The paper examines whether country-level digitalization affects female and male entrepreneurial potential differently, using a comparative analysis of 78 countries and gender-specific composite indicators (the Female Entrepreneurship Index, FEI, and Male Entrepreneurship Index, MEI) built on the National Systems of Entrepreneurship framework. Digitalization is considered as a core force reshaping entrepreneurship by changing how opportunities are identified, ventures are built, and firms scale, while also stressing that digital benefits are unevenly distributed and often gendered. In our paper we identify a key research gap in the field of entrepreneurship research: although many studies discuss digitalization and women's entrepreneurship, evidence is fragmented, often contradictory, and rarely compares women and men directly in this setting. The paper therefore asks whether digital transformation affects female and male entrepreneurial potential differently, and addresses this through a cross-country, multilevel design that combines individual and institutional dimensions of entrepreneurship. It further argues that digitalization may not automatically reduce gender inequality in entrepreneurship and previews a central contribution: digitalization supports entrepreneurship for both genders overall, but its gendered effects vary across national contexts and may even widen existing gaps where male entrepreneurial potential is already stronger.

A systematic literature review synthesizing 48 peer-reviewed studies has been carried out on digitalization and female entrepreneurship, showing broad agreement that digital technologies can support women's entrepreneurial activity in multiple ways. The strongest recurring theme is flexibility: digital tools enable home-based or hybrid work arrangements that help women balance business and family responsibilities. The role of social media and digital platforms (e.g., for marketing, sales, and customer engagement) has also been highlighted, as well as online learning and skill development, improved access to financial services and financial literacy tools, and expanded social capital via digital communities, mentoring, and international networks. Additional benefits include lower startup costs and reduced barriers to market entry, which make digital business models particularly attractive. At the same time, we note an important limitation: most studies focus only on women, which makes it difficult to determine whether these observed benefits are unique to women or simply general entrepreneurship effects that also apply to men.

Based on the literature, digitalization's benefits are highly context-dependent and often mediated by structural conditions, which helps explain mixed findings in the comparative literature. We identified four sets of contextual regulators: (1) technical conditions (internet access, devices, and digital skills), (2) resource conditions (financial, social, and educational capital), (3) socio-cultural and psychological conditions (gender norms, confidence, and self-efficacy), and (4) institutional and regulatory conditions (policies, legal protections, and support systems). Based on this, the paper highlights two major gaps: the lack of systematic male-female comparisons and the limited attention to how digitalization reshapes national entrepreneurial systems themselves. We therefore propose a conceptual model that treats digitalization as a system-level transformative force within national entrepreneurship ecosystems, affecting access to skills, finance, governance, and markets. This framework leads to two hypotheses: digitalization should be positively associated with both female and male entrepreneurial potential, but its positive effect is expected to be stronger for men than for women.

We define national entrepreneurial potential as our dependent variable and measure it separately for women and men using the Female Entrepreneurship Index (FEI) and Male Entrepreneurship Index (MEI), both rooted in the National Systems of Entrepreneurship framework. These indices combine individual-level entrepreneurial

attitudes/activities/aspirations (from GEM APS) with country-level institutional conditions, so they capture both micro and macro dimensions of entrepreneurship. To maximize cross-country coverage, we include countries with GEM data from 2017 onward and, when multiple years are available, we use the most recent year; this yields a broad sample of 78 countries. Our main independent variable is digitalization, proxied by the Network Readiness Index (NRI), specifically the technology-and-people-related dimensions (NRITP). We also include controls for economic development (GDP per capita), market structure (firm density), gender inequality (female political empowerment, from the Global Gender Gap framework), and demographic pressures (sex ratio at birth) to isolate the net association between digitalization and gender-specific entrepreneurial potential. We report descriptive statistics for all variables and note substantial cross-country variation in entrepreneurship, digital readiness, wealth, gender equality, and firm density.

