperatives
MSMEs on B2B and B2C platforms	6	9	1
MSMEs connecting digitally			4

MSMEs digital integration was triggered by several factors: the aim of strengthening client-customer relationships (i.e. through prompt on-line interaction, information provision about products' characteristics through the web), improving supply change management (i.e. online stock management, on-line traceability of products across the value chain), expanding clients and markets (i.e. by becoming discovered on the web) and acquiring market and business information (through connecting on-line to consumers, providers and other food-processing producers).

It is worth mentioning that food markets are increasingly stringent in terms of quality, health, environmental and traceability standards (Crespi et al., 2017; Ardila et al., 2019). In addition, food-processing value chains are very much governed by, on the one hand, retailers which set up standards and prices, and, on the other hand, by changes in consumers' demand to which food-processing companies need to respond timely (for example, nowadays consumers are more interested than ever in environmentally conscious agri-food production models, preferring products that respond to their environmental concerns and/or values, such as organic production). Firms that aimed at participating in agro-food processing markets, particularly those firms that intend to export and/or participate in "niche" or "prime" markets such as organic or specialized food markets, are forced to both attain higher standards in terms of cost, quality and traceability and keep up with changes in market conditions. To all these ends, becoming digital is key. As one agro-food processing MSMEs that exports asserted: "adopting new digital tools is a continuous and permanent process in our company. It is central to our growth, and we believe it will become more critical every year."

It should be highlighted that the COVID-19 outbreak accelerated the adoption and use of digital technologies by farmers and food producers analysed. Thus, the outbreak served as a powerful driver for digital integration both for: i) firms that were previously completely offline and that, during the pandemic, started to perceive the value of going digital to reach customers and suppliers, and ii) for those firms that were already digitally integrated, but that discovered that they needed to intensify their integration (for example, from using social media platforms only as advertising channels, to starting selling online).

It is key to remark that the firms analysed did not participate or benefit from any public support in their digital integration. However, one third of companies studied benefited from private initiatives, run by e-commerce platforms and civil and business associations, which offered training programs in digital technologies. For example, the Argentine Movement for Organic Production[21] (MAPO), regularly organises a series of meetings with digital technology providers.

[21]MAPO is Argentina's most influential organic Non-Governmental Organisation, registered as a Non-Profit Civil Society. For more than 20 years, it has brought together different entities, people, companies, and NGOs related to organic production. Its associates are producers, consumers, certifiers, researchers, scientists, technicians, educators, business people, and organic marketers. One crucial goal at MAPO is to make possible the connection and knowledge generation and flows among Argentine organic stakeholders.

c. Emerging digital integration models and value creation pathways

All agro-food processing MSMEs are users of digital platforms. Most MSMEs studied, 16 of them, reported using B2B and B2C platforms as their primary mode of digital integration. This included both social media platforms and e-commerce platforms. Social media platforms used are Instagram and Facebook, whereas e-commerce platforms are AgroJusto, Chasqui, TiendaNube, MercadoLibre, and Google Forms, mainly for B2B purposes. All these e-commerce platforms are domestic. The first two are specialised in agro-food products, whereas the other two are open to any type of product (see Box 1).

Box 1. Examples of local platforms development being used by interviewees

Agrojusto is a local platform to commercialise food products, which targets specific market niches such as “farm to table” agroecological and organic products. The platform was created in 2018 by a start-up that sought to connect small farmers and cooperatives with consumers through an application that served as a link between fruit and vegetable producers and the market. With the support of the Implementation Centre for Equity and Growth (CIPPEC) and IDB LAB, the Inter-American Development Bank's innovation lab, it was able to expand its reach. At present the platform also allows producers to interact with each other and provide training in online sales strategies. It also has functions that enable users to keep track of their sales, register their production costs, and calculate their margins, among other managerial matters.

Chasqui is an e-commerce tool specially developed for the Social and Solidarity Economy (SSE). It seeks to promote social markets and socioeconomic food circuits, while at the same time improves the conditions of families’ access to healthy consumption, as well as the income and sales of small producers and cooperatives. The platform is free. The main objective is to improve visibility and generate links and sales for small farming producers, cooperatives, mutuals, and other associative and self-managed organisational forms.

Tienda Nube is an e-commerce platform aimed at micro companies, through which firms can set up their own online shop to sell on the Internet, without intermediaries. The Argentinean company created in 2010, which has become a unicorn, was born as a start-up with the vision that in the country there is a vast majority of SMEs that operate in the physical world, but do not have a presence in the online world. The company's role is to facilitate the migration of small businesses to the digital world by creating and helping them manage their online shop. Customers can enable and customise their online shop, publish and update their catalogues, manage payments, control shipping and inventory, and manage other business operations.

Mercado Libre is an Argentine company founded in 1999, leader in e-commerce and fintech solutions in Latin America. The company has operations in Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela. Its direct competitor is the US-based Amazon.

Modes of value creation in pathway were:

- **Discoverability.** MSMEs interviewed people stated that they have to increasingly rely on online channels to be found by consumers. Sharing firms’ and products’ characteristics online (productive practices, products’ quality, the environmental and social impact of firms’ processes) is key for food-processing firms to reach consumers that are willing to pay a premium for high-quality and sustainably produced organic, fair-trade or gourmet products. For example, a cooperative of rural producers mentioned that "through social networks, we can show people who live in the country's big cities how we produce in harmony with nature."

Interviewed firms that just used social media platforms for advertising purposes reported achieving up to 10% of their revenues from digital channels, whereas firms that combined the use of social media and e-commerce platforms reportedachieving up to 65% of their revenues from digital channels. Platforms such as Mercado Libre and Tienda Nube were particularly relevant for the MSMEs studied to access mass B2C trade, whereas specialised food online platforms -e.g., AgroJusto and Chasqui-, which provide special features for agro-food producers to show its production process in great detail, were particularly useful for MSMEs to be discovered by consumers that are interested in purchasing fair trade or organic products.

Worth pointing out is the fact that those MSMEs studied that could obtain higher value from the use of platforms in terms of discoverability by new customers have been using this platforms for a longer period of time, tend to invest in developing elaborated posts - by hiring a professional photographer, video editors, etc- and even carried out sophisticated strategies to be discovered by consumers, as one respondent highlighted: “since 2020, we have been running advertising campaigns using Big Data to target specific customers through social media (e.g., Instagram)”. We found out that 7 interviewed firms, which are certified organic producers, also used B2B platforms to get connected with large retailers, wholesalers, and other businesses interested in purchasing organic products in bulk.

