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Stay alert, save businesses.
Planning for adversity among immigrant entrepreneurs

Purpose: Against the theoretical backdrop of the embeddedness and the resilience literatures, this paper investigates if and how SMEs' planning for adversity affects firms' performance.

Design/methodology/approach: The paper develops hypotheses that investigate the link between the risk management of immigrant-led and native-led SMEs and their performance and draw on novel data from a survey on 900 immigrant- and 2,416 native-led SMEs in 5 European cities to test them.

Findings: Immigrant-led SMEs are less likely to implement an adversity plan, especially when they are in an enclave sector. However, adversity planning is important to enhance the growth of immigrant-led businesses, even outside a crisis period, and it reduces the performance gap vis-à-vis native-led businesses. Inversely, the positive association between adversity planning and growth in the sample of native entrepreneurs is mainly driven by entrepreneurs who have experienced a severe crisis in the past.

Originality: This paper empirically uses planning for adversity as an anticipation stage of organizational resilience and tests it in the context of immigrant and native-led SMEs. Results support the theoretical reasoning that regularly scanning for threats and seeking information beyond the local community equips immigrant-led SMEs with a broader structural network which translates into new organizational capabilities. Furthermore, results contribute to the process-based view of resilience demonstrating that regularly planning for adversity builds a firm's resilience potential, though the effect is contingent on the nationality of the leaders.

Keywords: SMEs, Immigrants, Firm growth

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Introduction

In recent years significant flows of immigrants have shaped the European venturing scene (for an overview, see Dabić *et al.*, 2020). For many, starting a small business to support themselves is a way to integrate into the host society (Eurostat, 2017). However, immigrants experience more challenges than their mainstream counterparts in starting and sustaining their businesses (Dabić *et al.*, 2020, Ram *et al.*, 2017). As a result, their businesses tend to be more precarious, with lower turnover and smaller survival rates (OECD, 2017). The significant task of lasting economic integration makes the topic of immigrant entrepreneurs' resilience highly relevant for scholars and policy makers (e.g., Fairlie and Lofstrom, 2015). However, the extant literature has mainly contemplated organizational resilience from the perspective of larger organizations (Battisti and Deakins, 2017, Branicki *et al.*, 2018). In tandem, the immigrant entrepreneurship literature discusses the drivers of immigrant-led business performance and the performance gap between native- and immigrant-led businesses (Altinay and Altinay, 2008, Ensign and Robinson, 2011) with scant attention to how that performance is influenced by entrepreneurs' approach to adversity.

At the intersection of the two literatures, reside important questions about the resilience of immigrant-led small and medium enterprises (SMEs), that could help improve their integration into the host country. For instance, do immigrant business owners plan differently and more successfully for adversity because of their own relocation experiences? This paper focuses particularly on different levels of risk mitigation among immigrant entrepreneurs and sets their behaviors regarding planning for adversity in relationship with the performance of their ventures (Fairlie and Lofstrom, 2015). This is especially important, given the recent findings on changing risk-taking propensity over time and depending on social context among Chinese immigrant entrepreneurs (Rodríguez-Gutiérrez *et al.*, 2020).

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Theoretically, literature indicates that immigrant entrepreneurs might encounter greater challenges when facing adversity as they often share characteristics with the most vulnerable during recessions (i.e., low-skilled, informal, or low-technology sector entrepreneurs - for an overview, see Dabić *et al.*, 2020). Also, immigrant entrepreneurs often run their businesses differently to native entrepreneurs, relying on informal social networks for strategic support or funding without undertaking any formal business planning (Van Delft *et al.*, 2000). Such entrepreneurial approaches characterize an informal way of doing business that could be the key to initial economic and social integration, but that might ultimately limit the firms' growth.

The paper adopts the lens of the social embeddedness theory (Granovetter, 1985) which emphasizes the role of social relationships in economic activity (McKeever *et al.*, 2015). Both relational and structural embeddedness are essential because they allow the members of immigrant networks to access community, financial and non-financial resources within the host country (Lassalle *et al.*, 2020). This lens enables us to examine how, in the context of their network structure, immigrant entrepreneurs manage their businesses.

The focus of the paper is on their approach to planning for adversity i.e., the ability to detect a critical development and to adapt proactively to prevent possible disturbances (Boin and Van Eeten, 2013, Ortiz-de-Mandojana and Bansal, 2016). The paper develops testable hypotheses that investigate the mediating role of risk management practices of immigrant SME leaders and the performance of their SMEs, responding to calls to enhance understanding of the processes and conditions that help to leverage the value of diversity in entrepreneurship (Vershinina and Rodgers, 2019). The paper draws on novel data from a survey on 900 immigrant- and 2,416 native-led SMEs in 5 European cities (Paris, Frankfurt, Milan, Madrid, and London) collected between fall 2018 and spring 2019. While planning for adversity is an important tool to enhance firm performance,

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and planning for adversity reduces the performance gap between immigrant- and native-led businesses, results show that immigrant-led SMEs plan less for adversity than native-led SMEs. Additionally, the study demonstrates that the positive relationship between adversity planning and performance is stronger for immigrant-led SMEs than for native-led SMEs, even outside a crisis period. Inversely, the positive association between adversity planning and growth in the sample of native entrepreneurs is mainly driven by entrepreneurs who have been hit by a severe crisis in the past five years.

This study offers four main contributions. Firstly, it contributes to immigrant entrepreneurship literature that focuses on performance but that has hitherto overlooked the link with adversity planning with the finding that immigrant-led firms plan less for adversity, particularly those in enclave sectors, but that when they do plan this is linked to better performance even outside of a crisis. This finding suggests that planning for adversities can positively impact on general business performance in immigrant-led firms. Prior literature focused on performance in immigrant firms has investigated a range of firm and individual-level factors such as risk appetite (e.g., Van Stel *et al.*, 2021), access to resources (e.g., Gurău *et al.*, 2020), and human and social capital (e.g., Kloosterman, 2010) but none has considered the connection between performance and adversity planning.

The study also contributes to literature focusing on social embeddedness in immigrant entrepreneurs. To date, this literature has identified the value that immigrant entrepreneurs can derive from their embeddedness in their immediate social networks, i.e., relational embeddedness, including access to financial and other resources (e.g., Evansluong *et al.*, 2019, Meister and Mauer, 2019) and preferential access to specific market sectors (Ndofor and Priem, 2011) but it has not looked beyond to more broader embeddedness. With the finding that adversity planning can

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enhance performance, this study demonstrates the value of developing broader structural embeddedness, since adversity planning implies collecting information and resources through building connections beyond their immediate social networks. The paper thus elucidates the ways in which immigrants integrate into the economic frameworks of their host cities by demonstrating the importance of regular planning activities in building business resilience. This extends the social embeddedness literature, with a focus on the structural embeddedness of immigrant entrepreneurs, and responds to calls to understand and evaluate 'the critical importance of the structural context in which migrant enterprise operates' (Ram *et al.*, 2017).

The study contributes to organizational resilience literature with its focus on the resilience practices of immigrant entrepreneurs. Immigrant entrepreneurship is an under-researched area (Ram *et al.*, 2017) which merits focus in order to generate understanding into the sources of disadvantage experienced by migrants and their businesses. Studies contemplating the resilience of immigrant entrepreneurs to date are limited in scope and have tended to focus on the positive effects of co-ethnic ties within their enclaves (e.g., Lofstrom, 2017), or on the increased resilience that they may have derived from their migrant journey (e.g., Mawson and Kasem, 2019). Extending this focus to an examination of the resilience practices of immigrant-led firms, this study finds that these firms are less likely to plan for adversity when operating in an ethnic enclave sector. This in turn suggests that operating in an enclave sector may make an immigrant-led firm less likely to develop adversity plans, which may have implications for its resilience.

Finally, this study contributes to the process-based view of resilience with its focus on the anticipation stage of resilience, and specifically on adversity planning as a key antecedent of resilience. While the importance of resilience planning for adversity survival has been identified (e.g., Latifah *et al.*, 2021, Mpekiaris *et al.*, 2020), the majority of extant studies have considered

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resilience in the aftermath of a crisis (Duchek, 2020, Marcazzan *et al.*, 2022) with a focus on the impacts and responses. This study addresses this under-researched area, and its findings indicate that for immigrant entrepreneurs, the benefits of resilience planning may be felt even in the absence of a crisis.

Theoretical background

Planning for adversity as anticipation of resilience

Organizations inevitably face adversity that threatens functioning and performance at any moment in time (Whiteman and Cooper, 2011). For this reason, it has been widely argued that firms should enhance their organizational resilience, which is the ability to cope successfully with unexpected events, bounce back from crises, and promote future success (Duchek, 2020). Indeed, a highly resilient organization is more adaptive, competitive, agile, and robust than less resilient organizations and rebounds from adversity strengthened and more resourceful (Denyer, 2017).

Much research on organizational resilience has focused on large firms. In this context, resilience has often been conceptualized as being derived from their employees' psychological traits (Luthans, 2002) and behavioral and cognitive capabilities (Williams et al., 2017). It has also been presented as rooted in the firm's processes, including the empowerment of managers (Alesi, 2008), the use of responsible management practices (Ortiz-de-Mandojana and Bansal, 2016) and the development of the right culture to navigate adversity (Koronis and Ponis, 2018). Conversely, resilience in small firms has been much less studied (Battisti and Deakins, 2017). Part of the literature agrees that SMEs generally are more vulnerable than larger companies because they have more difficulties in obtaining resources compared to larger firms (Freeman *et al.*, 1983), suffer shortcomings in terms of technological, managerial, and human capabilities, and depend more

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strongly on a few customers and suppliers (Branicki *et al.*, 2018, Chowdhury, 2011). However, SMEs also show some features that could enhance organizational resilience (Eggers, 2020). They can be more flexible when opportunities or threats arise because they are less affected by inertia, rigidity, and sunk costs (Tan and See, 2004) and their decision making processes are less bureaucratic (Battisti and Deakins, 2017). Moreover, decision-makers are closer to the ground and may quickly adapt to constantly changing customers' and other stakeholders' needs and can reorganize and withstand adversities (Eggers *et al.*, 2012).

A capability-based conceptualization of organizational resilience has been recently proposed by Duchek (2020), asserting that resilience is dynamic in nature, can be conceptualized as a multi-stage process (Williams *et al.*, 2017), and emerges as a "unique blend of organizational capabilities and routines" (Duchek, 2020). The three stages of this process are anticipation, coping, and adaptation, therefore this model follows studies that see resilience as a proactive, rather than defensive, response to crisis (Lengnick-Hall *et al.*, 2011).

Firms can react to a crisis by preparing a plan as soon as they perceive adversity using crisis management practices (i.e., acting with a containment effect), or they can prepare a plan in advance to deal with unknown potential threats (i.e., acting with an anticipation effect). In the former, crisis management practices involve the capability to correctly frame the threats to the organization and design a plan for addressing them (Spillan and Hough, 2003, Vargo and Seville, 2011). In contrast, planning in advance relates to how firms anticipate (rather than react to) to unpredictable, high-impact situations (Pearson and Clair, 1998), as well as the cumulative daily disturbances that threaten and can eventually cause the proper functioning of the organization to degenerate (Williams *et al.*, 2017).

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This paper focuses on planning in advance, i.e. on the anticipation stage of resilience that is the ability to detect a critical development and to adapt proactively, preventing possible disturbances (Boin and Van Eeten, 2013, Ortiz-de-Mandojana and Bansal, 2016). Anticipating threats and preparing accordingly can reduce organisational vulnerability and improve organisational resilience (Burnard *et al.*, 2018, Latifah *et al.*, 2021, Mpekiaris *et al.*, 2020). Anticipation allows the firm to identify unknown internal or external threats (Rauch and Hulsink, 2021), to prepare for them and to mitigate their impact (Duchek, 2020). Anticipation is shown through a variety of actions, both informal, such as effective relationships and mutual understanding, and formal, such as the development of plans that delineate potential threats and the corresponding response actions. The focus of this paper is on the role of planning in advance as a way to plan for adversity (Mpekiaris *et al.*, 2020, Vargo and Seville, 2011). Planning for adversity is a process through which firms develop a plan to mitigate adverse events before they arise. The adversity plan should have the same importance as the strategic plan and should be simple and easy to execute if crisis hits (Hough and Spillan, 2005).

Planning for adversity can help in formulating reasonable understandings of event characteristics (i.e., micro- vs. macro-events, valence, uncertainty, temporal focus, and magnitude) (Rauch and Hulsink, 2021) and in developing the ability to scan the internal and external environments, determining how they are expected to evolve, identifying opportunities as well as potential sources of crises through the recognition of early signals or scenario-based techniques. Accordingly, SMEs should take decisions that enhance the possibility of the firm to thrive and circumvent the risk of future disruptions (Ortiz-de-Mandojana and Bansal, 2016). These abilities will help firms to perceive and respond to changes before their effects become real and the entire community cope with and recover from adversity (Rauch and Hulsink, 2021).

