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Exploring the gender entrepreneurial dimension following a long-term crisis: the case of Cypriot and Greek micro and small firms

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Exploring the gender entrepreneurial dimension following a long-term crisis: the case of Cypriot and Greek micro and small firms

Abstract

Purpose – The purpose of this study is to examine various key aspects associated with entrepreneurs' behaviour following a long-term crisis. Specifically, the study compares the perceptions of female and male entrepreneurs operating in Cyprus and Greece concerning success factors and firm performance in the aftermath of the global financial crisis.

Conceptually, the study considers the organisational adaptation literature (Miles and Snow's typology).

Design/methodology/approach – The views of female and male micro and small firm owners/managers operating in Greece and Cyprus, a total of 406, were gathered through a questionnaire. To analyse the quantitative data, independent samples t-test and exploratory factor analysis were applied.

Findings – Participants' responses reveal similar levels of perceived importance between genders regarding adaptive measures and strategies to confront a long-term crisis, as well as perceived firm performance. Exploratory factor analysis highlights differences in how male/female entrepreneurs perceive actions that, as in the case of financial management, can safeguard the immediate outlook of the firm.

Originality/value – While scholarly discourses on gender and entrepreneurship abound, important knowledge gaps still exist, for instance, in entrepreneurs' problem-solving strategies adopted by female and male entrepreneurs following crises. In addressing this scholarly gap cross-culturally, that is, drawing on cross-national data (Cyprus and Greece), the present study makes an important contribution. Empirically, the study ascertains similar entrepreneurial behavioural characteristics between female-male entrepreneurs.

Theoretically, the study validates Miles and Snow's typology and develops a theoretical framework linking the typology and dimensions emerging from the empirical findings.

Keywords: Gender entrepreneurship; micro-small firms; organisational adaptation; gender differences; Cyprus; Greece.

Introduction

Micro and small enterprises

Micro and small enterprises (MSEs) have key relevance for nations' economies (Nguyen et al., 2020). In the European Union (EU), for instance, MSEs, defined by the European Commission (2019) as those employing less than 10 and between 10 and 49 individuals,

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3 respectively, contribute to nearly two-thirds of the Union's private sector employment
4 (Eurofund, 2016). Approximately, there are 38.4 and 25.3 million micro and small
5 businesses, respectively (Statista, 2022).
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8 Contemporary contributions in the field of small business have shed light on the
9 challenges that firms or individuals face when dealing with crises (e.g., Baker and Judge,
10 2020). Research in the domain of organisational resilience problematises firms' coping
11 mechanisms that, at the same time, also help them withstand the impacts of a severe crisis
12 (e.g., Battisti et al., 2019); coping also entails behavioural adaptation. For instance, recent
13 research on small and medium enterprises (SMEs) confronting COVID-19 (Haneberg, 2021)
14 identifies two behavioural traits, uncertainty and learning. Uncertainty aligns with notions of
15 an 'affordable loss', where entrepreneurs' actions following their assessments of their firm's
16 survival can lead to survival or failure; in turn, learning steers entrepreneurs to engage in
17 experimentation behaviour, including making new offers to their customers (Haneberg,
18 2021).
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27 Greece and Cyprus, two countries that share geographic proximity and trade reciprocation
28 (Hellenic Republic, 2021), provide clear illustrations of small businesses' predicaments under
29 the effects of a major crisis. Moreover, a plethora of studies provide compelling evidence that
30 the global financial crisis (GFC) has severely affected both economies (e.g., Dimitropoulos et
31 al., 2020; Giannakopoulos et al., 2014). These countries and the corresponding firms provide
32 fertile ground to explore the devised strategies by the latter in confronting a long-term crisis.
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37 *Recognised research gaps*