- **Interact directly with customers avoiding intermediaries and receiving up-to-date information to develop more targeted products.** Six MSMEs interviewed stated that online reviews and comments are highly valuable for them to improve or enhance their product portfolio. An interviewed company stated this very clearly: “We interact with customers on social media to boost our sales and to get to know and understand them better. The questions they ask us and the comments they post help us to plan new strategies.” In this same line, another interviewed company mentioned that “we started selling organic honey, our star product, online. However, at the request of customers, we started adding organic jams to our product portfolio.” Direct interaction with customers through e-commerce platforms were also very valuable for small food-producers to bypass intermediaries’ costs. This source of value creation was especially relevant for 10 out of 14 microenterprises covered in this study. These microenterprises highlighted the use of the AgroJusto and Chasqui platforms as they function as a "platform of platforms," since those who log in get the tools to open their e-commerce website. For example, one interviewee who uses AgroJusto mentioned, "with this platform, I can keep higher profit margins since I don't need intermediaries to get to the large urban markets."

- **Access to specialised technical information directly from other producers and professionals (agronomists, for example).** Through information and communication services such as webinars or WhatsApp groups, MSMEs can interact with other communities of producers or attend special seminars organised by professionals in which they get technical assistance, share knowledge, ask for advice, or receive valuable information (35% of firms interviewed). For example, one interviewee mentioned that “he participates in three WhatsApp groups in which the members are other local farmers, where they share different experiences about a wide range of topics - e.g., strategies to deal with a particular plague, a new organic fertiliser that is showing efficient responses and so on and so forth.” Likewise, another interviewee pointed out, "I frequently attend webinars focused on small-scale agricultural crop management, where technicians specialised in various topics speak. This allows me to access new knowledge in order to be updated."

- **Improve supply chain management.** In two cases of organic food producers, we found that using platforms to track and trace organic products from farm to table ensured that their products were being handled and stored properly. This can increase the quality and safety of the organic products, which, in turn, can be a key factor in reaching and maintaining new markets and niches, increasing efficiency and reducing costs. Concerning B2B transactions, 15% of companies mentioned using Google Forms regularly. This platform allows for easy sharing of product lists and prices as well as synchronisation with Excel or other specialised software, e.g., stock tracking and customer management.

d.Digital integration; pathways of impact

Digital integration through digital infrastructure and the use of platforms have impacted MSMEs business in several ways.

Access to information and training. Digital integration, both through platforms and other digital tools (e.g.,mobile phone, WhatsApp and email) impacted MSMEs ability to access market and technical information timely through a more direct contact with consumers and other members of the value chain such as suppliers and other food-processing firms. Digital engagement allows these MSMEs to participate, for example, in on-line meetings and exchanges (on zoom or WhatsApp) with other producers, providing and/or receiving technical and market advice. These online exchanges reduce the lag in accessing relevant information for their business, which could, in turn, help reduce costs, improve production efficiency and increase sales.

Business growth. Generating value through direct interactions with consumers by integrating digital platforms has allowed 85% of the companies interviewed to build stronger relationships with their customers. In turn, this has allowed them to access information on changes in demand to develop more targeted products and even change their product mix, increase transparency and build trust with customers by improving customer loyalty and being discovered by new customers.

Cost reduction. The use of platforms such as Agrojusto to manage stocks online, link with suppliers and even use digital technologies to trace production from farm to table has resulted in improvements in value chain management and a drop in operating and transaction costs. For example, those firms that used digital tools to trace production across the supply chain affirmed that these procedures afforded them a quicker identification of any issues that may arise “from the farm to the table” journey, allowing them to address them timely. Online sales were also identified as having positive cost-reduction effects through the elimination of market transactions through intermediaries and brick-and-mortar stores.

e.Challenges to digital integration and perceived threats

In this section, we point out the main challenges MSMEs in the agro-processing sector studied in Argentina face to integrate digitally.

Lack of transportation logistics as a barrier for digital integration. Transportation logistics can be a significant barrier for farmers and food producers located in remote and rural locations to sell their products on-line. Among firms studied, those MSMEs only connecting digitally were the ones that faced this challenge the most. These food producers, mostly producing fresh vegetables and fruits, highlighted that they did not have the financial resources to invest in logistics solutions such as cold storage or refrigerated transportation, which may be necessary to preserve perishable products until reaching the market.

The cost of platforms as a barrier for smaller businesses to sell on digital channels. E-commerce platforms’ costs can be too high enough for some firms to use them. The platforms with a massive nationwide reach, such as MercadoLibre, charge percentages for sales that can expel certain producers, particularly those who cannot compete in sales volume.

For example, one organic processed food producer bluntly said, "when we started using MercadoLibre, we were surprised by how quickly our sales began to increase. However, we had to leave the platform because MercadoLibre's costs did not match our business model. In particular, given our installed capacity, we cannot increase our production volume considerably, and if we raise our prices, we fall behind the competition." Tienda Nube or AgroJusto, are e-commerce platforms that better adapt to micro and small businesses (see Box 1).

Lack of support to integrate digitally. The lack of public support (through technical knowledge, funding, training) for the digital integration of MSMEs in Argentina means that firms that perceive that they "must go digital" had to rely on their own skills and knowledge to do so, which tend to be very low. This is very challenging to the firms studied, particularly for independent producers and micro-companies which become aware they do not have the knowledge to carry out an efficient decision-making process. We found that the participation of young people (under 30 years old) in the firms, who participate as employees and/or members of the family owning the firm, was in 80% of firms studied, key to easing the integration of the digital decision-making process. Young adults tend to be more skilled in navigating digital technologies and platforms and drawing information that helps make technological choices - -e.g., marketplaces, platforms, social-networks, etc. - as well as helping implement digital technologies in daily business.