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Despite the importance of planning for adversity as a proactive action to enhance organizational resilience through anticipation, few studies have examined organizational resilience as a process before the impact of a crisis event in the context of SMEs (Han and Nigg, 2011, Herbane, 2015, Mpekiaris *et al.*, 2020, Sadiq and Graham, 2016, Spillan and Hough, 2003). Conversely, most studies focus on resilience mainly after the impact of crisis events and in the context of larger companies (Marcazzan *et al.*, 2022).

Immigrant entrepreneurs and business performance

Immigrant entrepreneurs are defined as entrepreneurs that reside and create their business outside their country of origin (Dabić *et al.*, 2020). This definition centers on first-generation immigrants, who tend to retain a strong identification with their origins, while acquiring new skills, values, and attitudes within a different societal context[i].

Immigrant entrepreneurs are a heterogeneous group with diverse motivations and attributes which determine the type of business they establish (Gurău *et al.*, 2020, Rodríguez-Gutiérrez *et al.*, 2020). Existing literature linking immigrant entrepreneurs and performance is sometimes contradictory, possibly because it represents two polarized groups – those who are pushed into entrepreneurship due to difficulty gaining employment and those for whom entrepreneurship is their preferred option (Ndofor and Priem, 2011). Indeed, most immigrants experience downward occupational mobility when they arrive in a host country. Host country employers fail to recognize immigrants' qualifications and experience, and even when they speak the local language, their accent is perceived as the inability to communicate fluently (Creese and Wiebe, 2012). As a result, immigrants tend to settle within specific locations or enclaves (OECD, 2018), which sustain community-based markets, generating opportunities to serve co-ethnics, typically in retail,

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accommodation, and food services sectors that provide little potential for business expansion (Evansluong *et al.*, 2019, Kerr and Kerr, 2020). These markets are easily accessible for immigrants low in human capital, as they do not require significant educational qualifications or capital investments (Kloosterman, 2010). The contextualization of immigrant entrepreneurship in comparatively homogeneous ethnic enclaves contrasts with the diversity that immigrants contribute to economic activity (Yamamura and Lassalle, 2021).

As entrepreneurship may be seen as an alternative to earning a living rather than a way to pursue high returns, many immigrant entrepreneurs are reluctant to take the business risks required to grow, especially if they judge their entrepreneurial ability to be lower than that of native entrepreneurs (Van Stel *et al.*, 2021). Their fear of business failure may be exacerbated by being outside the welfare systems in their home and host countries and their inability to marshal the financial and other resources needed to grow the venture (Bruder *et al.*, 2011, Gurău *et al.*, 2020). This is perhaps why empirical evidence shows that immigrant-led businesses lag behind native-led businesses in terms of sales, profits, survivability, and employment in knowledge intensity industries (Mueller, 2014) or non-high tech sectors (Kerr and Kerr, 2020).

On the other hand, there is growing evidence that some immigrant entrepreneurs are potentially advantaged compared to their native peers and perform exceptionally well (McKeever *et al.*, 2015). The lived experience of migration, for example, has been found to shape individuals' perceptions of their abilities, increasing their confidence and entrepreneurial intentions (Mawson and Kasem, 2019). Highly skilled immigrant entrepreneurs represent a significant share of entrants in high-tech industries, in locations like New Jersey or California (Kerr and Kerr, 2020). In high-tech industries, immigrant-led firms resemble native-led firms in terms of international activities

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and start-up and expansion financing, even outperforming them on innovation, perhaps because of their transnational networks (Brown *et al.*, 2019).

Given the diversity of immigrant entrepreneurs, the paper focuses on immigrant entrepreneurs from low-income neighborhoods, who usually respond to push factors when setting up their venture because they are located in neighborhoods with low social indexes (OECD, 2018). These areas are also disproportionately affected by adversity, and so the resilience of these firms becomes essential to the inclusion of the most vulnerable communities.

As the paper develops specific hypotheses, it highlights why immigrant-led firms might develop less organizational resilience, i.e., plan less for adversity, and the role that such planning has on performance. It then describes why immigrant entrepreneurs' choice to plan for adversity relates to the performance gap between native and ethnic entrepreneurs.

Hypothesis development

Planning for adversity among immigrant-led SMEs

The decision of firms to plan for adversity depends on the characteristics of the firm and its entrepreneur (Arend *et al.*, 2017). Previous studies demonstrate that firms that have experienced a crisis plan for, and react faster and better to, shocks having learned from experience (Carmeli and Schaubroeck, 2008, Doern *et al.*, 2016). Firm size also affects the decision to plan for adversity: larger organizations plan for adversity more often than smaller ones (Herbane, 2010). It is also known that SMEs prefer to contain downsides when they face risks instead of trying to anticipate them (Falkner and Hiebl, 2015).

As regards entrepreneur characteristics, gender and education impact the ways in which entrepreneurs plan for adversity: male entrepreneurs and those with low educational attainment

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plan less (Josephson *et al.*, 2017). It is also conceivable that proximity to others who plan prompts planning in entrepreneurs, while lower communication skills might hamper it. The paper extends this discussion, arguing that the propensity to plan for adversity may also vary depending on the entrepreneur's origin. Immigrant entrepreneurs share several characteristics with those that are less likely to plan for adversity. Also, their configuration of linkages in the host country is related to a lower capacity to anticipate environmental changes and willingness to plan. Immigrant entrepreneurs are seen as dependent on their relational embeddedness (Granovetter, 1985) within their family and ethnic enclave for support (Van Delft *et al.*, 2000). Past studies show that personal networks provide critical resources for starting a business, including financial resources and intangibles such as self-confidence and support (Van Delft *et al.*, 2000). Such networks provide advantages to immigrants, by facilitating access to scarce resources (Aldrich and Kim, 2007). These resources are critical in reducing immigrants' likelihood of exiting entrepreneurship (Bird and Wennberg, 2016). Yet, despite these advantages, these closely-knit networks may limit the exposure of immigrant entrepreneurs to the host country's formal institutions, hindering their understandings of local systems and markets (Harima, 2022), and overall making them more likely to perpetuate the models their close circle has relied on for years (Bruton *et al.*, 2003). This may be counter-indicative to the planning approach, where consideration of new and changing circumstances is key. An early warning system is unlikely to develop. Consequently, immigrant-led SMEs might lag behind native-led businesses in their likelihood to engage in adversity planning. Thus hypothesis 1 follows:

> Hypothesis 1 (H1). *Immigrant-led SMEs are less likely to plan for adversity compared to native-led SMEs.*

Planning for adversity and enclave sectors

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Migrant entrepreneurs could potentially derive human and social capital benefits from networks that connect them with native entrepreneurs (Meister and Mauer, 2019). However, as noted above, many immigrant entrepreneurs settle in enclaves and focus their business activities on providing specific products and services often in under-developed market sectors related to their community and in which they may have a competitive advantage over non-migrant entrepreneurs (Ndofor and Priem, 2011, Williams and Krasniqi, 2018). These market sectors are often labour intensive and service-oriented areas such as hospitality, transportation, trade and services (Kerr and Kerr, 2020). Thus, they exploit their superior understanding of and privileged access to their co-ethnics (Hamid *et al.*, 2019), but they tend to serve their community instead of reaching a more mainstream market. Consequently, immigrant entrepreneurs settled in enclaves may depend on their proximal community network, and be more likely to operate in specific enclave sectors and less likely to develop external connections (Wilson and Portes, 1980). In this scenario, planning practices are less likely to emerge, as these entrepreneurs might feel less exposed to economic shock because demand for their specialist goods and services is comparatively stable. Moreover, they might find access to (emergency) financial capital from their networks as well as access to supportive sources of supply and consumer outlets, even in adversity. Consequently, immigrant-led SMEs might perceive less need than native-led SMEs to plan for adversity they feel they are less likely to experience. These arguments suggest:

> Hypothesis 2 (H2). *Operating in an enclave sector intensifies the negative relationship between immigrant-led SMEs and planning for adversity.*

Planning for adversity and performance

From the crisis management perspective , the relationship between firm performance and adversity planning has been principally explored through the lens of organizational resilience. Scholars have

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sought to explain how adversity planning helps to preserve performance in times of adversity (Williams *et al.*, 2017). Crisis management enables firms to prepare the resources and organizational structures needed to respond to and recover from adversity (Vargo and Seville, 2011). Planning proactively for adverse events allows firms to minimize the negative consequences of predictable crises associated with organizational operations, and anticipate those contingencies that may adversely affect organizational performance (Pollard and Hotho, 2006). In view of the above, hypothesis 3 follows:

> Hypothesis 3 (H3). *There is a positive relationship between planning for adversity and business performance.*

Performance and the occurrence of a crisis

Organizations inevitably face adversity that threatens functioning and performance (Doern *et al.*, 2016). In this context, it has been widely argued that firms should develop formal strategies to identify threats, and develop contingency plans and sufficiently flexible procedures for an effective response (Vargo and Seville, 2011). It is important to highlight here that often, although the plan itself is not comprehensive when facing a real threat, the exercise of having developed it is already very valuable.

Nevertheless, experiencing a crisis highlights the need for planning even for those likely to procrastinate, and serves to benchmark existing procedures against a real threat. As such, a crisis often is a wakeup call that serves to update existing procedures and establish new ones. Thus, although more planning may not be a consequence of a crisis, the chance of this planning being taken more seriously increases. In addition, the psychological components of a crisis (e.g., stress, feeling powerless) most likely encourage the consideration of measures to avoid a recurrence. For these reasons, hypothesis 4 is proposed:

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Hypothesis 4 (H4). *Having experienced a crisis in recent years positively moderates the association between immigrant-led SMEs' planning and business performance.*

Adversity planning, immigrant entrepreneurs, and performance

As mentioned earlier, immigrants' weaker integration in society makes their businesses more vulnerable during recessions, suggesting that crisis planning might have a stronger impact on immigrant-led SMEs' performance compared to native-led SMEs. While developing a plan for adversity, entrepreneurs need to acquire information and to network with others from inside and outside their communities (Minniti, 2005). Planning for adversity should allow immigrant entrepreneurs to embed themselves in broader social circles, and to connect with institutions they would not normally interact with, if only to establish who to contact in case of adversity. All these activities build networks and capabilities for a better and faster response at a time of crisis (Lengnick-Hall *et al.*, 2011). Looking beyond existing relationships, learning from new contacts, and possibly broadening the business network are positive side-effects of developing a plan for adversity that strengthen immigrant entrepreneurs' structural embeddedness by strengthening their links to the host country's institutional frameworks (Burt, 1997). This, in turn, is known to impact the creation of entrepreneurial opportunities (Lassalle *et al.*, 2020) and improve firm performance (Hough and Spillan, 2005).

Given that immigrant-led SMEs are typically less structurally embedded than their native counterparts, the positive effect of planning on performance might be relatively stronger for them. Immigrants' lower familiarity with the institutional and market conditions in the host country may impact on their ability to perceive early warning signals of a threat. Thus, planning may allow immigrants to develop anticipation capabilities and to prepare for crises before they arise (Duchek, 2020). It is also conceivable that a new contact shares warning signs not perceived by the

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immigrant entrepreneur. Moreover, increased structural embeddedness is useful in the event of unexpected circumstances. All contacts may provide access to information, but new contacts offer new and non-redundant information (Lassalle *et al.*, 2020). Such information may prompt the entrepreneur to adopt new paths in the running of the business and may foster serendipity (Busch and Barkema, 2020), both when dealing with adversity and in their daily running of the business. All these arguments lead to the following hypothesis:

> Hypothesis 5 (H5). *Planning for adversity mediates the negative relationship between immigrant-led SMEs and business performance.*

Figure 1 provides an overview of the hypothesized relationships:

[INSERT FIGURE 1 HERE]

Methodology

Data

This study uses data from a novel, hand-collected international survey on business resilience among 3,316 SMEs in five European cities – Paris, Frankfurt, Milan, Madrid, and London. The rationale for sampling from these five cities includes: 1) the desire to represent different known migrant populations, 2) the accessibility of representative numbers of migrant entrepreneurs, 3) the convenience of continued supervision of data collection, and 4) the first-hand knowledge of the business environment allowing for appropriate contextualization of events during our observation period. Given the focus on immigrant-led SMEs, rather than analyzing country-level data, the survey explores multiple European metropolitan cities where immigrants in vulnerable environments are likely to congregate. In each city, around 600 small firms with between 3 and 99 employees were surveyed using a computer-assisted telephone interview (CATI). This is proven

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to be the best means of reaching the appropriate personnel within a business, typically with much better response rates than an online survey. A minimum business size was set to allow disentangling individual founder's attributes from organizational characteristics. The respondents were all owners and leaders of their businesses. Quotas were applied to ensure that respondents included immigrants and a balanced mix of men and women. The survey was carried out across low- and middle-income boroughs in all five cities, for both immigrant and native samples. The samples were stratified in order to be representative of the spread of businesses by size in each city. The survey aimed to achieve a sample of 300 firms in low-income and 300 firms in middle-income boroughs in each city, with around half being female-led and a quarter being immigrant-led. The questionnaire used was developed collaboratively by researchers in all five countries to ensure applicability in all countries, before being piloted in London in September 2018, finalised and translated. This meant that a standard questionnaire structure and coding were used in each city. Fieldwork took place in London in October to December 2018 and in Paris, Frankfurt, Milan and Madrid between January and May 2019. Once fieldwork had been completed, the resulting five data sets were combined using the STATA statistical software package, during June and July 2019. The final combined dataset includes information on 900 immigrant-led businesses, where immigrants represent the majority of owners in the firm, and 2,416 native-led businesses. The survey probed a range of issues, including respondents' approach toward risk management, their experiences of adversity, and their attitudes toward strategies and interventions to mitigate crises.