38 While a rich empirical and conceptual foundation has been developed to examine small
39 firms' adaptive strategies, there are knowledge gaps that require further empirical and
40 conceptual understanding. One area concerns gender entrepreneurship, particularly the role
41 that it plays in the adaptation process of micro and small firms to a major crisis. Investigating
42 this aspect is crucial as the very survival of a firm depends upon its ability to adapt to changes
43 (Joshi et al., 2018). Concerning how genders perceive their firm's financial strength, Sauer
44 and Wiesemeyer (2018) posit that having access to a bank loan has a significant gender-
45 equalising impact on aggregate business value. Nevertheless, while clear gender differences
46 exist between obtaining a bank loan and increasing one's mean business value, with female
47 entrepreneurs benefitting more than their male counterparts, Sauer and Wiesemeyer (2018)
48 conclude that female entrepreneurs are less likely to secure bank loans.
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58 Despite recent efforts to address female entrepreneurship in the context of COVID-19
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3 (e.g., Stephens et al., 2021), there is a void in the academic literature associated with
4 resilience and coping from a gender perspective. Buratti et al. (2017) recognise earlier
5 research (e.g., Sternad, 2012) that advances discourses of how firms can face a crisis,
6 including through restructuring. At the same time, Buratti et al. (2017) and Cesaroni et al.
7 (2015) argue that the extant literature does not consider the gender dimension in this same
8 context.
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13 Moreover, in identifying studies that observe gender differences concerning innovation,
14 growth, development, or risk-taking (e.g., Croson and Gneezy, 2009), Buratti et al. (2017)
15 posit that the entrepreneurship literature does not recognise whether opting for different
16 solutions in the face of economic downturns is dependent upon gender characteristics. This
17 missing link in understanding female-male entrepreneurship in times of severe crises is still
18 apparent nowadays, where the COVID-19 crisis has pushed businesses beyond their
19 boundaries, capacity, and endurance. Thus, exploring these crucial aspects from a female-
20 male viewpoint could be empirically and conceptually valuable, as they can substantially
21 “affect the choice of business strategies” (Buratti et al., 2017, p. 394).
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27 Therefore, it is worthwhile to explore fundamental questions that underscore the strategies
28 that female-male entrepreneurs have considered when facing a crisis, and the potential
29 differences between genders and undertaken strategies (Buratti et al., 2017). In addition,
30 examining the micro-small firm dimension through the gender lens could help develop useful
31 empirical and conceptual dimensions.
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34 *The study's objectives and contributions*

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38 By investigating the key aspects considered by female-male entrepreneurs that have equipped
39 MSEs to withstand the extremely challenging long-term GFC, the study will fulfil two
40 primary objectives. First, by addressing a recognised research gap (Buratti et al., 2017;
41 Cesaroni et al., 2015), the research contributes to the entrepreneurship literature. Elucidating
42 this relevant area could be valuable in various ways. Empirically, and through the
43 identification of specific factors that female-male entrepreneurs perceive as enabling their
44 firms to withstand the destructive effects of a long-term crisis, the findings could inform and
45 assist other micro and small firm operators whose survival skills or operational toolkits may
46 still be underdeveloped.
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52 The findings could also have practical value for firms' industries and for policy-supported
53 initiatives to enhance the long-term sustainability of firms. Theoretically, by revealing the
54 key dimensions related to firms' resilience and coping, the findings could result in the
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3 development of a conceptual foundation that affords stronger appreciation and discernment of
4 firms' journey through a severe crisis. Given the apparent links between the research focus
5 and firms' adaptation, this study will consider the organisational adaptation literature. Thus, a
6 second objective is to develop a conceptual foundation to be validated and complemented
7 with the study's findings, and, ultimately, be reflected through the development of a
8 theoretical framework.
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14 15 **Literature Review**