Skill-needs. Efficient digital integration demands farmers and food producers to develop new skills and business routines tailored to the online environment. For example, firms need to have prompt reply systems in place to ensure that customers receive timely responses to their inquiries and concerns. In the digital age, customers expect fast and efficient service, and businesses that are unable to provide this will quickly fall behind. Furthermore, businesses must also be able to effectively deal with public reviews, which can greatly impact a company's reputation. This means monitoring online review sites, responding to negative reviews in a professional manner, and taking steps to address any issues that customers raise. Uploading product information on social media and market-places demand writing skills to generate short and straightforward texts as well as being able to upload high quality pictures of their products. The development of all these digital skills turned out to be a key challenge for all MSMEs analysed, and much more so for those businesses that still could not integrate through platforms. The latter are unable to afford the costs of hiring community managers and skilled employees on digital channels in order to take care of digital integration. Half of the MSMEs that participate in B2B and B2C platforms rely on community managers building and managing the online community, boosting the firm's brand image, and creating and maintaining stable and lasting relationships with their online clients. Firms that could access this specialised service become aware of the benefits of digital integration, which drives them further into digital tools, generating a sort of virtuous circle.

f. Deep dive into women led MSMEs

Women interviewed asserted that they perceive they have a central role in the firms' decision making process. They reported feeling empowered to make crucial business decisions and are confident about their abilities. They also reported feeling supported by their partners in their decision-making roles. Likewise, almost all interviewees highlighted thatsocial norms have positively changed towards women in leadership roles. In fact, according to their perception, this shift has led to a growing number of women-led businesses. A key result from the study shows that the average number of female employees in women-led businesses is 25% higher than in men-led ones. This figure indicates that women in leadership roles are making important decisions for their businesses and creating a culture of inclusivity and empowerment for other women. Women in leading roles also interact more with other firms led by women. Women interviewed affirmed that these interactions are valuable in terms of networking and sharing ideas and best practices, and enable women leaders to learn and support each other.

Women that run the companies interviewed, however, indicated that they struggle daily to balance work responsibilities, household chores (cooking, cleaning, etc.) and childcare tasks. Three out of seven women interviewed mentioned that taking care of domestic chores has negatively impacted their professional opportunities.

They reported feeling overwhelmed and stressed, finding keeping up with their workload challenging. One testimonial indicated that: "my responsibilities for domestic work not only take hours away from my work in my company but it also creates many interruptions throughout the day, which affects my efficiency."

At the workplace, however, all interviewed women stated that they regularly face gender discrimination. This discrimination can show in different ways, but it is particularly acute in tasks related to dealing with logistics and trading matters. Logistics can include managing the supply chain, inventory, and delivery of goods. Women reported feeling that their ideas and opinions were not taken seriously and that they were often dismissed or not given the same opportunities as their male counterparts. Regarding trading, women also reported facing discrimination in negotiations and marketplaces. They felt they were not given the same level of respect or trust as their male counterparts. They reported feeling that they had to work harder to prove themselves and gain the same recognition and success as their male colleagues.

For example, one respondent highlighted: “When I have to deliver goods to the central market, which is done in the early morning hours when the public is not yet in, I have to ask a man from my family to accompany me. I have had many experiences of discrimination and sexual harassment in the central market.” These experiences of gender discrimination can make it more difficult for women to advance in their careers and lead to frustration and dissatisfaction.

f.Case Study: Viene del monte

This case study shows how native communities living in remote and rural areas started a digital integration process, enhanced communication and contact with consumers in other parts of the country, and substantially increased their incomes. Moreover, this case depicts the social tensions that emerged when women started to get digitally integrated through the use of mobile phones to manage their businesses.

Viene del Monte is a project that started in 2016 as a public initiative that seeks to strengthen rural aboriginal communities led by the National Institute of Agricultural Technology. This initiative brings together 150 women belonging to three different aboriginal groups located within a 40-kilometre radius in the country's northwest. These communities live in humble conditions, with few financial resources.

Figure 1. Location of the communities participating in Viene del Monte

The project's objective is to empower women by helping them sell handicrafts made from native fibres on digital platforms. The project has a website and an Instagram profile to advertise products. Communication between these craftswomen and customers is on WhatsApp. These digital media allowed the inhabitants of these communities to show the production process behind the crafts they make, as well as reach consumers directly. The National Institute of Agricultural Technology (INTA) handed out cell phones to all 150 women that participated in the program. Younger women took on a leading role in managing these devices, establishing communication with buyers, and supporting older women to sell online.

It is worth mentioning that digital integration was not free of tensions. Although it gained more acceptance over time, at first, many cases arose when husbands disapproved of their wives having cell phones, and forced them to quit the community. One of the project coordinators mentioned that "in order for the initiative to be successful, we had to do a lot of work to raise awareness about gender issues. For this purpose, we implemented a series of multiple talks with the rural communities living in these areas, including both men and women. In fact, the project not only aims to increase the income of these rural families but also to empower women to play a leading role in the required change." After several years, the Viene del Monte project has played a significant role in these rural and agricultural communities, empowering women in several dimensions.

Overall, the case of Viene del Monte shows us how a group of women from native communities living in remote rural areas took advantage of digital integration. In this case, the use of cell phones enabled their market expansion, reaching the leading country's urban areas. Despite the rise of some intrafamilial conflicts, these empowered women were able to increase their family income, and therefore, improve their living conditions. This experience, led by INTA, could represent an example to be replicated in other country regions or even in other foreign countries.

4.2.Tourism

a. Methodology and data

The study of digital integration of MSMEs in the Argentina's tourism sector is focused on MSMEs providing services in the tourism value chain of a particular region: The Iberá National Park[22]. MSMEs studied are located in Colonia Pellegrini (a rural village located within the Iberá National Park) and Mercedes (the nearest town). This natural park is particularly interesting for exploring our research questions, given that it is a growing tourist destination[23] far from urban centres (860 km from Buenos Aires and 200 km from the nearest city), with difficulties in being reached by land (200 km of unpaved, easily flooded road connects the park with the nearest city), poor Internet connectivity and a predominance of MSMEs that provide a wide variety of tourism services (accommodation, excursions, etc.).
To select the companies to be included in the study, we interviewed the Presidents of the Tourism Business Chambers of the two main locations where tourism MSMEs cluster. These interviews were key to understanding the type of tourism activities that took place in the Iberá National Park, furnishing us with the list of MSMEs that provide tourism services in the region, helping us select a sample to be studied (see the list in Annex B) and facilitating the fieldwork by providing selected MSME' contact details and by letting them know about the study before we contacted them.

The study covered 21 MSMEs (see Table 3). In terms of the activities that compose the tourism GVC, in Graph 1 we have highlighted in grey those activities included in the study. All of them take place within Argentina's inner country. The MSMEs studied provides transportation, distribution, accommodation and excursion services.