We test our hypotheses with a stepwise OLS regression design that lets us compare female and male entrepreneurship in a consistent way and identify the incremental contribution of digitalization. First, we estimate baseline models using only the control variables (for FEI and MEI separately), then we add the digitalization indicator (NRITP) in a second step to evaluate whether it improves explanatory power and model fit. We standardize the variables using z-scores before estimation, which makes coefficients directly comparable across variables and across the FEI and MEI models. To examine whether digitalization also affects the gender gap itself, we run additional OLS models using derived dependent variables based on the FEI-MEI difference, and we apply a Chow test to detect structural breaks between countries where female entrepreneurial potential exceeds male potential and countries where the reverse holds. This combined strategy allows us to assess not only whether digitalization matters, but also whether its effects differ systematically by gender and country context.

In our analyses, we first show that digitalization is positively associated with entrepreneurial potential for both women and men, but with some important differences. In the FEI models, when we include only controls, all controls are significant, and the model already explains a large share of variance ($R^2 = 0.747$). After adding digitalization, explanatory power increases substantially ($R^2 = 0.843$), and digitalization becomes a strong positive predictor of female entrepreneurial potential ($\beta = 0.4533$, $p < 0.0001$). In this FEI model, GDP per capita remains strongly positive, firm density remains significant, female political empowerment becomes only a weak predictor, and sex ratio loses significance. In the MEI model (M2), we find a similarly strong but slightly larger digitalization effect ($\beta = 0.4824$, $p < 0.0001$), with model fit also high ($R^2 = 0.827$). Comparing FEI and MEI directly, we conclude that digitalization and GDP per capita affect both indices in broadly similar positive ways, but digitalization's estimated coefficient is somewhat larger for men; we also observe that firm density matters for FEI but not for MEI once digitalization is included, which suggests that competitive environments condition female entrepreneurial potential more strongly.

We then analyze the gender gap directly by modeling the MEI–FEI difference. In the pooled model, we find a positive association between digitalization and the MEI–FEI gap, indicating that higher digitalization tends to increase the male advantage rather than reduce it, although the explanatory power of this simple gap model is modest indicated by low explained variance. We then run a Chow test and detect a clear structural break between countries where FEI is larger than MEI and those where MEI is largen than FEI, which leads us to estimate the two subsamples separately. In countries where female entrepreneurial potential is already higher (FEI > MEI), digitalization has essentially no effect on the gap (coefficient near zero; $p = 0.985$; $R^2 = 0.000$). By contrast, in countries where male entrepreneurial potential is stronger (MEI >

FEI), digitalization has a positive and statistically significant effect on the gap ($\beta = 0.2099$, $p = 0.067$), implying that digitalization tends to widen the gap further in contexts where men already lead. We interpret the overall pattern as conditional and path-dependent: digitalization supports entrepreneurship generally, but its gender effect depends on the preexisting entrepreneurial balance, and in many settings, it amplifies rather than closes inequality.

In our paper, we synthesize the core empirical message of the paper as a conditional one: while digitalization supports entrepreneurial potential in general, its gender effects are uneven and depend on the preexisting entrepreneurial balance in a country. We conclude that digitalization tends to increase the advantage of male entrepreneurial potential in countries where men already outperform women (MEI > FEI), whereas it does not significantly affect the gender gap in countries where female entrepreneurial potential is stronger (FEI > MEI). We therefore argue that digitalization is not a universally equalizing force in entrepreneurship and may instead reinforce existing structural asymmetries. In this sense, our findings challenge optimistic accounts that treat digitalization as inherently gap-closing and are more consistent with the view that men often convert digital resources into entrepreneurial outcomes more effectively because of stronger access to networks, resources, and technology-intensive sectors.

Based on our results, digitalization should be understood as embedded in broader institutional and social systems rather than as an isolated technological driver. Theoretical implications of our paper suggest that future gender-sensitive entrepreneurship research should model digitalization together with competitive conditions, institutional quality, and structural inequalities, because the same digital environment can produce different outcomes for women and men. We stress that policy should go beyond expanding digital infrastructure or basic digital access: if the goal is to improve female entrepreneurial potential, interventions must also strengthen market access, competitiveness, inclusive networks, and support mechanisms that address persistent sociocultural and structural barriers. We also highlight the need for integrated policies that combine digital literacy, inclusive digital ecosystems, and progress in political and economic gender equality; otherwise, digitalization alone is unlikely to narrow the entrepreneurship gap.