16 *Organisational adaptation – A discussion of Miles and Snow's typology*

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18 The literature on organisational adaptation has developed conceptual elements that are useful
19 in guiding the understanding of how entrepreneurs confront crisis scenarios, and with it
20 illuminate potential strategic paths. Within the realms of the current research, where the
21 strategies and various initiatives undertaken by female and male entrepreneurs in the
22 aftermath of a long-term crisis are contrasted, the conceptual foundation that Miles and
23 Snow's (1978) typology provides insightful perspectives.
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29 The selection of this framework is in line with earlier research focusing on gender
30 entrepreneurship. For instance, Reichborn-Kjennerud and Svare (2014) sought to understand
31 the 'how' and 'why' of gendered entrepreneurial strategies, thereby basing their assessment
32 upon and seeking to adjust and expand Miles and Snow's typology. In their analysis,
33 Reichborn-Kjennerud and Svare (2014) observed that, while female and male participants
34 shared entrepreneurial qualities, the values and ambitions of females appeared to be different,
35 which in turn influenced their growth strategies. In times of crisis, Alonso-Almeida and
36 Bremser (2015) ascertained gender differences in the implementation of strategic
37 management decisions. Male company leaders, for instance, took drastic measures to limit
38 costs, while female leaders enhanced company-customer relationships and added value to
39 their company offerings (Alonso-Almeida and Bremser, 2015).
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48 The work of Miles and Snow (1978) enables the analysis of organisations as dynamic and
49 integrated entities and the understanding of relationships between their processes, structures,
50 and strategies (Anwar et al., 2021). Furthermore, it establishes generic strategies based upon
51 how firms respond to challenges they face (Costin, 2012). Miles and Snow (1978), and Miles
52 et al. (1978) conceptualise organisational adaptation as an adaptive cycle that entails three
53 problems:
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58 *An entrepreneurial problem* exists when an organisation has managed to find solutions to its
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3 engineering and administrative problems, yet its next attempt, which is to achieve
4 entrepreneurial thrust still proves to be elusive (Miles et al., 1978).

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6 *An engineering problem* is associated with creating a system that operationalises the solution
7 to the entrepreneurial problem and includes the selection of an appropriate technology to
8 enable the production and distribution of products-services (Miles et al., 1978).

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11 *An administrative problem*, in turn, is concerned with lessening uncertainty within the
12 organisation by, for instance, formulating and executing processes based upon innovation that
13 enable organisational evolution (Miles et al., 1978). Importantly, innovation is also linked to
14 adaptability and has significant implications for firms' strategic competence (Thrassou et al.,
15 2021).

16
17 Arguably, at least two of these problems, entrepreneurial and engineering, have been
18 magnified by the recent COVID-19 crisis which has brought more uncertainty and
19 complexity, including to smaller firms (e.g., Belitski et al., 2022). Indeed, COVID-19 has
20 profoundly changed the environment in which firms operate, including micro, small and
21 medium enterprises, and led to a stronger emphasis on digital transformation, knowledge
22 management and sustainability-related phenomena (e.g., Bai et al., 2021; Isensee et al., 2022,
23 2023; Klein and Todesco, 2021; Khurana et al., 2022).

24
25 Through their work and the interpretation of the scholarly literature, Miles et al. (1978)
26 propose four types of strategic organisations, with the first three being the more proactive.
27 According to Verma and Sharma (2019), these topologies, which are based on organisations'
28 emphasis on the changing dynamics of markets or products, can address a firm's strategy:
29 *Defenders* intentionally seek to maintain and enact a stable environment (Miles et al., 1978).
30 Yet they may be operating in limited business domains (Pinto and Curto, 2007) or possess a
31 limited variety of products (Costin, 2012). By focusing on an established and stable market,
32 and in attempting to maintain their position (Lin, Tsai, and Wu, 2014), defenders seek to
33 safeguard the short-term survival of the business (Buratti et al., 2017).
34 *Prospectors* tend to favour consistency among the available solutions towards the problems
35 of adaptation (Miles et al., 1978), and seek to create long-term value opportunities (Buratti et
36 al., 2017). Prospectors subscribe to a more dynamic environment, contemplating change;
37 demonstrations include exploiting and finding new markets or product opportunities and
38 being innovating (Miles et al., 1978). In essence, prospectors highlight the impact of, and a
39 focus on, offering new services or products (Lin et al., 2014), displaying overall a more
40 entrepreneurial management style (Costin, 2012).
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3 *Analysers* provide a viable alternative. An organisation exhibiting analyser traits seeks to
4 lessen risk while capitalising on opportunities for profit (Miles et al., 1978). Analysers also
5 emphasise marketing, research and development, alongside production as essential
6 capabilities (Lin et al., 2014). Overall, they adopt a dualistic attitude; in turbulent
7 environments, they try to borrow from those innovations conceived by prospectors, whereas
8 in stable environments they strive to optimise efficiency through formalised procedures
9 (Pinto and Curto, 2007).