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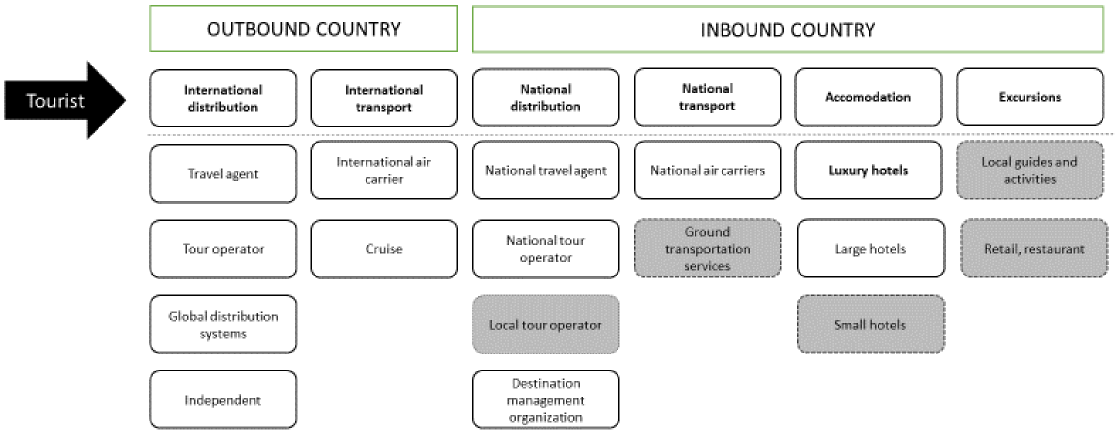
[22]This park, located in the northeast of Argentina in the province of Corrientes, is a macro-ecosystem of wetlands - one of the largest in the world - composed of diverse ecosystems of wide diversity.

[23] Iberá National Park was selected by The New York Times as number six out of 52 outstanding destinations to visit worldwide, for its natural beauty and the opportunity to help strengthen the regional economy.
https://www.lanacion.com.ar/sociedad/the-new-york-times-eligio-al-parque-nacional-ibera-entre-los-52-lugares-del-mundo-para-visitar-en-nid10012022/

Firms covered are a local tour operator, 2 ground transportation service providers, 8 small hotels, 2 restaurants, 2 local guides and activities (horseback riding, hiking, wildlife watching, boating) providers and 6 MSMEs that sell handcrafts and regional food (such as jams made with local fruits). Firms studied were mostly micro companies and family businesses (90%), 42% of them led by women (these are companies in which decision-making and leadership positions are filled by women, and at least 51% of the staff are women).

Graph 1 - Tourism GVC: activities included in the study



Source: Adapted from World Bank (2013) "Global Value Chains, Economic Upgrading, and Gender"

Table 3 - Sample Summary

Type of activity	Total sample	Firms' size	Women-led MSMEs
Accommodation	8	Micro (7) Small (1)	3
Restaurant	2	Micro (2)	0
Travels Agencies	1	Micro (1)	1
Transport	2	Micro (2)	0
Local guides and activities	2	Micro (2)	0
Retail	6	Micro (5) Small (1)	5
Total	21		9

Interviews were carried out on Google Meet, WhatsApp and phone calls, and lasted one hour, on average. Due to firms' poor internet connection, many interviews had to be rescheduled, or carried out on phone calls. Interviews were recorded, typed and then processed using tables to organise data according to our research questions.

b.Level of digital integration in firms

All tourism MSMEs studied are digitally integrated. Digital integration is motivated by firms' desire to facilitate the provision of information to clients, communicate with them easily and become visible to a greater number of potential new clients (both domestic and foreign). All of the firms analysed, regardless of the type of touristic service they provide, use digital infrastructure (Internet, email, WhatsApp) and almost all of them use social media platforms (Facebook, Instagram) (see Table 4). E-commerce platforms (Booking, Expedia, Trivago), however, are much less widespread among the firms analysed. Less than 40% of MSMEs studied use such platforms, most of which are accommodation providers. Thus, most small hotels studied are the most digitally integrated type of business, as they use digital infrastructure, use both social media and e-commerce platforms, and 6 out of 8 also have their own webpage.

Table 4 - Level of digital integration, by type of MSME

Type of activity	Total sample	Digital infrastructure	Social media platforms	E-commerce platforms	Own webpage
Accommodation	8	8	8	7	6
Restaurant	2	2	1	1	0
Travels Agencies	1	1	1	0	1
Transport	2	2	2	1	1
Local guides and activities	2	2	2	0	1
Retail	6	6	6	0	1
Total	21	21	20	9	10

Firms' digital integration has taken place without any particular public support such as funding, technical assistance or training programs. Two of the interviewed firms did, however, participate in the public programme Sello Correntino de Calidad Turística ("Corrientes Seal of Tourism Quality"), run by the Ministry of Tourism of Corrientes Province, which helped them to improve their use of digital tools, e.g. by standardising answers to questions received through digital channels (see Box 2). It should be highlighted that the program was not specifically aimed at supporting tourism providers' digital integration, even though some firms, as two in our sample did receive technical assistance to improve online communication efficiency.

The MSMEs analysed do benefit from, and value positively, the websites of public bodies such as the Municipality of Carlos Pellegrini and Mercedes, as portals that allow them to gain visibility and attract new customers.

The websites of the municipalities provide tourist information about the destination, including a list of companies that provide accommodation, restaurants, excursions and shopping services, enabling users to send direct messages to providers through the website. All firms analyzed, regardless of their main activity, are listed on such websites. These webpages can be understood as a public good, since firms listed there do not have to pay any fee. Being there allows firms to be visible to those interested in seeking tourist information about the region (mainly to inbound tourism).

Box 2 - Sello Correntino de Calidad Turística program

Sello Correntino de Calidad Turística programme was created by the Ministry of Tourism of the Province of Corrientes, which seeks to promote quality as a fundamental precept to achieve competitiveness and economic, socio-cultural and environmental sustainability of tourism activity in the province. The programme promotes a culture of continuous improvement to strengthen tourism value chains in order to satisfy and transcend visitors' expectations. Through a manual[24], the programme offers quality guidelines in several major areas: quality, culture, safety, health and the environment.

Digital integration is not a topic in itself, but is included within guidelines on "Performance evaluation". In order to incorporate best practices, it is suggested that tourism companies identify the web platforms and social networks where tourism demand assesses the services contracted, with the most relevant platforms for the sector being TripAdvisor, Google, Booking and Despegar, and it is indicated that companies should follow up on customer comments regarding the quality of the service provided and register complaints through these platforms.

c.Emerging digital integration models & modes of value creation

Analysed firms follow a platform-based integration pathway (MSMEs on B2C platforms) primarily to support downstream market linkages. Social media platforms used are Facebook, Instagram and Youtube, whereas e-commerce platforms are Booking, Expedia, Trivago, Airbnb and TripAdvisor.

