

# **Digital Platform-Enabled Organizational Resilience in Major Exogeneous Shocks:**

## **A Multimethod Exploration Study of Platform's Network Effect on SMEs' Digital Resilience during COVID-19**

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### **Extended Abstract**

In this study, we investigate the impact of digital platforms on the digital resilience of small and medium-sized enterprises (SMEs) during major exogenous shocks. Exogenous shocks are massive events that disrupt businesses across industries and create considerable uncertainty on how to respond and adapt to them (Boh et al., 2021). In contrast with the 2008 global financial crisis, the recent COVID-19 has led to shifts in customer behavior worldwide (Guthrie et al., 2021). From offline shopping, buyers started to shop online, particularly during the lockdown restrictions the world has experienced. Therefore, it has vividly surfaced need for firms across industry sectors to swiftly transform their digital capabilities to successfully address such drastic changes, thereby achieving digital resilience (Boh et al., 2021).

Compared to large firms, SMEs are more vulnerable to the substantial changes caused by the COVID-19 crisis. This is due to their inherent lack of important resources (e.g., digital, financial, human), impacting their adaptability to the new market norms (Belitski et al., 2022; Eggers 2020). Therefore, to rapidly overcome those constraints, which might take some time to develop, many SMEs have partnered with third-party digital platforms (Kumar et al., 2021; Asadullah et al., 2020). With their all-in-one digitally-enabled services, digital platforms support SMEs with the necessary digital resources (e.g., online customer base, marketing features, customer review systems, live chatting tools) to adapt quickly to changes in customer behavior. Through the platforms, SMEs manage to continue to transact with their existing customers who have moved to online shopping due to the COVID-19 disruption. Although this enabled their digital resilience, the network effect – resulting from the increasing participation of both SME sellers and customers during COVID-19 – makes it challenging for the platform owners to sustain their performance at a higher level for every individual SME, hence diminishing the value of digital platforms for SMEs' resilience. While digital platforms have emerged as a potential strategic partner for SMEs during COVID-19, there is limited research that examines the factors that enable and hinder the impact of digital platforms on SMEs' resilience during a major exogenous shock (Miklian et al., 2022). In this research, we aim to address this research gap.

We conducted the research using a three-stage multimethod approach (Mingers 2001). First, we integrated the organizational resilience theory (Khurana et al., 2022; Williams et al., 2017) with the digital platform's perspective (Cenamor et al., 2019; Vial 2021; Xu et al., 2010) to develop a theoretically driven research model, namely, the "Platform-enabled SMEs' Digital Resilience Research Model." The initial research model distinguishes between the two broad categories of network effects, positive and negative network effects, which might have different effects on SMEs' digital resilience. Although existing studies have recognized the network effect of digital platforms, the mechanism by which two categories of network effects impact digital resilience remains unclear.

Second, we contextually refined the research model using a case study. The case study's findings helped determine the particular forms with corresponding mechanisms that could impact digital resilience under the two network effect categories. The findings were based on inputs from FairPrice Marketplace – one of the largest digital platforms in Singapore established by NTUC FairPrice (Singapore's leading supermarket chain). During COVID-19, FairPrice marketplace constantly sought ways to support local SME retailers to tide through the global pandemic crisis and rediscover new drives for growth and expansion. Concurrently, the marketplace encountered multiple challenges in sustaining the service level when their seller-customer network scaled tremendously during COVID-19. The case provided an ideal setting to study the positive and negative network effects on SMEs' digital resilience. We collected the case study data through 14 interviewees with both the marketplace's SME sellers and the marketplace's core members– to gain a comprehensive perspective when refining the research model. Each interview lasted from 1 to 2.5 hours.

Third, we tested the refined research model by surveying 200+ SMEs. We have developed a survey questionnaire by adapting the existing measurements of digital resilience and network effects into the current context (i.e., the FairPrice marketplace). The questionnaire was pre-tested with FairPrice marketplace managers and their SME sellers to enhance its content validity and face validity. The survey is targeted towards SMEs participating FairPrice marketplace. We plan to use Partial Least Squares (PLS) for the data analysis as PLS is generally recommended for theory development rather than theory confirmation research model (e.g., LISREL) (Joreskog 1982). Further, PLS is capable of accounting for both formative and reflective constructs, which are included in our research model.

The preliminary findings suggest that digital platforms could leverage the positive network effect through the facilitation of network-based cognitive resources and network-effect-enabled coordination capability while concurrently reducing the negative network effect through the development of a balanced relationship-building capability to support SMEs in achieving digital resilience. Our study contributes to the digital resilience literature (Boh et al., 2021) by providing a model that explains how and why digital platforms are able to empower SMEs to achieve digital resilience in a state of major exogenous shock. Whether for research, policy-making, or social program development, our developed platform-enabled digital resilience model offers a basis to devise appropriate strategies to harness digital platforms' power in building more sustainable communities amid crises across the world.

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