Dependent variables

The conceptual framework identifies two dependent variables: planning for adversity and firm performance. Planning for adversity has been identified in the literature as the formalization of a

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planning process and as the perceived importance of planning (Pearce *et al.*, 1987). This study uses the former definition and identifies resilience planning approach by asking how entrepreneurs feel about business risks. There are four options: (i) entrepreneurs do not think about risks and deal with them when they arise (score of 1); (ii) entrepreneurs sometimes think about risks but do not make specific plans to address them (score of 2); (iii) entrepreneurs regularly think about risks and formulate plans (score of 3); (iv) entrepreneurs have a formal risk register with response strategies, which is regularly reviewed (score of 4).

The second dependent variable - firm performance - is operationalized as an increase in turnover and measured with a binary variable asking whether turnover, compared with the previous financial year under which the firm operated, increased (value of 1) or decreased (value of 0). The chance that turnover remained exactly the same as before was neglible. Table A1 in the online appendix provides descriptive statistics on planning for adversity and performance according to business leader's origin.

Independent variables

The independent variable of interest is a dummy variable identifying immigrant-led businesses. The authors identified these businesses based on a screening question about the country in which the owner-managers were born. When the respondent is the only manager, the authors define it as immigrant-led if she/he was born outside the country but moved there in the last five years or were born in a developing country (according to OECD definition).[ii] When a board controls the company, it is defined as immigrant-led if at least 50% of the board members are immigrants, i.e., if they were born outside the country and lived in the host country for at most five years or were born in a developing country.

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Moderators

The authors created a dummy variable with a value of one if the business is in an enclave sector (trade, transport, hospitality, or other services) and zero otherwise (agriculture, manufacturing, construction, information and communication, finance, insurance and real estate, and business services) based on evidence on the higher concentration of immigrant-led businesses in low value-added sectors (Basu and Pruthi, 2021), which the data also supports (Online Appendix Table A2). The measure of the enclave sector accounts for a classification of industries and might not reflect firms' spatial location or the intensity of entrepreneurs' community ties. Yet, the authors expect entrepreneurs in highly concentrated sectors to draw heavily on their ethnic community for business advice and support.

The adversity of being an immigrant and the challenges might alter the entrepreneur's view of the intensity of the crisis, especially if migration is borne out of a crisis event such as a conflict or natural disaster. Therefore, the analysis also considers the relationship between planning for adversity and performance of native- and immigrant-led businesses on the subsample of businesses who have experienced a crisis (Online Appendix A7). Firms' experience of crises is operationalized as a dummy variable valued at one if the firm has survived an existential crisis in the past five years, and zero otherwise[iii]. The definition of the crisis was left open to the respondents' interpretation, allowing the capture of crises with a range of causes i.e., internal, external, technical/economic, or people/social/organizational issues (Doern *et al.*, 2016). Although the crisis may be ongoing, the authors do not believe this compromises the analysis since the question clearly asked about crises that threatened the survival of the firm. Responding to the questionnaire demonstrates that the firm has survived.

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Control variables

A set of individual- and firm-level control variables was also included. Individually, this study controls for entrepreneurs' age, gender, level of education[iv], and personal or individual resilience. To measure entrepreneurs' individual resilience, it uses the 10-item Connor-Davidson scale (Connor and Davidson, 2003). At the firm level, this study controls for business size, sector, and firm age[v]. It also considers the type of risks businesses expect to face in the future by incorporating two dummy variables that capture internal[vi] and external risks to the firm[vii].

Results

Tables A3 and A4 in the online appendix provide descriptive statistics and a correlation table for the main variables. While there was some variation in the causes of previous crises experienced by respondent firms, loss of a major customer and cash flow problems were commonly reported. In detail, the top three causes of crisis reported in each city were as follows: Paris – loss or failure of a major customer, unanticipated cashflow problems, and strike. Frankfurt - loss or failure of a major customer, loss of key staff members and unanticipated cashflow problems. Milan – loss or failure of a major customer, strike and new competitor. Madrid - loss or failure of a major customer, strike and loss of key staff members. London – cost rises, unanticipated cashflow problems and loss of key staff members.

Table 1 provides univariate mean comparisons of important attributes of firms owned by immigrants with those owned by native entrepreneurs according to their planning behavior.

[INSERT TABLE 1 HERE]

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Results indicate that firm performance is higher for native-led businesses compared with immigrant-led businesses. One third of immigrant-led businesses experienced increased turnover (compared to the previous financial year) compared with 42% of native-led businesses. Immigrant-led SMEs plan less for adversity than native-led SMEs in the sample (54% of immigrant-led SMEs and 62% of native-led SMEs). However, the difference in performance between immigrant-led and native-led SMEs is significantly lower in the sample of SMEs who plan for adversity (Panel C) than in the sample of those who do not plan for adversity (Panel B). This provides preliminary evidence that, particularly for immigrant-led SMES, planning for adversity is an important tool to improve firm performance.

H1: Planning for adversity among immigrant-led and native-led businesses

Using an ordinal logit estimation (see Table 2), the study first estimated the relationship between the business leader's origin and the likelihood to plan for adversity (Hypothesis 1). Column (1) reports the results with a dichotomous variable capturing the origin of the business leader(s) (immigrant or native), without any control variables as the baseline. Column (2) adds control variables on gender, individual resilience, crisis experience and internal or external threat to the business. Column (3) adds individual information like education and age dummies to the list of covariates, and column (4) includes firm information like age, size, and sector dummy variables.

[INSERT TABLE 2 HERE]

Results show that the odds of developing a plan for adversity is 0.19 times lower for immigrant-led businesses than for native led-businesses, supporting Hypothesis 1 that immigrant business leaders plan less for adversity. Moreover, the likelihood of adversity planning is greater when threats are external to the business than when threats are internal. A positive relationship

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between individual resilience and the choice to develop a contingency plan was observed, with more resilient entrepreneurs more likely to plan.

H2: The moderating role of running a business in enclave sectors

The theoretical framework hypothesized that immigrant-led firms in enclaves might plan less since entrepreneurs might rely more on informal network support to run their business. To test this hypothesis, the likelihood of SMEs developing a plan for adversity in enclave and non-enclave sectors using ordinal logit estimation was estimated (see columns (4) and (5) in Table 2). Figure 2 presents the resulting predictive margins graphically, for ease of interpretation.

[INSERT FIGURE 2 HERE]

The predictive margins on planning for adversity for immigrant-led SMEs (versus native-led SMEs) is lower for SMEs in an enclave sector (low panel in Figure 2), whereas the predictive margins on not planning for adversity is higher for immigrants than native-led businesses (high panel in Figure 2). For businesses in enclave sectors, the difference in predictive margins for planning for adversity between immigrant and native entrepreneurs is 0.05 percentage point higher than for businesses in non-enclave sectors. This result supports Hypothesis 2.

H3:Planning for adversity and business performance

Table 3 reports the estimates of the likelihood of reporting an increase in turnover compared to the previous financial year. Column (1) presents the results for the entire sample. Column (2) adds a variable on planning for adversity. For ease of interpretation, a dummy variable for adversity planning equal to one if the business has adversity plans and zero if not was created[viii]. Columns

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(3) and (4) estimate the specification concerning the sample of native-led SMEs and immigrant led-SMEs, respectively.

[INSERT TABLE 3 HERE]

When looking at the coefficient associated with the variable planning for adversity, it is noteworthy that SMEs who plan are 4.6 percentage points more likely to report increased turnover. This result supports Hypothesis 3. On average, immigrant-led firms are less likely to experience an increase in turnover compared with native-led firms. The average immigrant-led firm has an 8.5 percentage-point lower probability of experiencing increased turnover. In addition, results from columns (3) and (4) show that the positive relationship between planning for adversity and performance is mainly driven by immigrant-led SMEs. Immigrant-led SMEs who plan for adversity report a 12 percentage points higher likelihood of improving firm performance than those that don't. The analysis does not find any significant coefficient associated with adversity planning in the native-led businesses sample.

As expected, results from columns 1 and 2 in Table 3 show a negative relationship between crisis and performance. Firms that have experienced a severe crisis are less likely to report an increase in turnover. The authors also notice a negative relationship between internal and external threats on the likelihood of reporting an increase in turnover. Interestingly, a positive and significant relationship between individual resilience of the firm leader and firm performance is observed. Individual resilience is associated with a higher likelihood of reporting an increase in turnover.

Although the analysis controls for a number of firm- and individual-level characteristics, there is a risk that the differentiated effect of planning between native and immigrant businesses captures a selection effect since native and immigrant entrepreneurs run their businesses

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differently. Specifically, immigrant entrepreneurs might not have ambition to grow their business and might not run their venture as formally as native-led businesses. Therefore, to make the two groups as comparable as possible, the study matched businesses with similar scores on their likelihood to plan for adversity using a propensity score matching (see Table A9 in the online Appendix). The conclusions are qualitatively unchanged when using alternative estimation strategies.

H4: The moderating role of crisis on firm performance

The study analyzed whether the role of planning for adversity on firm performance changes when firms face adversity. Table 4 in columns 3 and 4 explores the difference between native-led and immigrant-led SMEs hit by a crisis. Results show that planning for adversity is significantly associated with a higher likelihood of reporting an increase in turnover only in the sample of native-led SMEs, with firms that plan for adversity reporting a 7.7 percentage points higher likelihood of increase in turnover when hit by a crisis. This result lends initial support to Hypothesis 4.

[INSERT TABLE 4 HERE]

On the other side, Table 4 in columns 1 and 2 reports the difference between native-led and immigrant-led SMEs that were not hit by a crisis. Results show that the positive relationship between crisis planning and performance in the sample of immigrant-led businesses is observed outside any crisis period. In contrast, in the sample of native-led businesses, the positive relationship between planning for adversity and performance is only statistically significant during crisis periods. This result implies that the moderating role of crisis on performance is only observed in the sample of native-led businesses.[ix]

To illustrate this result, the same specification as in Table 3 column (2) was run adding the interaction term between planning for adversity and crisis. Figure 3 represents the marginal effect

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of planning for adversity on performance according to whether the business has experienced a crisis or not and separately estimated values for immigrant- and native-led businesses.

[INSERT FIGURE 3 HERE]

Results from Figure 3 show that the positive effect of planning on performance in the sample of immigrant-led SMEs is stronger outside any crisis period contrary to what Hypothesis 4 suggested. One possible explanation is that SMEs who engage in adversity planning may meet stakeholders from outside their community, which may help to improve their firm's performance irrespective of crisis (Hough and Spillan, 2005). Consequently, the effect of planning on performance can work through more effective and professional business practices. Planning might encourage entrepreneurs, particularly immigrant entrepreneurs, to strengthen their structural embeddedness, which may enhance their firm performance. This assumption is in line with the results showing a positive relationship between planning for adversity and the likelihood of belonging to a business organization or network in the sample of immigrant-led businesses (see Table A11 in the online Appendix).

H5: Adversity planning, immigrant entrepreneurs and performance

Bui's (2010) approach is used to identify the direct and indirect effect of the performance gap between native- and immigrant-led businesses to test the final mediating hypothesis. This method allows decomposing the total difference in the odds of success in performance between immigrant- and native-led businesses into an indirect and a direct effect. The indirect effect captures the difference in the odds of performance between immigrant and native entrepreneurs that are due to differences in the distribution of planning for adversity, that is, the mediating effect. The direct effect measures the difference in the odds of performance for the same distributions of planning

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for adversity. This method was chosen because the outcome variable is a dummy variable, thus other standard methods to test mediation were problematic.

Table 5 reports results showing that both direct and indirect effects are significant in explaining performance differences. The contribution of planning for adversity in explaining differences between immigrant and native entrepreneurs is relatively lower in magnitude: only 3% of the performance gap between immigrant and native-led businesses is attributable to planning for adversity. Immigrant entrepreneurs would still have 1.4 percentage points lower odds of reporting an increase in turnover even if their firms planned for adversity the same way as native business leaders. This result shows that although planning influences performance, the indirect effect of planning in explaining the performance gap between native- and immigrant-led businesses is quite low, which provides partial support to Hypothesis 5.