MSMEs' participation on B2C platforms create value mainly through discoverability. Even though all MSMEs interviewed asserted that "word of mouth" is still relevant for the survival of their businesses, they also affirm that participation on B2C platforms has become a key additional tool for gaining new clients. Firms are convinced that "you have to be" on platforms to be discovered. As one firm interviewed asserted "it could be said that for most sales, digital tools such as social media are key as clients contact us through them. However, then payments are mostly made through other channels (usually bank transfers). Thus, social media is the contact channel, rather than the payment channel".

Through a process of trial and error, each firm has identified the combination of platforms that maximises their "discoverability" by new customers, and the most efficient way to use them. For example, almost all MSMEs studied combine the use of Facebook and Instagram, as each of these social platforms targets different types of customers. Instagram is regarded nowadays as the most relevant social platform to have; in the words of one of our interviewees: "people ask you if you have Instagram". However, firms still keep Facebook because it is more effective in reaching out to older clients, as they are almost the only users of that social media platform at present.

24 http://biblioteca.cfi.org.ar/documento/sello-correntino-distincion-de-calidad-turistica-provincia-de-corrientes/

In the case of the accommodation providers analysed, e-commerce platforms such as Booking, TripAdvisor, Expedia or Airbnb, are also key to their visibility. According to interviews, some of these platforms are more relevant for local tourists (such as Booking) whereas others are for foreign ones (Expedia, Airbnb, TripAdvisor). Thus, each accommodation provider chose the e-commerce platform(s) that best suit their commercial strategy and their capabilities to make the most of it (them). Firms interviewed tended to try several of these e-commerce platforms at first, and then selected the ones that found more convenient in terms of visibility, cost and ease of use, and stuck to it. A firm interviewed asserted: “We found Expedia to be very difficult to use. It is very different from Booking, which is the platform we are used to” Some quotes of interviews with two accommodation providers illustrate how various e-commerce platforms are perceived very differently in terms of value creation for the firm:

“Booking is my calling card, you have to be there because everyone can find you, and I get a lot of bookings on it. But I do not have a website”

“We prefer TripAdvisor because the marketing process is slower. I receive an email and get in touch (unlike Booking where the booking is made on the spot). In addition, we have our own website, social networks and videos on Youtube”

Interestingly, according to small hotels interviewed, the value of “discoverability” that platforms provide is much higher in low and mid seasons, when demand decreases. In other times of the year (high season and long weekends), hotels can be fully booked by means of “word of mouth” and previous clientswhich contacting the hotel through WhatsApp or email.

Many MSMEs analysed, which provide services other than accommodation, prefer to use Google Adwords or Google Maps to gain visibility rather than e-commerce platforms. They find these types of digital tools easier to use, cheaper and more convenient than e-commerce platforms. As one firm interviewed suggested: “We tried out platforms such as Booking and they don't work for us. We prefer Google Adwords and our own website”. Typically, clients find them through Google maps or Google Adwords, and then get in touch with them by email, WhatsApp or Instagram. Restaurants consulted asserted that having the GPS location online is key to their discoverability.

d.Digital integration; pathways of impact

Digital integration had three main pathways of impact on studied firms: improvements in business management practices, market expansion and enhanced service quality.

Improvement in business management practices. Digital integration of MSMEs studied let them to change their internal management procedures related to bookings’ administration and communication with clients. This applies to all companies analysed, regardless of the type of service they provide. Previous to their digital integration, bookings were mostly registered on paper and/or files which were not available on-line, by using non-standarized procedures. When firms studied became digitally integrated, they found that to avoid overbooking and other types of reserves’ mismanagement, they needed to incorporate an online digital management booking system (to allow for more than one person in the firm to check out and update bookings simultaneously and at any given time) to efficiently manage bookings coming from different sources: offline (telephone) and online channels (e-mail, WhatsApp). Firms incorporated, however, different management software, from simple excel spreadsheets, usually uploaded to Dropbox or Google Drive, to more sophisticated booking platforms developed by close acquaintances (family or friends). As these are small businesses, they cannot afford other types of paid booking software. Some interviewees’ quotes illustrate this point:

- "I have an Excel spreadsheet created by my husband that is very good. It shows everything: the occupancy, and within it, it breaks it down by monthly and annual percentages. , All relevant information...".
- "We have a booking platform designed by my business partner’s daughter, a systems engineer, and all of us, in different places of Argentina, can check it out simultaneously. ... ".

- "We have a system of dynamic Excel spreadsheets, which we can access from anywhere, because they are on Dropbox.

The MSMEs analysed also realised that to maximise the impact of digital integration, responding promptly to online queries was key. Thus, as firms learned that clients usually send questions online on weekdays at noon or in the evening, and during weekends, they try to assure that at least one person (usually the owner who takes care of bookings in most cases) is online during those periods of time. Thus, owners have changed their daily routines, assigning a specific time slot of the day to take care of online queries and update the booking information, accordingly. Some firms studied have also put together standardised answers to speed up responses.

Market expansion. Digital integration allowed firms to reach new clients, as platforms allow them to be discovered by potential new customers, even from distant locations. This is particularly so for accommodations. The providers that do have a track record of online sales, affirmed that online sales account for 20 to 50 % of total sales, becoming more relevant in low- and mid-season when platforms are more extensively used.

Service quality. MSMEs studied are very much aware of the impact that comments can have on their business. All of them stated that they do read all comments received on the different platforms used. To guarantee good comments, being digitally integrated through platforms, they are , more focused on clients' satisfaction than ever. As one small hotel interviewed asserted: "We try very hard to make sure that the reviews are good, and most of the people who reply to us tell us that they chose us because of Google reviews.(...) If we see any criticism, we use it to improve ourselves. (...) We are very attentive to guest comments, we use them as feedback to improve ourselves".

e.Challenges to digital integration and perceived threats

In this section we point out the main challenges MSMEs that provide tourism services in the Iberá National Park face to integrate digitally.

Lack of proper internet infrastructure. Digital integration is perceived as a must for MSMEs interviewed ("you have to be there"), many of which have to overcome enormous challenges related to the lack of proper Internet infrastructure in their locations. This is the case of 12 out of 21 MSMEs interviewed, which are located in the rural village Colonia Pellegrini within the Iberá National Park. In the village the Internet service is unstable, it does not work when climate conditions are bad as it is provided through overhead links, and it is very slow – being the maximum speed 6 megabytes. To overcome the lack of proper internet infrastructure MSMEs tend to prefer the use of smartphones (using mobile data) and some of them even set up strategies to manage on-line communication from nearby cities which have better Internet connectivity.