10
11 *Reactors* display a pattern underlining adjustment to the environment (Miles et al., 1978).
12 However, such adjustment is compelled by environmental pressures (Lin et al., 2014), and
13 can lead to a mediocre performance (Pinto and Curto, 2007). Overall, reactors have no
14 response to the entrepreneurial problem (Slater et al., 2010), instead favouring the status quo
15 for their business, and trading-off benefits in exchange for their autonomy (Costin, 2012).
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19 In the domain of small business research, Cassol et al. (2019) posit that the four types
20 of strategic organisations enable the identification of challenges within firms' environments
21 and strategic choices and attitudes available to their management to confront them.
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24 *Empirical assessments of Miles and Snow's typology*

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26 A plethora of scholarly contributions have demonstrated the merit of Miles and Snow's
27 (1978) typology in various organisational domains (e.g., Costin, 2012; Helmig et al., 2014;
28 Reichborn-Kjennerud and Svare, 2014). Behling and Lenzi (2019) identified a predominance
29 of behavioural attributes associated with the prospector (opportunity seeking, initiative
30 driven, goal setting, risk taking), and analyser (demand for efficiency and quality,
31 persistence, systematic planning), with the defender (persistent, commitment to work) and
32 reactor (commitment to work) being marginally represented.
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36 A second SME study (O'Regan and Ghobadian, 2006) confirmed the predominance of the
37 prospector and defender behavioural types, and further revealed that the performance of
38 prospectors was twice as high as that of defenders. Importantly, O'Regan and Ghobadian
39 (2006) also noticed that firms with less than 100 staff tended to fulfil the prospector type.
40 Female entrepreneurship research (Costin, 2012) has similarly partly validated this typology,
41 revealing that more than 60 percent of participants' responses defined them as prospectors
42 and analysers, exhibited by their constant innovative and proactive methods of pursuit of
43 business growth. Sonfield et al. (2001) compared genders in terms of strategic decision-
44 making, finding that no significant differences existed in risk situations, venture innovation,
45 "or in strategies chosen by business owners" (p. 165).
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3 To date, the study by Reichborn-Kjennerud and Svare (2014) is among the very few
4 contributions that have sought to assess strategic tendencies between both female and male
5 entrepreneurs, espousing Miles and Snow's (1978) typology. This paucity of an insightful
6 dimension of entrepreneurship further supports Buratti et al.'s (2017) claim, which
7 accentuates research focusing on entrepreneurial strategies, particularly when facing an
8 economic crisis. Indeed, alongside this knowledge gap, the validity of the four conceptual
9 types of strategic organisations has not fully been assessed in empirical research concerning
10 gender, entrepreneurship, and a crisis scenario.

11
12 Drawing on a sample of 300 Italian micro firms and an equal number of female and male
13 entrepreneurs (n=150), and also empirically testing Miles and Snow's (1978) typology,
14 Buratti et al. (2017) first noticed that under crisis conditions, entrepreneurs utilised a
15 defensive approach (e.g., resizing and restructuring strategies). Secondly, and as compared
16 with their male counterparts, female participants' propensity to engage in offensive strategies
17 (growth, innovation, and development) was lower (Buratti et al., 2017).

18
19 In line with Buratti et al. (2017) and Reichborn-Kjennerud and Svare (2014), this study
20 suggests that both genders differ in how they perceive and act upon a crisis; this suggestion is
21 verbalised through the following overarching question:

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23 To what extent do female and male entrepreneurs differ in the ways they operate in Cyprus
24 and Greece, both of which were severely affected by a long-term crisis?