[INSERT TABLE 5 HERE]

Robustness Analysis

In this section robustness specifications to overcome two potential biases of the data due to its retrospective nature are proposed. First, the perceptions of respondents might be altered, leading to an overestimation or underestimation of the real business performance. Second, a reverse causality problem could lead to biased estimations due to endogeneity. Specifically, a decrease in performance in *t-1* could influence the choice to plan for adversity in *t*. Two additional estimations were run to overcome these limitations.

The first uses a new dependent variable which captures ambition about next year's performance, instead of last year's performance. The correlation between planning for adversity and anticipated performance was measured. The conclusions are qualitatively unchanged with this

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estimation (see Table A12 in the online appendix): planning for adversity and anticipated performance are correlated, especially in the immigrant entrepreneurs sample.

The second estimation accounts for the reverse causality bias by running the Lewbel and Dong estimator based on a natural experiment that took place prior to fieldwork in Paris. The instrument is a natural experiment of the so-called '*Yellow Vest'* protests, which hit businesses for several months in the Paris metropolitan area. A dummy variable with a value of one if the firm reported that the crisis was a significant or very significant threat (score of 4 and 5) and zero if the threat was not significant (score of 1 to 3 on a 5-item Likert scale) was created. As the crisis started in December 2018, the instrument could only influence a firm's choice to develop an adversity plan by the time of the interview in March 2019 but not firm performance in t-1. The conclusions are unchanged when accounting for the endogeneity of the variable on planning (see results in Table A13 in the online appendix). There is a positive and statistically significant correlation between planning for adversity and performance in the sample of immigrant entrepreneurs.

Discussion and conclusion

This paper has examined if and how the relationship between immigrant entrepreneurship and performance is mediated by planning for adversity. Drawing from extant literature, it maintains that immigrant-led SMEs are characterized by a lower performance level and a lower propensity to plan than native-led SMEs. In fact, unfamiliarity with the economic and institutional contexts in a foreign country and the support immigrant entrepreneurs usually benefit from within their own social network of compatriots may promote an informal way of doing business. But, this reduces immigrant-led SMEs' capacity a) to grow under 'normal' circumstances and b) to deal with crises. Therefore, the authors argue that dedicated planning that anticipates and prepares for threats (i.e.,

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planning for adversity) mediates the negative relationship between immigrant entrepreneurship and performance. The results confirm that: (1) immigrant-led SMEs plan less for adversity than their native counterparts; (2) immigrant-led SMEs operating in enclave sectors are less likely to plan for adversity than those in other sectors; (3) planning for adversity is good for SMEs performance; (4) the positive relationship between immigrant-led SMEs' planning for adversity propensity and firm performance is stronger for firms that have not been hit by a crisis, while for native-led SMEs it is stronger for firms that have been hit by a crisis and finally (5) planning for adversity partly mediates the negative relationship between immigrant-led SMEs and performance.

Theoretical contributions

This study offers several contributions to the literature on immigrant entrepreneurship and organizational resilience.

The research builds on entrepreneurship studies that have focused on the performance implications of immigrant-led companies but overlooked the relationship with planning for adversity (Bird and Wennberg, 2016, Kerr and Kerr, 2020). Firstly, the results confirm that immigrant-led SMEs plan less for adversity than their native counterparts, but this effect is not uniform among immigrants. Specifically, those immigrant-led firms that operate in enclave sectors plan less. This indicates that planning for adversity and the capability to go beyond the restricted circle of ethnic networks are positively correlated. Second, the results demonstrate that planning for adversity positively affects performance, and this relationship is more important for immigrant entrepreneurs, who can be more vulnerable to economic downturns. The results also show that immigrant-led SMEs that plan for adversity are less likely to report lower performance compared to native-led SMEs. Third, the results demonstrate that those immigrant-led SMEs that benefit the most from planning for adversity are those that have not been hit by a crisis. Overall, these results

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extend the existing literature on immigrant entrepreneurship and performance (Ndofor and Priem, 2011), proving that planning for adversity allows immigrant entrepreneurs to pick up early warning signals of a threat, before the firm is irreparably damaged (Carmeli and Schaubroeck, 2008). Regularly analyzing threats and preparing for them, implies collecting information, recognizing the internal and external resources they can access, and developing new resources and relationships outside the enclave that they usually depend on.

These arguments and empirical findings also extend understanding about the value of immigrant entrepreneurs' social embeddedness. Extant literature using this theoretical perspective has focused on the value of relational embeddedness to the success of their ventures; several studies have shown that immigrants' comparatively tightly-knit and closed social networks provide benefits in the form of enhanced cooperation and easier access to resources (Aldrich and Kim, 2007, Bird and Wennberg, 2016, Lassalle *et al.*, 2020). The paper extends this view by arguing that immigrant entrepreneurs may also benefit from building structural embeddedness, which may provide them with vital information related to the host country to help them in times of crisis. Prior studies have noted the importance of assessing both relational and structural components of social embeddedness, so as to understand their unique contribution to managerial performance (Lassalle *et al.*, 2020). Here the authors offer such an approach, balancing the relative importance of relational components and structural embeddedness and the link to planning-related tasks for immigrant entrepreneurs.

The study contributes to the organizational resilience literature with its focus on the resilience practices of immigrant-led firms. The finding that immigrant-led firms are less likely than native firms to plan for adversity empirically demonstrates a key difference in their approach to running their businesses which, given the link between adversity planning and survival (e.g.,

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Battisti and Deakins, 2017, Williams *et al.*, 2017) has relevance for their ability to rebound from a shock. The finding that operating in an enclave sector negatively moderates the relationship between immigrant-led SMEs and planning for adversity, i.e., that immigrant entrepreneurs are less likely to plan when their business operates in an enclave sector, chimes with the stereotypical view of the migrant entrepreneur as embedded in their ethnic network. Some prior research has found such embeddedness to be beneficial as it gives them access to fellow migrant customers as well as to financial and other resources (e.g., Lofstrom, 2017). Other studies have found it to be a disadvantage because such enclaves can be highly competitive, restricting opportunities and profitability (Fairlie and Lofstrom, 2015) and because they can struggle to move beyond the enclave, which can limit growth (Ensign and Robinson, 2011). The authors extend this debate with the new empirical observation that immigrant-led firms plan less for adversity when operating in an ethnic enclave. This may be because they adopt a less formal way of doing business in such circumstances. However, given that planning can be considered an antecedent of organizational resilience, it indicates that operating in an enclave sector makes an immigrant-led firm less likely to plan for and consequently survive adversity.

The study contributes to the process-based view of resilience (Duchek, 2020) by concentrating on the first stage of anticipation. While existing studies on the process-based view of resilience focus on "highly volatile and uncertain times" (Duchek, 2020) that usually create adversity, this study extends such view to business-as-usual times that are characterized by lower volatility and uncertainty. The paper demonstrates that regularly planning for adversity can be useful for a firm's performance, regardless of whether the adversities arise or not (Hough and Spillan, 2005), even if the effect is contingent on the nationality of the leader. Specifically, while native-led SMEs benefit the most from regular adversity planning if they have overcome a crisis

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in the past, immigrant-led counterparts benefit from planning even outside any adversity period. This suggests that planning for adversity implies focusing on how to address threats before they arise and before they have undermined the organization, and in so doing, builds resilience potential. Thus, making decisions about planning under *usual* circumstances allows in-depth consideration of, and planning for, future opportunities as well as threats. Conversely, not planning for adversities risks the firm being overwhelmed by a crisis and forced to re-allocate resources to survive, leaving little time for identifying new opportunities. Moreover, the risk of a poor decision-making process due to narrow design and little screening of alternatives is higher and thus likely to negatively affect the firm's growth potential.

Managerial implications

These findings show that anticipating and preparing for negative events is beneficial for a firm's growth regardless of adversity because it encourages the collection of information that is essential to cope with the uncertainty of their current business setting. Therefore, in addition to strategic planning, SMEs should dedicate resources to the periodic analysis of the external and internal environment to detect future threats. Moreover, the positive association with a firm's growth indicates that planning for adversity increases the chances of identifying and preparing for opportunities that may arise alone or alongside threats.

Second, immigrant-led SMEs should plan for adversity in order to survive and grow. Thus, the findings support interventions that encourage immigrant entrepreneurs to be proactive in preparing for possible adversity as the survival and growth of their businesses could ultimately facilitate their better integration into the host society. While strategic planning might be perceived as unnecessary by immigrant entrepreneurs, who often do not aim to grow their businesses,

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planning for adversity may have better acceptance within this community, particularly following the Covid-19 crisis that demonstrated the uncertainty about the even nearer future. As in strategic planning, this would promote a forward-thinking mindset that helps overcome weaknesses that typically characterize immigrant-led businesses. In the context of current policy discussions in many European countries on integrating inflows of immigrants into the labor market and society (European Commission, 2016), policies promoting planning may constitute a useful tool. Indeed, they could be implemented together with other type of intervention, like incubation or acceleration platforms, that have also proved to be effective in developing social ties outside their network of co-ethnics (Meister and Mauer, 2019). Together, such measures may also foster immigrants' economic and social contribution to their host countries.

Limitations and future research

This study has limitations, some of which suggest future research directions. First, some variables (e.g., firm performance) are not measured as precisely as the authors would have liked, limiting the precision with which the detected effects can be discussed. Second, the study is limited by the cross-sectional nature of the data. Although unable to track planning decisions, business-threatening experiences, and firm resilience over time, the authors made use of the unexpected French "yellow vest" strikes to address endogeneity concerns and thus could partially address this limitation. But longitudinal data could strengthen the analyses, further approximating discussions of causal relationships in the data. Furthermore, sampling is only possible among functioning firms and respondents who are alive and well, possibly exposing the data collection to often unmentioned survival bias, because firms that cease to exist, possibly because of a lack of resilience or any other cause, can by definition not form part of the sample. Moreover, the impact of national culture in the choice to plan for adversity was not considered. This may have been relevant given the diverse

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origins of the immigrant entrepreneurs and of the five host cities studied. Additionally, the study represents central and southern European cities, but northern countries with strong immigration rates, such as Denmark and Norway, were not included. Their specific institutional settings and strong welfare states may have influenced results, particularly in relation to the perceived need to anticipate adversity. Furthermore, the findings may not be generalizable to other contexts, where immigrants are less concentrated in vulnerable communities. Their already greater integration into society could mean that the construction of networks through planning actions would benefit them less. This suggests future research exploring the contrasts of these findings with firms created by immigrants from developed economies in developing contexts. Similarly, comparison and constrast with potentially further disadvantaged immigrant populations, such as refugee entrepreneurs (Harima, 2022) would further enrich understanding of the implications for business of the motives leading to the migration decision. Indeed, in the specific case of refugees, they tend to move to the nearest safe country and not necessarily to the one where they expect easier integration or where they can make use of their ethnic capital. Finally, the data collection occurred, except in Paris, during a stable period, and before the Covid-19 pandemic, which allowed analysis of recent firm performance without the noise of a more turbulent period. Yet, the latter context could be equally relevant to future research.

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[i] In this paper, the authors use the term in its purest sense as they exclude second-generation immigrants and those who migrate within the same country.

[ii] In London, the definition of immigrant entrepreneurs also includes entrepreneurs who define themselves as belonging to a minority ethnic group.

[iii] The question the authors asked is the following: "Now thinking about the last five years, have any situations arisen which have threatened the survival of your business?". Possible answers included Yes and No.

[iv] Defined as a set of dummies for the following educational levels: (i) No formal qualifications, (ii) secondary education, (iii) A-levels or an apprenticeship qualification, (iv) other qualifications (v) a Bachelor degree or equivalent, and (vi) a Doctorate or Master's degree.

[v] Dummy variables for business size to represent the number of employees (including the owner) for 5 levels: (i) 3 to 4 employees, (ii) 5 to 9 employees, (iii) 10 to 19 employees, (iv) 20 to 49 employees, and (v) 50 to 99 employees. The authors added dummy variables for each of the following sectors: (i) agriculture, (ii) manufacturing, (iii) construction, (iv) trade, transport, hospitality, (v) information and communication, (vi) finance, insurance, real estate, (vii) business services, (viii) other services. And dummy variables to capture firm age ranging from (i) up to 12 months, (ii) over 1, up to 3 years, (iii) over 3, up to 5 years, (iv) over 5, up to 10 years, (v) over 10, up to 20 years, and (vi) over 20 years.

[vi] Unanticipated cash flow problems, loss of key staff members or difficulty in recruiting suitable personnel, technical failure in equipment, loss or failure of a major customer or supplier, personal circumstances such as illness, increased competition from existing competitors, issues with business premises, cost rise in materials, services or labor.