Skill-needs. Integration through social platforms, like Instagram, impose the need to generate media content to feed their webpage on MSMEs. To most MSMEs interviewed, this was a challenge as they believe they do not have, for example, the capabilities to take good pictures to feed the webpage properly. This challenge is even more acute for MSMEs run by middle-aged people. Many of those firms interviewed asserted that young people in the family helped them in their digital integration. As one firm run by a middle-aged couple asserted: "Until not long ago – not so much now - we would upload something and then our daughter would adjust the content, because our way of communicating is not in the style of this platform, especially with Instagram. She doesn't manage it any more, she intervenes every now and then". Many MSMEs had to also incur in the extra-costs of hiring photographers and/or community managers to generate content for their Instagram. As one women led-MSME said: "I don't manage either Facebook or Instagram. I look at it, but I don't know anything about it, or about posting things. I have zero experience in that, honestly. So, well, first I sought the help of my son. And now, three months ago, we hired a group of guys from Posadas, Misiones, who make posts for us on Instagram".

It is key to point out, however, that when MSMEs end up hiring services to generate platforms' content, they feel the investment is worthwhile: "We hired a group of guys from the city of Posadas (Misiones Province), who make posts on Instagram for us... from those posts we got a huge boost in the number of enquiries through Instagram". "We hired some girls who came especially to take some photos, they took some very nice photos (...) and our clients many times say to us:, 'how beautiful the page is'".

Small business size. This barrier was especially present among MSMEs providing accommodation services (which have mostly six rooms). Using several online channels (WhatsApp, email, social media and e-commerce platforms) expose firms to the risk of overbooking. To reduce that risk and better control booking, MSMEs interviewed prefer using one e-commerce platform at a time, or even not to use platforms at all. As one firm interviewed stated: "I don't have enough rooms to have them published on Booking or any other platform. That's why I only use my website and social media". However, most accommodation providers interviewed do use e-commerce platforms by uploading one or two rooms to one platform (Booking, Airbnb, TripAdvisor or Expedia) to be discoverable online, and then manage the rest of the bookings on other channels (direct contact through email, WhatsApp, web page and social media).

Restrictions to provide a personalized treatment to clients. MSMEs found that e-commerce platforms such as Booking or TripAdisor, limit their ability to reach out to the clients prior to their arrival and, thus, provide them with a personalised treatment. As these are family-owned, small hotels, personalized treatment is considered a key competitive advantage to preserve. In addition, they informed that it is key for them to communicate the characteristics of the place to clients prior to their arrival, so as to manage their expectations (and avoid future complaints). For example, hotels mean to warn clients about the poor Internet access of the place, as performing remote work or attending an online class is barely possible from Colonia Pellegrini.

Costs. Some platforms, as they charge their services in US dollars, can be far too expensive for small businesses. Argentina's large macroeconomic uncertainty , and a devalued exchange rate provide barriers to local businesses, whose services are charged in Argentinean pesos, to have costs in foreign currencies.

The (still) relevant value of the "word of mouth". Regardless of the type of service MSMEs studied provide, greater digital integration is hampered by firms' perception that the business model does not require it, since the word of mouth is still valuable for the business profitability. In addition, as firms interviewed are small businesses where the owner is in charge of the day-to-day running of the business, bookings, payments and answering queries, they think shortage of time goes against further digital integration.

f.Deep dive into women led MSMEs

The development of tourism in the Esteros del Iberá was initiated by women leaders from other regions. Previously in Colonia Pellegrini, the rural village where most of the tourism ventures within the Esteros del Iberá Park are located, rice production predominated. Typically, men worked in the rice fields, and women did the housework and looked after the children. At the end of the 1990s, when the first tourist ventures began, the women of the village began to be called upon to work as cleaners and cooks in the hotels. This generated an important cultural change in the village, since it was not customary for women to work. In the beginning, there was a lot of resistance from local men. Gradually, households became accustomed to women working in tourism enterprises and having two incomes at home. Men also gradually began to be hired by the tourism companies to carry out maintenance work, boat or horseback excursions, or other tasks requiring more physical strength. Today, the village's economic activity is only about tourism.

Our fieldwork research revealed that most of the ventures in the region are led by women from other regions or larger cities more accustomed to a culture in which women work and can play a leadership role. Many of the tourism establishments are owned by couples. On the day-to-day business there is a gender division of tasks: the men run the excursions and organise the maintenance, and the women do all the administration of the establishment (bookings, payments, coordination of staff tasks).

Strategic decisions are made jointly by the couple or the head of the family. Women interviewed affirmed that they are listened to when it comes to business matters. There are also tourism enterprises run only by women (travel agencies, hotels, excursions), who make all the decisions in the establishment.

In terms of digital integration, in establishments owned by a married couple, it is the women who use digital tools. In general, being middle-aged women, they do not have much conflict with childcare (they have already grown-up children) and they also rely on third parties for their own household chores. Women are dedicated to business administration. No particular restrictions are observed for women in the use of digital technologies in terms of gender, nor any discrimination associated with the use of these tools.

g.Case Study: "The case of Arandú - a case about learning the best digital integration strategy"

Arandú is a three-star, five-bedroom hotel located in Colonia Pellegrini, within the National Iberá Park. The hotel was set up in 2018 by a married couple who is also in charge of its administration. Arandú has 3 permanent employees (all women) who are in charge of cleaning and cooking, and two part-time employees (for gardening and washing towels and sheets). Arandú receives a lot of tourism from Argentine families looking to be in contact with nature. From the start, Arandú adopted digital infrastructure (such as WhatsApp, email) and platforms so that new clients could find them on the web. However, through a "trial and error" process, they managed to find the best digital integration for their business based on their capabilities and business model.

In its inception the company opened a Facebook account and registered with Booking. What drove them to Booking was discoverability by customers. In fact, in the first year of the hostel, most new customers came from Booking. In the second year, they were contacted by Google Maps, and, ended up subscribing to such platform.

Booking accounts for 30% of the bookings, although many such bookings originate on Booking platform but then take place outside it. In general, clients first see them on Booking, Google maps or the Municipality's website (where they are also registered), and then contact the company by email, WhatsApp or call them to check availability and corroborate if there is a price difference with the rate that appears on the Booking platform. Once they contact the company, most of the time the booking and the purchase is made directly on WhatsApp and the payment is made by bank transfer, and not through the platforms.