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26 More specifically, the study proposes the following hypotheses:

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28 Hypothesis 1 (H1): Female and male entrepreneurs differ in how they perceive critical
29 success factors that could enable their firms to build adaptive-resilient strengths when facing
30 a major crisis.

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32 Hypothesis 2 (H2): Differences exist between female and male entrepreneurs concerning how
33 they perceive critical success factors that enabled their firms to adapt in the aftermath of a
34 long-term crisis (after 2008).

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36 Hypothesis 3 (H3): Female and male entrepreneurs exhibit different perceptions regarding
37 how their firms performed following a long-term crisis (between 2008 and 2016).

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39 In addressing these hypotheses, the study also seeks to validate the usefulness of Miles
40 and Snow's typology in the context of female and male entrepreneurs, including their
41 entrepreneurial behaviour when facing a long-term crisis.

Methodology

As reflected in the research questions, this study is concerned with understanding in greater detail the dynamics of organisational adaptation. Furthermore, the study examines how business practices are undertaken, and if differing approaches and priorities exist between female and male entrepreneurs, including in their entrepreneurial behaviour. More specifically, focusing on Greece and Cyprus, the study seeks to identify differences between female and male entrepreneurs in their considerations, approaches and methods in business practices after being severely affected by a major crisis.

As the focus of the study was to examine organisational adaptation in a crisis alongside any differences aligned with gender, a theme that to date is still under-researched (Buratti et al., 2017), the study takes an exploratory path. Some of the goals of exploratory research include the articulation of problems, clarification of concepts, and the development of hypotheses (Sue and Ritter, 2012). In addition, the importance of ensuring that the appropriate demographic group and information-rich respondents contributed to robust data collection led to the choice of purposive sampling.

Patton (2015) indicates that purposive sampling methodologies afford the opportunity to collect data from respondents who are best placed to provide rich insights and data as well as being strategically aligned to the study's focus. Patton's (2015) point is also in line with exploratory research (Sue and Ritter, 2012), which highlights the significance of searching for individuals who are knowledgeable about a process or theme. In addition, the socioeconomic significance of micro and small firms, coupled with their overwhelming numerical dominance in European Union economies (Eurofund, 2016), justified the focus on this group. These decisions led to the application of the following criteria:

- Participants: Female and male entrepreneurs with direct involvement in the firm (owner or manager).
- Firm 1: All firms were micro and small-sized.
- Firm 2: All firms were operating in Greece or Cyprus.
- Firm 3: Firms had been operating for two years at the time of the study.

After gaining university ethics approval, during December 2016 and June 2018, utilising websites, including industry associations, as many as 1,700 firms were contacted by one of the members of the research team, who speaks fluent Greek and English. 1,300 of these firms were operating in Greece and 400 in Cyprus. In 420 cases (338 in Greece, 82 in Cyprus), firms were visited between the above years, presented the objectives of the research, and

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3 provided with a hardcopy of the questionnaire in an envelope. Subsequently, the sealed
4 envelopes containing the questionnaires were collected two weeks later. In the remaining
5 1,280 cases where distance, time and budget precluded the researcher from travelling,
6 questionnaires were sent to the firms directly with a prepaid return envelope (980 in Greece,
7 300 in Cyprus). Overall, 443 responses were gathered; of these, 37 were either incomplete or
8 blank, and therefore were discarded. Thus, 406 usable responses were gathered, 348 in
9 Greece and 58 in Cyprus, resulting in a 23.9 percent response rate. Most usable responses
10 (332, 81.8%) were collected through direct questionnaire distribution. In both cases,
11 participants were informed about the aims of the research, and invited to partake in it. In
12 addition, they were informed that their participation was at the same time their consent to be
13 part of the research.