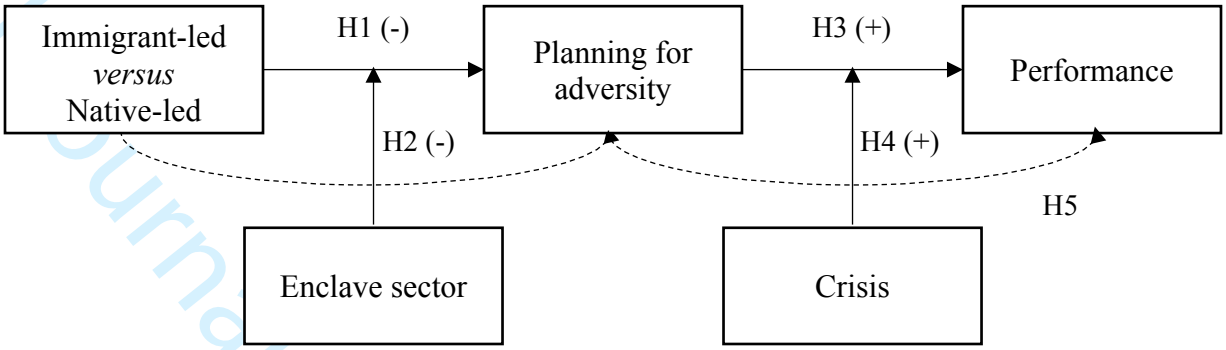
[vii] Disruptive events like strikes or industrial action, natural disasters like extreme weather events or floods, cyberattacks, hacking or data theft, crime, emergence of new competitors, disruption in supply of materials or services to the business, changes in regulation or legislation.

[viii] The variable on planning takes the value of one if the business leader(s) regularly think about risks and formulate plans (score of 3) or if the business has a formal risk register with response strategies (score of 4) and a value of zero if the business leader(s) do not think about risks until they arise (score of 1) or if they do not formulate plan (score of 2). The authors provide additional tables in the online appendix reporting the results of the categorical variable on planning for adversity. The results in Table A8 in the online appendix are qualitatively similar when using either the categorical or dichotomous variable on planning for adversity

[ix] Unfortunately, the data do not provide information on firms that have faced a crisis but did not survive it. Firms dealing with a crisis at the time of the interview, could well shut down right afterwards without being captured in the data. This limitation implies that the authors cannot fully measure the intensity of the crisis since the data are right censored. Therefore, the authors provide some robustness analysis by measuring the average treatment effect of planning on performance on a sample of matched firms that are similar on a number of characteristics that the authors know influence the likelihood of survival following a crisis, namely, firm size, sector and the nature of the threat (internal or external). Conclusions are qualitatively similar to the ones from the baseline specification (see Table A10 in the online appendix).

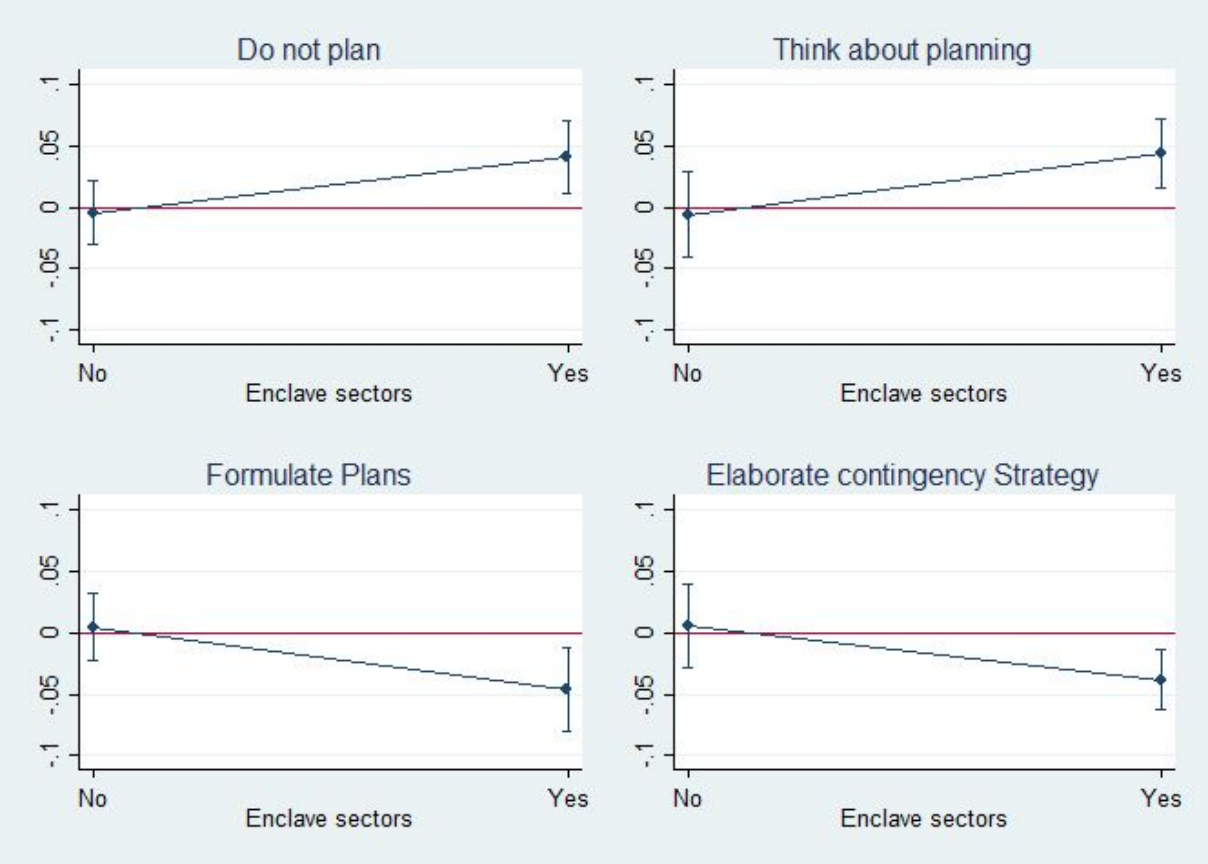
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Figure 1 - Theoretical framework



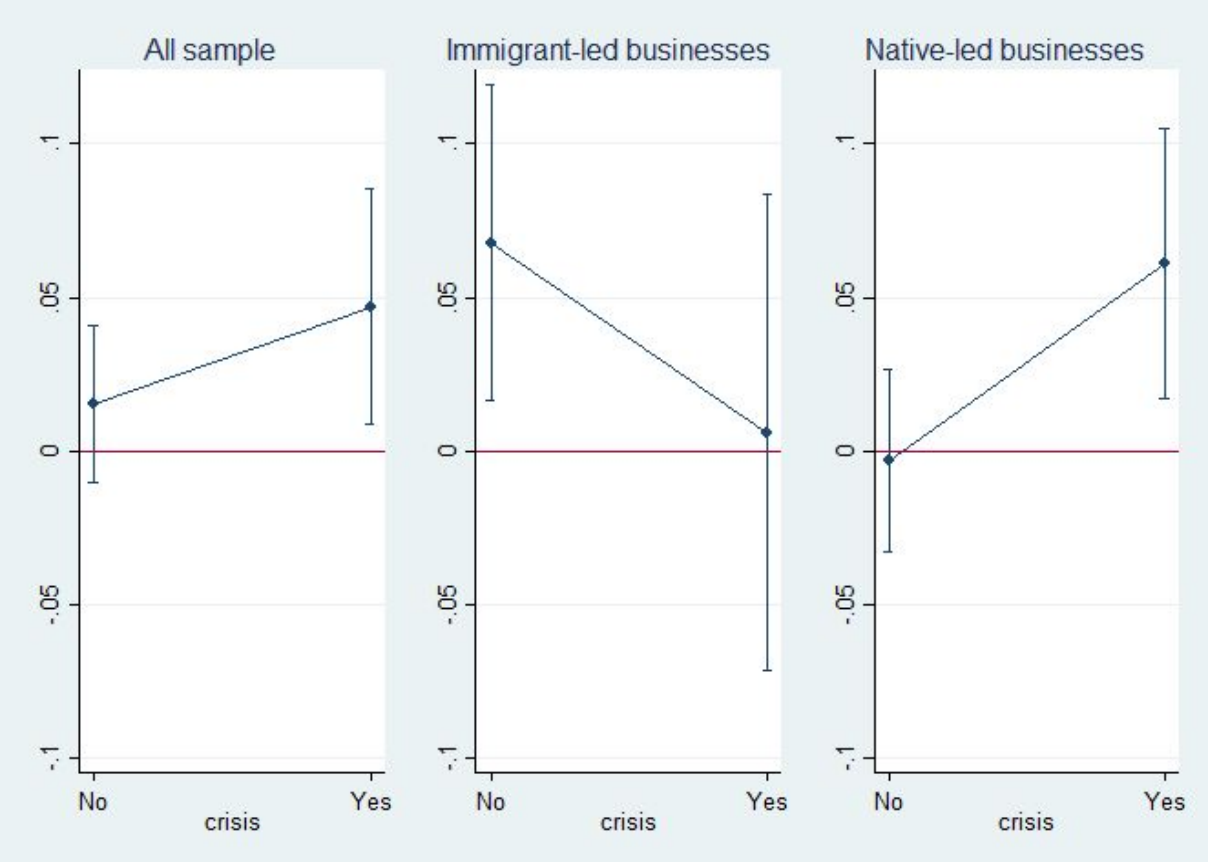
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Figure 2 - Contrasts of predictive margins of business leader's origin on planning with 95% CIs



Notes: The figure plots the difference in differences of predictive margins at means of business leader's origin on different levels of planning, according to the business enclave sector. Estimates come from results in Table 2. column (3) when adding an interaction variables between business leader's origin and the operation of the business in an enclave sector.

Figure 3 - Contrasts of predictive margins of planning on performance with 95% CIs



Notes: The figure plots the marginal effect at means of planning on performance, according to the experience of a serious threat to the survival of the business over the past five years.

Table 1 - Mean comparison of key variables by origin of the venture

	Immigrant-led (N=900)	Native-led (N=2,416)	Student test (t value)
Panel A: Overall sample			
Planning for adversity	0.543	0.619	3.94***
Increase in turnover	0.334	0.421	4.34***
Panel B: Without planning for adversity			
	Immigrant-led (N=361)	Native-led (N=877)	Student test (t value)
Increase in turnover	0.249	0.384	4.574***
Panel C: With planning for adversity			
	Immigrant-led (N=444)	Native-led (N=1,432)	Student test (t value)
Increase in turnover	0.398	0.445	1.741*

Notes: To facilitate the interpretation of descriptive statistics, the analysis shows a dummy variable on planning for adversity that takes the value of one if the entrepreneur answered a score of 3 or 4 and a value of zero if the entrepreneur answered a score of 1 or 2. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively.

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Table 2 - Ordinal logit regression results of planning for adversity

	All Sample			Enclave Sector	Non Enclave Sector
	(1)	(2)	(3)	(4)	(5)
Venture type:					
Immigrant-led	-0.410***	-0.346***	-0.170**	-0.225**	0.0325
	(0.0748)	(0.0822)	(0.0579)	(0.106)	(0.144)
Crisis information:					
Dealt with crisis		0.151**	0.0718	0.150	-0.0250
		(0.0707)	(0.0750)	(0.113)	(0.102)
Internal risks		0.0183	0.0445	0.0736	-0.0128
		(0.0677)	(0.0705)	(0.106)	(0.0966)
External risks		0.0791	0.0694	0.00941	0.179*
		(0.0654)	(0.0685)	(0.100)	(0.0960)
Individual information:					
Gender		-0.0529	-0.0748	-0.0996	-0.0196
		(0.0694)	(0.0736)	(0.106)	(0.105)
Ind. resilience		1.418***	1.455***	1.117***	1.887***
		(0.236)	(0.248)	(0.345)	(0.371)
Education	No	Yes	Yes	Yes	Yes
Age	No	Yes	Yes	Yes	Yes
Firm information:					
Age	No	No	Yes	Yes	Yes
Size	No	No	Yes	Yes	Yes
Sector	No	No	Yes	No	No
Country FE	Yes	Yes	Yes	Yes	Yes
Cut 1	-2.210***	-0.904	-0.889	-0.341	-1.059
	(0.0843)	(0.618)	(0.655)	(1.022)	(0.790)
Cut 2	-0.753***	0.614	0.702	1.213	0.602
	(0.0780)	(0.617)	(0.654)	(1.022)	(0.792)
Cut 3	1.561***	3.009***	3.120***	3.718***	2.984***
	(0.0845)	(0.619)	(0.656)	(1.021)	(0.797)
Observation	3,273	2,989	2,744	1,309	1,435
R2	0.02	0.04	0.05	0.026	0.028

Notes: Coefficients represent marginal effects at means. Robust Standard Errors in parentheses. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively. Details about the coefficients of the control variables are available in Table A5 in the online appendix. Cut is the estimated cutpoint on the latent variable used to differentiate between category 1, 2 3, 4 with respect to all others. The four categories for this variables are: (1) entrepreneurs do not think about risks at all until they arise, and then deal with them; (2) entrepreneurs sometimes think about risks but do not make specific plans to deal with them; (3) entrepreneurs regularly think about risks and formulate plans: (4) entrepreneurs have a formal risk register with response strategies, which is kept under review.