By using Booking, they learnt three things that made them change the way they use the platform:

- The company is part of Booking's Genius programme, which gives them additional benefits. For example, it allows the company to pay an additional commission and be able to appear first on searches. The company decided to contract this service, but later regretted it: "At first, when we were just starting out, we thought that appearing first would be "a good thing" and we used it, but then we realised that you get a legend - which we thought was in bad taste - that says "this establishment has paid an additional commission to appear first", we thought it was awful and we took it down immediately".

- When they first started using Booking, they posted all the rooms available on the platform, but then they realised that it wasn't the best strategy. "Starting last year, we decided to post fewer rooms on the platform, only three. That way I don't have to keep checking all the time to make sure I don't oversell. Therefore I work more relaxed now". "But I'm going to be very honest, I don't dare to take them all down, I don't dare not to be on Booking because I use it a lot for promotion. Clients look at the comments you have on Booking and then they call you".

- Another lesson learned was not to be on Booking in high season or long weekends, because the company knows that it can still sell by word of mouth, and the price it has to charge for the room (including Booking's commission) makes the room overpriced. As the owner of the company asserted: "In July we are not on Booking.

> Before, we were always on Booking, but as we started to get direct bookings, I took rooms down Booking. And what I did was to take it down on long weekends, and in July. You can't book them through Booking, because we have a higher rate at that time. And Booking's commission is very high, and generates expectations that are not what we and our business aims to achieve".

The company tried out other platforms, but they were not suitable. In the case of Expedia, the company says: "the way the platform works is different from Booking, we didn't understand it much, we would post the rate and then they would charge us something else. It also required us to be aware of another platform and avoid overbooking. For 5 rooms, two platforms is too much. Also, we had a room posted on Expedia that sold out twice in six months and we always had problems, so we decided not to use that platform any more".

A relevant issue has been the challenge of the region's poor connectivity, which forced the company to incorporate changes in how to engage with the customer and rent out rooms. "More and more people are going on holiday, but they are still working. So the world of leisure is mixed with the world of work. Today you go on holiday and you take your computer with you because at some point you have to connect. The issue of connectivity becomes fundamental in this. We warn our guests that connectivity is not good in the region, that if someone needs to connect, they should take it into account. What we did was to standardise that message when we exchange messages with clients prior to their visit. We always send them the recommendations of the trip, among other things, for example that there is no pharmacy, there is no gas station and the connection is not good, if they need to work please let them know. In general, we recommend that you don't commit yourself to anything that involves going online, because you might not have Internet connection. We provide them with a computer, but Internet service is not up to us".

The company used Corrientes's public programme Sello Correntino de Calidad (see Box 2), which has been important to improve communication with customers. Hence, communications with customers have been standardised. "When people ask us about availability, we already have a standardised response. If they contact us saying they want a reservation, we have another standardised response. This allows people to receive the same quality of response every time".

5.Analysis of findings

In this section, we provide a discussion on findings in terms of "equitable development" of MSMEs in the agro-processing and tourism sectors in Argentina, based on our study cases. The analysis concisely ties together the various elements of digital integration described in the previous section.

MSMEs studied in the agro-processing and tourism sectors in Argentina started a pathway of digital integration triggered primarily by firms' perceived value of being more easily discovered online, and the growing concern of falling off the map if they did not integrate into the digital world. This perception was even boosted by the COVID-19 crisis, in the case of agro-food producers analyzed.

Firms' integration tends to occur sequentially. First through channels such as the Internet, WhatsApp or email, then through social media platforms, and after that through e-commerce platforms. None of the firms analysed was "born digital". In the choice of social media platforms, Facebook and Instagram are the most used, with a tendency to use Instagram more and more as firms consider that this is the social network that gives them the most visibility, especially among the younger population.

The choice of e-commerce platforms generally follows a trial-and-error process. Given that these are establishments with low knowledge of digital technologies and low availability of resources (as they are small ventures), the choice of the e-commerce platform that best suits the firms' business model, cost structure and capabilities may vary over time. MSMEs studied show that firms may switch platforms over time, but in most cases they do not stop using platforms once they have incorporated them.

Regarding the use of large platforms such as Mercado Libre, Booking or AirBnb, we have observed that many of the MSMEs analysed use them, but with a low degree of dependence. In the case of MSMEs in the agro-processing sector, e-commerce platforms specialised in small agri-food producers, such as AgroJusto and Chasqui, or Tienda Nube, which allows the creation of e-shops for small enterprises, are preferred by many of the producers.

These platforms allow them also to connect in a B2B way, and also offer them training spaces to support the digital integration. Given that these alternative platforms are lower cost, and some even specialise in the type of market, the firms interviewed prefer them to large platforms such as Mercado Libre.

In the case of tourism, only accommodation providers use e-commerce platforms. However, they use them as an additional channel to be discovered, and find value in them mostly at some specific times of the year (mid and low season, for example). They do not consider them essential to the functioning of the business, although they recognise that they provide visibility. Word of mouth is still very relevant for these small establishments. In addition, the small size of the hotels and the restrictions of international platforms to provide specialised services in the treatment of customers prior to their arrival limit the value that platforms can bring to family boutique hotels.

For a number of establishments, there are infrastructure-related barriers to digital integration that can be easily removed through public investment. Such is the case of terrestrial infrastructure for agri-food producers located in remote places to get their products to customers located in distant parts of the territory, and the lack of Internet infrastructure in rural places, such as the Iberá National Park. The lack of skills in the use of digital tools is also a barrier that could be addressed through training programmes in digital technologies and platforms.

Among those with a similar degree of access to digital infrastructure (and transport logistics in the case of agri-food firms), the extent to which the firms analysed have been able to benefit from digital integration has depended on their differential access to resources and their own capabilities. Firms with sufficient resources have been able to compensate, for example, for the lack of in-house capabilities to manage the platforms, by contracting services from third parties. Firms with young people with digitalisation skills have had advantages in making digitalisation decisions and even using digital technologies more efficiently, with some firms even relying on their family networks to do so. Expectedly, the availability of and access to these resources was found to be uneven and inconsistent. Therefore,in terms of "equitable development", the provision of digitisation resources and training can play an important role in promoting equal opportunities to access the benefits of digital integration in each market. For example, only a few firms in the agro-processing sector could harness specific digital tools to run targeted advertising campaigns for particular customers, which impacts on firms' market expansion.

6. Policy recommendations

Improving the digital integration of the MSMEs studied requires policies on two main fronts: promoting digital upskilling and expanding the supply of public goods associated with the needed infrastructure.