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Table 3 - Probit regression results of increase in turnover

	(1) All Sample	(2) All Sample	(3) Native-led businesses	(4) Immigrant-led businesses
Planning for adversity	-	0.0473**	0.0313	0.0967**
	-	(0.0209)	(0.0237)	(0.0467)
Venture type:				
Immigrant-led	-0.0929***	-0.0923***	-	-
	(0.0248)	(0.0249)	-	-
Crisis information:				
Dealt with crisis	-0.0345	-0.0360*	-0.0382	-0.0930*
	(0.0211)	(0.0211)	(0.0239)	(0.0478)
Internal risks	-0.0351*	-0.0345*	-0.0383*	-0.0181
	(0.0182)	(0.0182)	(0.0207)	(0.0392)
External risks	-0.0307*	-0.0326*	-0.0101	-0.0891**
	(0.0185)	(0.0186)	(0.0213)	(0.0394)
Individual information:				
Gender	-0.0111	-0.0111	-0.0140	0.0265
	(0.0199)	(0.0200)	(0.0227)	(0.0450)
Ind. resilience	0.228***	0.203***	0.214***	0.199
	(0.0647)	(0.0651)	(0.0766)	(0.130)
Education	Yes	Yes	Yes	Yes
Age	Yes	Yes	Yes	Yes
Firm information:				
Age	Yes	Yes	Yes	Yes
Size	Yes	Yes	Yes	Yes
Sector	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observation	2,678	2,66	2,083	570
R2	0.07	0.05	0.05	0.05

Notes: Columns (1) to (4) estimate the likelihood of reporting an increase in performance with robust probit estimates. Coefficients represent marginal effects at means. Column (1) runs the analysis in the entire sample without controlling for planning for adversity. Column (2) runs the analysis by controlling for planning for adversity. Robust Standard Errors in parentheses. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively. Details about the coefficients of the control variables are available in Table A6 in the online appendix.

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Table 4 - Probit regression results of increase in turnover according to entrepreneur's origin and crisis occurrence

	Without crisis		Dealt with crisis	
	Native-led ventures	Immigrant-led ventures	Native-led ventures	Immigrant-led ventures
	(1)	(2)	(3)	(4)
Planning for advsersity	0.0101	0.134**	0.0805**	0.103
	(0.0294)	(0.0597)	(0.0410)	(0.0856)
Gender	0.0207	0.0846	-0.0801**	-0.130
	(0.0281)	(0.0594)	(0.0405)	(0.0823)
Ind. resilience	0.240**	0.244	0.247*	0.216
	(0.0960)	(0.165)	(0.133)	(0.269)
Internal risks	-0.0369	0.0201	-0.0489	-0.131*
	(0.0261)	(0.0511)	(0.0364)	(0.0768)
External risks	0.0112	-0.120**	-0.0428	-0.0435
	(0.0268)	(0.0532)	(0.0367)	(0.0729)
Individual information:				
Education	Yes	Yes	Yes	Yes
Age	Yes	Yes	Yes	Yes
Firm information:				
Age	Yes	Yes	Yes	Yes
Size	Yes	Yes	Yes	Yes
Sector	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observation	1,377	363	698	195

Notes: Columns (1) to (4) estimate the likelihood of reporting an increase in performance with robust probit estimates. Coefficients represent marginal effects at means. Column (1) runs the analysis in the sample of native-led businesses that have not experienced a crisis in the past five years; column (2) in the sample of immigrant-led businesses that have not experienced a crisis; column (3) in the sample of native-led businesses that have experienced a crisis and column (4) in the sample of immigrant led-businesses that have experienced a crisis. Robust Standard Errors in parentheses. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively. Details about the coefficients of the control variables are available in Table A7 in the online appendix.

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Table 5 - Size of the effect of planning on the performance gap between immigrant- and native-led ventures

Total effect	-0.501***
	(0.09)
Indirect effect	-0.014*
	(0.007)
Direct effect	-0.487***
	(0.007)
Share of indirect over total	0.03*
	(0.02)

Notes: The odds of reporting an increase in turnover is 0.54 times lower for ethnic entrepreneurs. Coefficients represent marginal effects at means. Robust Standard Errors in parenthesis. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively.

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Planning for adversity among immigrant entrepreneurs

ONLINE APPENDIX

A.1- Additional Descriptive Statistics Tables

Table A1. Descriptive statistics on planning for adversity and performance according to business' origin

	Native-led	Immigrant-led
We don't think about risks at all until they arise, and then we deal with them	11.52	19.98
We sometimes think about risks but do not make specific plans to deal with them	26.60	25.73
We regularly think about risks and formulate plans	47.76	43.79
We have a formal risk register with response strategies, which is kept under review	14.12	10.50
Increase in turnover in t-1	42.04	33.41

Table A2. Share of native- and immigrant-led businesses across sectors

	Native-led	Immigrant-led
Agriculture	0.34	0.29
Manufacturing	15.75	6.81
Construction	10.82	8.41
Trade, transport, hospitality	30.43	47.25
Information and communication	7.22	3.33
Finance, insurance, real estate	4.37	3.77
Business services	18.00	12.75
Other services	13.07	17.39

Table A3. Variable distribution across cities

	Paris	Frankfurt	Milan	Madrid	London
Share of respondents:					
Immigrant-led	29.00	26.19	24.33	26.21	30.45
Planning for adversity	60.98	57.85	48.74	64.11	64.55
Increase in turnover	42.86	44.59	39.66	33.15	43.16
Dealt with crisis	30.80	30.10	23.26	35.37	37.77
Gender	43.50	44.02	49.17	47.77	49.25

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Average:					
Resilience	0.71	0.79	0.78	0.76	0.78
Internal risks	3.04	2.58	3.02	3.31	3.01
External risks	2.89	2.35	2.76	3.17	2.90
Entrepreneurs' age					
Under 25	1.53	0.19	0.50	0.91	3.70
25-34	12.59	6.53	9.33	10.86	18.99
35-44	23.47	16.70	25.33	31.88	22.52
45-54	34.86	34.17	30.50	34.21	27.56
55-64	21.09	32.82	22.50	18.98	21.51
65-74	5.95	7.29	7.33	2.84	5.21
75 or over	0.51	2.30	4.50	0.30	0.50
Firm size:					
3-4 employees	28.89	28.84	23.83	31.33	23.79
5-9 employees	37.16	31.31	30.17	27.67	32.11
10-19 employees	19.76	20.87	23.67	20.04	23.96
20-49 employees	10.64	13.66	19.50	16.07	14.81
50-99 employees	3.55	5.31	2.83	4.88	5.32
Firm age:					
Up to 12 months	1.83	0.19	0.17	5.16	1.50
Over 1, up to 3 years	4.83	3.98	5.17	9.11	3.83
Over 3, up to 5 years	12.67	6.26	10.33	7.49	7.15
Over 5, up to 10 years	22.17	18.41	21.83	13.97	21.46
Over 10, up to 20 years	24.00	23.91	22.17	27.53	32.28
Over 20 years	34.17	47.06	39.33	36.64	33.61
Sector:					
Agriculture	0.17	0.57	0.00	0.68	0.17
Manufacturing	7.83	8.60	35.48	10.10	7.15
Construction	16.67	11.47	9.85	9.41	4.33
Trade, transport, hospitality	45.00	25.24	35.99	32.88	31.28
Information and communication	4.33	9.18	4.07	7.09	7.15
Finance, insurance, real estate	4.67	4.59	1.53	4.50	5.82

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Business services	11.33	14.72	7.13	22.65	26.46
Other services	10.00	25.62	5.94	12.69	17.64
Education					
Doctorate or master degree	31.63	39.64	14.05	11.76	19.20
Bachelor degree	29.76	17.71	12.71	44.62	43.07
Apprentiship qualif.	15.82	23.34	55.85	29.21	19.70
Secondary Educ	15.65	17.71	13.38	12.37	9.85
Other qualifications	6.12	1.41	0.67	0.81	5.68
No formal Education	1.02	0.20	3.34	1.22	2.50

Table A4. Correlation matrix

	Performance	Immigrant	Gender	Planning	Crisis	Internal	External	Resilience
Increase in turnover	1.0000							
Immigrant-led	-0.0773*	1.0000						
Gender	-0.0264	0.0240	1.0000					
Planning for adversity	0.0895*	-0.0688*	-0.0213	1.0000				
Dealt with crisis	-0.0357	-0.0374	0.0044	0.0607*	1.0000			
Internal risks	-0.0998*	0.0808*	0.0616*	0.0231	0.1215*	1.0000		
External risks	-0.1045*	0.1187*	0.0719*	0.0360	0.1002*	0.7629*	1.0000	
Resilience	0.0643*	0.0247	0.0635*	0.0807*	-0.0217	0.0263	0.0230	1.0000

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A-2- Details of the Tables

Table A5- Ordinal logit regression results of planning for adversity

	All Sample			Enclave Sector	Not Enclave Sector
	(1)	(2)	(3)	(4)	(5)
Venture type:					
Immigrant-led	-0.410***	-0.346***	-0.170**	-0.225**	0.0325
	(0.0748)	(0.0822)	(0.0579)	(0.106)	(0.144)
Crisis information:					
Dealt with crisis		0.151**	0.0718	0.150	-0.0250
		(0.0707)	(0.0750)	(0.113)	(0.102)
Internal risks		0.0183	0.0445	0.0736	-0.0128
		(0.0677)	(0.0705)	(0.106)	(0.0966)
External risks		0.0791	0.0694	0.00941	0.179*
		(0.0654)	(0.0685)	(0.100)	(0.0960)
Entrepreneur type:					
Gender		-0.0529	-0.0748	-0.0996	-0.0196
		(0.0694)	(0.0736)	(0.106)	(0.105)
Ind. resilience		1.418***	1.455***	1.117***	1.887***
		(0.236)	(0.248)	(0.345)	(0.371)
Education: No formal educ (ref.)					
Doctorate or master degree		0.523	0.207	1.034	-0.541
		(0.431)	(0.453)	(0.731)	(0.530)
Bachelor degree		0.470	0.126	0.837	-0.500
		(0.429)	(0.452)	(0.730)	(0.525)
Apprentiship qualif.		0.128	-0.0928	0.735	-0.860
		(0.430)	(0.454)	(0.727)	(0.533)
Secondary Educ		-0.0890	-0.236	0.444	-0.749
		(0.435)	(0.461)	(0.735)	(0.545)
Other qualifications		0.307	0.118	0.756	-0.236
		(0.473)	(0.493)	(0.770)	(0.633)
Age: 75 or over (ref.)					
65-74		-0.200	-0.145	-0.379	0.0956
		(0.516)	(0.526)	(0.673)	(0.772)
55-64		-0.328	-0.183	-0.110	-0.233
		(0.432)	(0.442)	(0.527)	(0.694)
45-54		-0.521	-0.350	-0.327	-0.274
		(0.425)	(0.434)	(0.511)	(0.683)
35-44		-0.467	-0.352	-0.303	-0.294

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		(0.425)	(0.435)	(0.513)	(0.688)
25-34		-0.148	-0.0333	0.0563	-0.0531
		(0.426)	(0.435)	(0.513)	(0.683)
Under 25		-0.617	-0.522	-0.386	-0.604
		(0.446)	(0.456)	(0.557)	(0.699)
Size: 3-9 employees (ref.)					
10-19 employees			0.146	0.229*	0.0555
			(0.0938)	(0.138)	(0.132)
20-49 employees			0.272***	0.314**	0.214
			(0.104)	(0.149)	(0.146)
50-99 employees			0.627***	0.639***	0.640***
			(0.117)	(0.166)	(0.167)
Age of the business: Over 20 years (ref.)					
Up to 12 months			0.518	0.702	0.374
			(0.490)	(0.588)	(0.932)
1-3 years			-0.0814	0.461*	-0.838***
			(0.208)	(0.271)	(0.309)
3-5 years			-0.0893	-0.0677	-0.0402
			(0.141)	(0.188)	(0.217)
5-10 years			0.0411	0.0381	0.103
			(0.107)	(0.163)	(0.145)
10-20 years			0.0444	0.124	-0.0118
			(0.0887)	(0.131)	(0.124)
Other services (ref.)					
Agriculture			0.862		
			(1.156)		
Manufacturing			-0.0458		
			(0.151)		
Construction			-0.0760		
			(0.150)		
Trade, transport, hospitality			-0.212*		
			(0.114)		
Information and communication			-0.0100		
			(0.169)		
Finance, insurance, real estate			0.236		
			(0.174)		
Business services			-0.0739		
			(0.127)		
Counrtry: London (ref.)					
Paris	-0.0473	-0.0234	0.0172	-0.174	0.205
	(0.114)	(0.118)	(0.120)	(0.179)	(0.164)
Frankfurt	-0.294***	-0.261**	-0.252**	-0.269	-0.219
	(0.106)	(0.115)	(0.117)	(0.168)	(0.170)
Milan	-0.570***	-0.435***	-0.468***	-0.649***	-0.219
	(0.117)	(0.124)	(0.132)	(0.206)	(0.182)

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Madrid	-0.174*	-0.121	0.0850	0.112	0.0571
	(0.0969)	(0.0997)	(0.108)	(0.163)	(0.148)
Cut 1	-2.210***	-0.904	-0.889	-0.341	-1.059
Cut 2	-0.753***	0.614	0.702	1.213	0.602
Cut 3	1.561***	3.009***	3.120***	3.718***	2.984***
Observation	3,273	2,989	2,744	1,309	1,435
R2	0.02	0.04	0.05	0.026	0.028

Notes: Coefficients represent marginal effects at means. Robust Standard Errors in parentheses. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively.