The degree of digital integration of firms, and the benefits they could reap from it, was essentially associated with MSMEs own capabilities and resources. Therefore, there are important opportunities to strengthen firms' digital inclusion through training. Short and targeted upskilling programs might be helpful, for instance, to enhance MSMEs understanding of how to take advantage of e-commerce platforms or social networks for marketing purposes in each of its sectors, which are the costs and risks involved. The case of Corrientes's Quality Seal Programme, in the tourism sector, shows the impact that simple policies can have on improving firms' skills for their digital integration. A useful practice can also be through the presentation of success stories in which small entrepreneurs tell how they started their digital inclusion process, the difficulties they faced and the benefits they found.

Investments in public goods - e.g. expanding Internet coverage, or improving land logistics infrastructure - are key to facilitating the process of digital inclusion, particularly among communities living in remote areas of the country. In the case of agri-food producers located in rural locations with poor land logistics, digital integration is constrained by poor connectivity infrastructure.

The deployment of these policies should be carried out from a gender perspective, seeking to promote the digital inclusion of women, particularly those living in impoverished areas of the country. As presented in the case of Viene del Monte, women's entrepreneurship can play a central role in increasing household income, with the use of digital tools being a relevant element. Likewise, promoting the use of digital tools among women also provides them with new tools to get out of situations of discrimination or inadequate treatment, whether in their homes or in other areas of daily life.

Appendix

Table A. List of SMEs included in the Agro-Processing study

Firm name	Location	Foundation yearn	Women led firm	Type of products' certifications	Type of firm	Main products/crops
"La Posta" de Olavarría	Olavarría, Buenos Aires	2017	Yes	agroecological	Agro and food-processing cooperatives	Fruits, vegetables, processed food
Semilla Viva	CABA	2017	No	Organic	Agro and food-processing cooperatives	Processed food
Mercado territorial	Quilmes, Buenos Aires	2015	No	Agroecological	Agro and food-processing cooperatives	Fruits, vegetables, processed food
Mercado Transformador	Haedo & Moron, Buenos Aires	2015	No	Agroecological	Agro and food-processing cooperatives	Fruits, vegetables, processed food
Viene del monte	Victoria Este, Salta	2016	Yes	-	Agro and food-processing cooperativesIndigenous community	Apparel made of natural fibres
Pollos Organicos Carlos Keen	Carlos keen, Buenos Aires	2020	No	Organic	Independent farmers	Chicken meat
Peu SRL	Costa de Anzorena, Mendoza	2016	No	Organic	Independent farmers	Green onion and alfalfa
El Colono	Posadas, Misiones	2014	No	Agroecological	Independent farmers	Fruits and vegetables
La Amistad Bio	Lujan, Buenos Aires	2012	Yes	Organic	Independent farmers	Fruits and vegetables
Siembra Diversa	Guaymallen, Mendoza	2011	Yes	Agroecological	Independent farmers	Fruits and vegetables
Huerta Orgánica La Anunciación	Abasto, Buenos Aires	1989	Yes	Organic	Independent farmers	Fruits and vegetables
Finca Paru	San Rafael, Mendoza	2014	No	Organic	Agro-food processing	Tomatoes, tomato extracts and sauces, olives, other food preserves
Pampa Gourmet	San Fernando, Buenos Aires	2007	No	Organic	Agro-food processing	Dressings and conserves
Aryza	Rio Negro	2005	No	Organic	Agro-food processing	Dressings and conserves

Las Quinas	General Las Heras, Buenos Aires	2003	No	Organic	Agro-food processing	Honey and jams
Olivares San Nicolas	Cruz del Eje, Córdoba	1953	Yes	Organic	Agro-food processing	Olive oil, fruits and vegetables
Yerbeza	Ciudad de Buenos Aires	2020	No	Organic	Agro-food processing	Beer with mate (Argentinian infusion)
Bapan	General Rodriguez, Buenos Aires	2019	No	Organic	Agro-food processing	Flours
Arasá	Carlos Pellegrini, Corrientes	2015	Yes	-	Plant-based food & food processing	Jam made of berries
Nuestras Manos	Godoy Cruz, Mendoza	2002	No	Organic	Plant-based food & food processing	Jams, syrups and fruit pulps

Table B. List of SMEs included in the Tourism Study

Firm name	**Location**	**Foundation year**	**Number of employees (women)**	**Type of firm, main products or service**
Arandú	Carlos Pellegrini, Corrientes	2018	7 (5)	Accommodation
Ecoposada del Estero	Carlos Pellegrini, Corrientes	2012	16 (11)	Accommodation
Casa de Esteros e Iberá Explorer	Carlos Pellegrini, Corrientes	2021	9 (5)	Accommodation
Camba Cuá	Carlos Pellegrini, Corrientes	2012	3 (3)	Accommodation
Rancho Inambú	Carlos Pellegrini, Corrientes	2002	5 (3)	Accommodation
Santa Ana del Iberá	Carlos Pellegrini, Corrientes	2010	5 (3)	Accommodation
Rancho de los Esteros	Carlos Pellegrini, Corrientes	2006	8 (4)	Accommodation
Torres de Guayaibi Hotel Boutique	Mercedes, Corrientes	2013	4 (3)	Accommodation
Costa Iberá	Carlos Pellegrini, Corrientes	2018	3 (2)	Restaurant
Restaurant Pizza Libre	Mercedes, Corrientes	2002	14 (7)	Restaurant

Iberá Spirit - Silvina Martinez viajes y turismo	Mercedes, Corrientes	2005	1 (1)	Travel agency
Transporte 2 de Abril	Mercedes, Corrientes	2011	3 (1)	Transport
Guayrá Turismo Alternativo	Carlos Pellegrini, Corrientes	1999	2 (1)	Transport
Estancia San Antonio	Carlos Pellegrini, Corrientes	2008	4 (2)	Others, excursions and tours - horseback rides, hiking, wildlife watching
Arasá	Carlos Pellegrini, Corrientes	2015	1 (1)	Others, jams with berries
Los Carros	Carlos Pellegrini, Corrientes	2007	3 (1)	Others, excursions and tours - horseback rides, boating, hiking, wildlife watching
Don Coco	Mercedes, Corrientes	1998	4 (2)	Others, jams with berries, liqueurs.
Arandupó artesanías	Mercedes, Corrientes	2020*	4 (2)	Others, handicrafts, art
Artesanías del Iberá	Mercedes, Corrientes	2020*	4 (4)	Others, handicrafts, art
Yandepó Artesanias	Mercedes, Corrientes	2005*	9 (8)	Others, handicrafts, art
Fundación Manos Correntinas	Mercedes, Corrientes	1977	10 (10)	Others, Foundation, handicrafts