Table A6- Probit regression results of increase in turnover

	(1)	(2)	(3)	(4)
	All Sample	All Sample	Native-led businesses	Immigrant-led businesses
Planning for adversity	-	0.0473**	0.0313	0.0967**
	-	(0.0209)	(0.0237)	(0.0467)
Venture type:				
Immigrant-led	-0.0929***	-0.0923***	-	-
	(0.0248)	(0.0249)	-	-
Crisis information:				
Dealt with crisis	-0.0345	-0.0360*	-0.0382	-0.0930*
	(0.0211)	(0.0211)	(0.0239)	(0.0478)
Internal risks	-0.0351*	-0.0345*	-0.0383*	-0.0181
	(0.0182)	(0.0182)	(0.0207)	(0.0392)
External risks	-0.0307*	-0.0326*	-0.0101	-0.0891**
	(0.0185)	(0.0186)	(0.0213)	(0.0394)
Entrepreneur type:				
Gender	-0.0111	-0.0111	-0.0140	0.0265
	(0.0199)	(0.0200)	(0.0227)	(0.0450)
Ind. resilience	0.228***	0.203***	0.214***	0.199
	(0.0647)	(0.0651)	(0.0766)	(0.130)
Education: No formal educ (ref.)				
Doctorate or master degree	0.0313	0.00258	-0.0679	0.115
	(0.110)	(0.114)	(0.142)	(0.208)
Bachelor degree	-0.0217	-0.0493	-0.113	0.0425
	(0.109)	(0.114)	(0.141)	(0.207)
Apprentiship qualif.	-0.0490	-0.0757	-0.141	0.00894
	(0.109)	(0.114)	(0.141)	(0.207)

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Secondary Educ	-0.123	-0.146	-0.213	0.0468
	(0.111)	(0.116)	(0.144)	(0.210)
Other qualifications	0.0215	-0.0116	-0.0545	0.0139
	(0.121)	(0.125)	(0.155)	(0.229)
Age: 75 or over (ref.)				
65-74	0.503***	0.487***	0.504***	0.179
	(0.143)	(0.143)	(0.164)	(0.212)
55-64	0.447***	0.454***	0.426***	0.291*
	(0.111)	(0.110)	(0.120)	(0.148)
45-54	0.453***	0.463***	0.441***	0.301**
	(0.109)	(0.108)	(0.117)	(0.143)
35-44	0.413***	0.420***	0.412***	0.192
	(0.108)	(0.108)	(0.116)	(0.144)
25-34	0.406***	0.411***	0.388***	0.235
	(0.108)	(0.108)	(0.116)	(0.147)
Under 25	0.267**	0.277**	0.268**	
	(0.114)	(0.114)	(0.122)	
Size: 3-4 employees (ref.)				
5-9 employees	-0.310***	-0.303***	-0.343***	-0.107
	(0.0505)	(0.0506)	(0.0577)	(0.115)
10-19 employees	-0.213***	-0.208***	-0.247***	-0.103
	(0.0485)	(0.0484)	(0.0550)	(0.113)
20-49 employees	-0.129***	-0.128***	-0.154***	-0.0318
	(0.0494)	(0.0494)	(0.0557)	(0.117)
50-99 employees	-0.147***	-0.146***	-0.128**	-0.187
	(0.0511)	(0.0511)	(0.0577)	(0.121)
Age of the business: Over 20 years (ref.)				
1-3 years	0.300***	0.299***	0.319***	0.232**
	(0.0535)	(0.0534)	(0.0685)	(0.0942)
3-5 years	0.185***	0.187***	0.231***	0.144*
	(0.0403)	(0.0405)	(0.0513)	(0.0783)
5-10 years	0.178***	0.176***	0.188***	0.187***
	(0.0286)	(0.0288)	(0.0331)	(0.0685)
10-20 years	0.0741***	0.0743***	0.0835***	0.0356
	(0.0247)	(0.0248)	(0.0272)	(0.0655)
Other services (ref.)				
Agriculture	-0.00919	-0.0122	-0.122	0.472
	(0.188)	(0.192)	(0.225)	(0.383)
Manufacturing	0.110***	0.106***	0.0626	0.197*
	(0.0403)	(0.0404)	(0.0457)	(0.103)
Construction	0.0702*	0.0671	0.0763	-0.0164
	(0.0422)	(0.0423)	(0.0480)	(0.0934)
Trade, transport, hospitality	0.0167	0.0178	0.0487	-0.0577
	(0.0326)	(0.0327)	(0.0383)	(0.0656)

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Information and communication	0.0700	0.0663	0.0789	-0.0866
	(0.0469)	(0.0471)	(0.0524)	(0.120)
Finance, insurance, real estate	0.120**	0.115**	0.0992	0.153
	(0.0557)	(0.0557)	(0.0636)	(0.120)
Business services	0.0833**	0.0822**	0.0687	0.150*
	(0.0368)	(0.0369)	(0.0424)	(0.0798)
Country: London (ref.)				
Paris	0.0402	0.0450	0.0317	0.0932
	(0.0324)	(0.0325)	(0.0390)	(0.0615)
Frankfurt	0.0295	0.0355	0.0534	0.0340
	(0.0351)	(0.0352)	(0.0415)	(0.0705)
Milan	-0.0221	-0.0117	0.0716*	-0.296***
	(0.0347)	(0.0349)	(0.0407)	(0.0934)
Madrid	-0.0254	-0.0260	-0.00636	-0.175**
	(0.0309)	(0.0311)	(0.0353)	(0.0832)
Observation	2,678	2,66	2,083	570
R2	0.07	0.05	0.05	0.05

Notes: Columns (1) to (4) estimate the likelihood of reporting an increase in performance with robust probit estimates. Coefficients represent marginal effects at means. Column (1) runs the analysis in the entire sample without controlling for planning for adversity. Column (2) runs the analysis by controlling for planning for adversity. Robust Standard Errors in parentheses. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively.

Table A7- Probit regression results of increase in turnover according to entrepreneur's origin and crisis occurrence

	Without crisis		Dealt with crisis	
	Native-led businesses (1)	Immigrant-led businesses (2)	Native-led businesses (3)	Immigrant-led businesses (4)
Planning for advsersity	0.0101	0.134**	0.0805**	0.103
	(0.0294)	(0.0597)	(0.0410)	(0.0856)
Gender	0.0207	0.0846	-0.0801**	-0.130
	(0.0281)	(0.0594)	(0.0405)	(0.0823)
Ind. resilience	0.240**	0.244	0.247*	0.216
	(0.0960)	(0.165)	(0.133)	(0.269)
Internal risks	-0.0369	0.0201	-0.0489	-0.131*
	(0.0261)	(0.0511)	(0.0364)	(0.0768)
External risks	0.0112	-0.120**	-0.0428	-0.0435
	(0.0268)	(0.0532)	(0.0367)	(0.0729)
Education: No formal educ (ref.)				
Doctorate or master degree	-0.175	0.0587	0.140	-0.270
	(0.185)	(0.218)	(0.237)	(0.216)

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Bachelor degree	-0.201	0.00161	0.0663	-0.429**
	(0.184)	(0.217)	(0.235)	(0.218)
Apprentiship qualif.	-0.240	-0.00498	0.0598	-0.472**
	(0.184)	(0.215)	(0.235)	(0.222)
Secondary Educ	-0.292	0.00142	-0.0827	-0.395
	(0.187)	(0.219)	(0.240)	(0.254)
Other qualifications	-0.177	-0.184	0.204	-
	(0.199)	(0.249)	(0.265)	-
Age: 75 or over (ref.)				
65-74	0.378*	0.180	0.276	-
	(0.203)	(0.279)	(0.182)	-
55-64	0.300**	0.121	0.245**	0.170
	(0.133)	(0.179)	(0.108)	(0.149)
45-54	0.381***	0.133	0.105	0.373***
	(0.130)	(0.175)	(0.0961)	(0.122)
35-44	0.347***	0.111	0.107	0.123
	(0.128)	(0.175)	(0.0911)	(0.125)
25-34	0.335***	0.173	0.0403	-
	(0.128)	(0.178)	(0.0930)	-
Under 25	0.182	-	-	-
	(0.135)	-	-	-
Size: 3-4 employees (ref.)				
5-9 employees	-0.308***	-0.152	-0.420***	0.248
	(0.0688)	(0.148)	(0.109)	(0.207)
10-19 employees	-0.235***	-0.154	-0.287***	0.300
	(0.0655)	(0.142)	(0.105)	(0.208)
20-49 employees	-0.0989	-0.105	-0.266**	0.365*
	(0.0663)	(0.148)	(0.106)	(0.215)
50-99 employees	-0.0794	-0.278*	-0.245**	0.157
	(0.0680)	(0.151)	(0.112)	(0.220)
Age of the business: Over 20 years (ref.)				
1-3 years	0.376***	0.198*	0.169	0.442**
	(0.0793)	(0.120)	(0.143)	(0.179)
3-5 years	0.249***	0.227**	0.208**	-0.0218
	(0.0639)	(0.101)	(0.0909)	(0.147)
5-10 years	0.190***	0.203**	0.192***	0.201*
	(0.0426)	(0.0915)	(0.0554)	(0.115)
10-20 years	0.0607*	0.106	0.133***	-0.0204
	(0.0338)	(0.0878)	(0.0469)	(0.120)
Other services (ref.)				
Agriculture	-0.0616	-	-	-
	(0.238)	-	-	-
Manufacturing	0.142**	0.235*	-0.0949	0.0348
	(0.0568)	(0.138)	(0.0792)	(0.175)

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Construction	0.0683	-0.0420	0.0876	0.0107
	(0.0580)	(0.123)	(0.0864)	(0.150)
Trade, transport, hospitality	0.0877*	0.0365	-0.0504	-0.269**
	(0.0471)	(0.0879)	(0.0668)	(0.114)
Information and communication	0.108	-0.0821	0.000505	0.0714
	(0.0659)	(0.146)	(0.0877)	(0.222)
Finance, insurance, real estate	0.132*	0.371**	0.0461	-0.397*
	(0.0777)	(0.167)	(0.112)	(0.203)
Business services	0.121**	0.272**	-0.0375	-0.0817
	(0.0532)	(0.122)	(0.0723)	(0.122)
Country: London (ref.)				
Paris	0.0202	0.112	0.0416	0.0302
	(0.0482)	(0.0826)	(0.0700)	(0.103)
Frankfurt	0.0645	0.0297	0.0315	0.0239
	(0.0514)	(0.0970)	(0.0735)	(0.117)
Milan	0.0423	-0.329***	0.0997	-0.00461
	(0.0512)	(0.112)	(0.0698)	(0.257)
Madrid	-0.0179	-0.142	0.0135	-0.207
	(0.0449)	(0.120)	(0.0589)	(0.148)
Observation	1,377	363	698	195

Notes: Columns (1) to (4) estimate the likelihood of reporting an increase in performance with robust probit estimates. Coefficients represent marginal effects at means. Column (1) runs the analysis in the sample of native-led businesses that have not experienced a crisis in the past five years; column (2) in the sample of immigrant-led businesses that have not experienced a crisis; column (3) in the sample of native-led businesses that have experienced a crisis and column (4) in the sample of immigrant led-businesses that have experienced a crisis. Robust Standard Errors in parentheses. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively.

A-3- Planning for adversity as a categorical variable

In the baseline specifications, the variable on planning for adversity is a dummy variable that takes the value of one if the business leader(s) regularly plan for adversity and zero if not. In this section, the authors provide additional analysis when the variable on planning for adversity is categorical with four different category. A score of 1 if the business leader(s) do not think about risks until they arise. A score of 2 if they do not formulate adversity plan. A score of 3 if they regularly think about risks and formulate plans and a score of 4 if they have a formal risk register with response strategies.

Table A8- Marginal Effect of Planning for Adversity when Planning is a categorical Variable

	Without crisis		With Crisis	
	Native-led businesses	Immigrant-led businesses	Native-led businesses	Immigrant-led businesses

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Planning for adversity:				
Do not think about risks (ref.)	-	-	-	-
Sometimes think about risks	-0.0379	0.0498	0.105	0.0334
	(0.0505)	(0.0791)	(0.0724)	(0.159)
Regularly think about risks	0.0105	0.173**	0.156**	0.137
	(0.0476)	(0.0736)	(0.0692)	(0.150)
Have a formal risk register	-0.102*	0.124	0.205**	0.0429
	(0.0553)	(0.110)	(0.0881)	(0.182)
Gender	0.0240	0.0857	-0.0808**	-0.136*
	(0.0282)	(0.0593)	(0.0405)	(0.0823)
Ind. resilience	0.260***	0.267	0.227*	0.232
	(0.0973)	(0.167)	(0.134)	(0.270)
Internal risks	-0.0376	0.0225	-0.0511	-0.133*
	(0.0262)	(0.0515)	(0.0367)	(0.0765)
External risks	0.0108	-0.121**	-0.0431	-0.0364
	(0.0269)	(0.0533)	(0.0368)	(0.0718)
Individual information:				
Education	Yes	Yes	Yes	Yes
Age	Yes	Yes	Yes	Yes
Firm information:				
Age	Yes	Yes	Yes	Yes
Size	Yes	Yes	Yes	Yes
Sector	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observation	1,377	363	698	195

Notes: Columns (1) to (4) estimate the likelihood of reporting an increase in performance with robust probit estimates. Coefficients represent marginal effects at means. Column (1) runs the analysis in the sample of native-led businesses that have not experienced a crisis in the past five years; column (2) in the sample of immigrant-led businesses that have not experienced a crisis; column (3) in the sample of native-led businesses that have experienced a crisis and column (4) in the sample of immigrant led-businesses that have experienced a crisis. Robust Standard Errors in parentheses. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively.

Results in Table A8 show that immigrant-led businesses are more likely to report an increase in turnover when they regularly think about risks and have a formal risk register compared with those who do not think about risks.

A-4- Comparison between Native and Immigrant entrepreneurs

The analysis might have suffered from a self-selection problem as the assignment of entrepreneurs to the treatment (developing an adversity plan) could not be random. Indeed, some entrepreneurs might not develop an adversity plan because their performance is high enough to do without or because immigrant entrepreneurs believe they are resilient enough to take risks (as is hypothesized in the theoretical framework). Therefore, in order to avoid underestimating the effect of planning for adversity on performance of immigrant-led

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businesses, the authors adopted propensity score matching. To this end, businesses according to the probability that they would implement a pre-written adversity plan have been matched. To do so, the authors used a propensity score to match immigrant-led businesses with native-led businesses that are identical on a number of characteristics, including gender, age, sector, size, firm age, type of threats, experience of a crisis, individual resilience and planning for adversity.[1] The authors report the average treatment effect of whether the business is led by an immigrant entrepreneur or a native entrepreneur on the likelihood to plan for adversity. The authors report several methods of matching (nearest neighbor matching, kernel matching, and stratification matching) in Table A9.[2]

Table A9. Average treatment on the treated: effect of planning for adversity on performance

	(1) Nearest Neighbor	(2) Stratification	(3) Kernel
ATT	-0.067***	-0.043*	-0.045*
	(0.031)	(0.025)	(0.026)
Number of treated	900	609	900
Number of controls	684	2137	2416

Results show that immigrant-led businesses have a 6.7 percentage points lower likelihood to plan for adversity, even after controlling for self-selection issues.

A.5- Likelihood to survive to a crisis

Information on whether the firm has survived a crisis or not are not available. This might lead to biased estimations since only self-select surviving firms are available. In order to overcome

[1] The authors built a propensity score based on a probit to develop an adversity plan to account for the following control variables: immigrant, gender, age, sector, size, firm age, type of threats, individual resilience, experience of a crisis.

[2] The matching method relies on three assumptions. First is the conditional independence assumption that requires that, subject to observable characteristics, the outcomes are independent of treatment. Second, the common support assumption ensures that each treated observation has a matched control observation with similar characteristics. Third, the balancing condition requires that assignment to treatment is independent of the characteristics of X, given the propensity score. The authors verified each of the three conditions when matching entrepreneurs.

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this limitation, the authors provide robustness analysis by matching firms on their likelihood to survive a crisis based on some characteristics that the authors know from previous literature influence their survival (e.g. firms' size, sector, type of threat and age).[3] The authors then measured the average treatment effect of planning on performance on different groups of firms: native-led, immigrant-led, those that have faced a crisis and those that have not. Table A10 report the results based on nearest neighbor matching.

Table A10- Average treatment on the treated: effect of planning for adversity on performance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				With crisis		Without crisis	
	All sample	Immigrant-led Bus.	Native-led Bus.	Immigrant-led Bus.	Native-led Bus.	Immigrant-led Bus.	Native-led Bus.
ATT	0.098***	0.143***	0.054*	0.060	0.117***	0.225***	0.025
	[0.025]	[0.043]	[0.028]	[0.086]	[0.046]	[0.052]	[0.035]
Nb of treated	1958	481	1477	169	496	305	957
Nb of control	927	290	658	57	212	218	450

Conclusions are qualitatively unchanged when using propensity score matching (see online appendix). The results are similar to the baseline specifications. Precisely, they show that immigrant-led businesses that plan for adversity are more likely to report an increase in performance even outside any crisis period compared to those that do not plan for adversity, whereas native-led businesses that plan for adversity are more likely to report an increase in performance during a crisis period compared to those that do not plan for adversity.

A.6- Theoretical Mechanisms: the role of social embeddedness

The authors argued that planning encourages entrepreneurs, particularly immigrant entrepreneurs, to strengthen their structural embeddedness, which consequently enhances their firm performance. In order to test this mechanism more explicitly, the authors consider the

[3] Precisely, the authors include in the propensity score the following variables: gender, individual resilience, internal and external threats, education, age of the business leader, age of the firm and sector.

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information on whether the firm belonged to a business organization or network, such as the Chamber of Commerce or a local/national small business association. As expected, relatively fewer immigrant-led SMEs than native-led SMEs to be engaged in a formal business organization (27.3% vs. 35.2%) were observed.

Table A11. Probit regression results of belonging to a business organization or network

	(1) Native-led	(2) Immigrant-led
Planning for adversity	0.0102	0.130***
	(0.0225)	(0.0421)
Gender	0.0102	-0.0442
	(0.0216)	(0.0400)
Ind. resilience	0.310***	0.279**
	(0.0728)	(0.120)
Crisis information:		
Dealt with crisis	0.00737	0.129***
	(0.0230)	(0.0428)
Internal risks	0.00820	0.0144
	(0.0193)	(0.0362)
External risks	-0.0718***	-0.0519
	(0.0197)	(0.0351)
Individual information:		
Education	Yes	Yes
Age	Yes	Yes
Firm information:		
Age	Yes	Yes
Size	Yes	Yes
Sector	Yes	Yes
Observation	2,094	570

Notes: Columns (1) to (2) estimate the likelihood of reporting being part of a national business organization for native (column (1)) and immigrant (column (2)) business leaders. Coefficients represent marginal effects at means. Robust Standard Errors in parentheses. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively.

Table A11 shows the marginal effects of planning for adversity on the likelihood of belonging to a business organization or network. The authors find a positive relationship between planning for adversity and the likelihood of belonging to a business organization in the sample of immigrant-led businesses. In this respect, the authors find that immigrant-led businesses that account with a plan for adversity are 13 percentage points more likely to be part of a network of business leaders than immigrant-led businesses without a plan for adversity.

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This result provides support to the arguments on why planning for adversity might influence firm performance, particularly among immigrants.

A.7- Additional Analysis

In this section, the authors provide additional analysis when using ambition about next year's performance instead of past performance as the dependent variable. The variable is a dichotomous variable that takes the value of one if the entrepreneur expects an increase in turnover over the next 12 months and a value of zero if the entrepreneur expects a decrease or stability of turnover over the next 12 months.

The results are reported in Table A12.

Table A12. Planning for adversity and ambition about next year performance

	(1) All Sample	(2) Native-led businesses	(3) Immigrant-led businesses
Planning for adversity	0.0937***	0.0780***	0.156***
	(0.0212)	(0.0241)	(0.0472)
Business type:			
Immigrant	-0.0388	-	-
	(0.0269)	-	-
Crisis information:			
Dealt with crisis	0.0583***	0.0556**	0.0442
	(0.0218)	(0.0247)	(0.0503)
Internal risks	-0.00203	0.00455	-0.0114
	(0.0186)	(0.0211)	(0.0424)
External risks	-0.0525***	-0.0358*	-0.0960**
	(0.0187)	(0.0213)	(0.0418)
Individual information:			
Gender	-0.0522**	-0.0563**	-0.0184
	(0.0205)	(0.0232)	(0.0463)
Ind. resilience	0.486***	0.572***	0.197
	(0.0684)	(0.0797)	(0.141)
Education	Yes	Yes	Yes
Age	Yes	Yes	Yes
Firm information:			

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Age	Yes	Yes	Yes
Size	Yes	Yes	Yes
Sector	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Observation	2,642	2,074	568
R2	0.05	0.05	0.05

Notes: Coefficients represent marginal effects at means. Robust Standard Errors in parentheses. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively.

In addition, there was a risk that the analysis of the relationship between planning for adversity and performance might suffer from an endogeneity problem due to reverse causality. Indeed, the questionnaire identified firm performance the year prior to the interview (in *t-1*), whereas it captured crisis occurrence over a five-year window and contingency planning at the time of the interview (in *t*). Hence, given the time lag the data could have captured the opposite relationship: a decrease in performance in *t-1* influences the choice to plan for adversity in *t*. Respondents might well have had an adversity plan in place for a long time, or had recently developed one because they had suffered a reduction in performance the previous year.

In order to address this concern, the authors use a natural experiment that was unanticipated by respondents and that took place a few months before the interviews. Thus, the instrument could not influence firms' performance in year *t-1* since the shock had occurred in year *t*. The instrument is a natural experiment of the violent strike called '*Yellow Jacket*', which lasted for several months and hit many businesses in the Paris metropolitan area. As the crisis started in December 2018, the instrument could only influence a firm's choice to develop an adversity plan by the time of the interview in March 2019 but not firm performance in t-1. Results of the instrumental variables are reported in Table A13.[4] They provide additional support for the positive relationship between planning for adversity and performance.[5]

[4] The authors use the Lewbel and Dong simple special regression estimator of a binary outcome with one binary endogenous variable.

[5] There are two conditions for an instrument to work well. First, it must be valid: the instrument must be uncorrelated with the error term. Second, it must be powerful: the instrument must be correlated to the endogenous variable. The instruments are only weakly correlated with the endogenous regressor as suggested by the very small F statistic in all equations. Hence, the authors do not want to overly stress the results from IV estimations since

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Table A13. Planning for adversity and performance (Instrumental Variables)

	(1) All sample	(2) Native-led businesses	(3) Immigrant-led businesses
Planning for adversity	-0.062	-0.131	0.078**
	(0.065)	(0.156)	(0.040)
Entrepreneur type:			
Gender	-0.023***	0.510***	0.023***
	(0.003)	(0.008)	(0.004)
Individual Resilience	0.105***	0.039*	-0.016
	(0.021)	(0.021)	(0.015)
Crisis information:			
Dealt with crisis	-0.008	-0.007	-0.008
	(0.019)	(0.015)	(0.017)
Internal risks	-0.001	-0.011***	-0.0015
	(0.015)	(0.003)	(0.005)
External risks	-0.0258***	-0.014***	-0.003
	(0.003)	(0.005)	(0.004)
Individual information:			
Education	Yes	Yes	Yes
Age	Yes	Yes	Yes
Firm information:			
Age	Yes	Yes	Yes
Size	Yes	Yes	Yes
Sector	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes
F-stat	3.224	2.758	0.628
Observation	2,660	905	1,747

Notes: Columns (1) to (3) estimate the likelihood of reporting higher performance with robust IV probit estimates for firms having dealt with a crisis (column (2)) and those who have not (column (3)). Coefficients represent marginal effects at means. Robust Standard Errors in parentheses. ***, **, and * indicate significance at the 1, 5 and 10 % levels respectively.

the results controlling for endogeneity need to be taken with caution. Even so, they provide further support for the positive relationship between contingency planning and performance.

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