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15 The questionnaire, translated into Greek, was divided into four sections, with the first
16 gathering demographic data (participants, firms). Before its dissemination and in alignment
17 with suggestions by Douglas and Craig (2007), through collaborative efforts with other
18 researchers, multiple iterations were conducted for purposes of content clarity and
19 consistency. Utilising a five-point Likert-type scale, the second, third, and fourth sections
20 sought to ascertain the level of importance which participants placed upon a) firm-related
21 success factors together with those highlighting success to respond to the GFC, b) items
22 associated with firm performance in the aftermath of the GFC, and c) items associated with
23 the extended GFC between 2008 and 2016. The items, categorised into dimensions (Tables 2,
24 4, and 6), were developed by consulting different studies that examine entrepreneurs'
25 strategies, success factors, and performance-related aspects during a crisis among SMEs (e.g.,
26 Devece et al., 2016). Research focusing on gender entrepreneurship in the fields of strategy
27 and adaptation was also considered (e.g., Buratti et al., 2017; Cesaroni et al., 2015; Costin,
28 2012; Kirkwood, 2016).

29
30 Once the data collection process ended, the useable questionnaires' content was entered
31 into a spreadsheet and was subsequently exported to the Statistical Package for the Social
32 Sciences (SPSS). In using this tool to analyse the quantitative data, and in line with previous
33 research that compares entrepreneurship in the context of gender, independent samples t-test
34 (e.g., Ali and Shabir, 2017) and exploratory factor analysis (e.g., Dabic et al., 2012) were
35 conducted. Independent samples t-test was undertaken to uncover potential differences
36 between female and male entrepreneurs in their approaches. The statistical differences in
37 mean scores split by gender helped identify variations in business approaches undertaken by
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3 female and male entrepreneurs.

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5 **Before** undertaking the independent samples t-test, all sections featuring scaled items were
6 cross-checked to ensure reliability **and** robustness. In all instances, Cronbach's Alpha
7 exceeded the 0.7 threshold as suggested by Nunnally (1978). **According to Kim (2015), when**
8 **considering** the use of t-tests: "the two samples for comparison must be independently
9 sampled from the same population, satisfying the conditions of normality, equal variance, and
10 independence" (p. 544). The first condition is satisfied in the present research through
11 appropriate **data-gathering** principles. Second, and aligned with Garson's (2012) notions,
12 equal variance using Levene's test was assessed using part of the gathered data; for instance,
13 a comparison was made between the two countries and the 21 items displayed **in** Table 5. The
14 results of Levene's test showed that in most instances a statistic at the 0.05 level or higher
15 was achieved; thus, the test illustrates an appropriate homogeneity of variance. Third, using
16 the same data set (Table 5), a normal distribution test was run; the results also illustrate a
17 normal distribution curve within the 21 items. With these conditions satisfied, the data
18 analysis was continued.

19
20 **The result concerning the data's normal distribution further underscores the**
21 **appropriateness of choosing the independent samples t-test over other tests. For example, the**
22 **independent samples t-test is favoured when the data fulfil assumptions related to parametric**
23 **distributions which are usually met when the data "approximate an acceptable level of normal**
24 **distribution"** (MacFarland and Yates, 2016, p. 103). In contrast, the Mann-Whitney test might
25 **be more appropriate "when measurements made on a continuous scale are non-normally**
26 **distributed"** (Bergmann et al., 2000, p. 72).

27
28 **In addition, exploratory factor analysis results satisfied the required assumptions in**
29 Kaiser-Meyer-Olkin's Measure of Sampling Adequacy (<0.05) and Bartlett's Test of
30 Sphericity (<0.05). These metrics indicate reliable and robust results across the statistical
31 tests. Conducting a close examination of the exploratory factor analysis identified that the
32 different communalities, particularly **in** Tables 5 and 7, exhibited values above 0.50, which is
33 a threshold considered acceptable (e.g., Patnaik and Bhowmick, 2022). In line with Tapsoba
34 et al. (2000), those factors displayed on the scree plot test solution and based on the
35 percentage explained by the variance were retained. The factors are illustrated **in** Tables 2, 5,
36 and 7, and the percentage of the variance **is** at the bottom of each of these tables.

Demographic information

One of the key highlights of the participating firms is that almost three-quarters were well established at the time of the study, having operated for over a decade, and over one-quarter for over two decades (Table 1). Over 80 percent were micro firms. The predominant industries in which firms were involved were hospitality/tourism and retail/wholesale (73.1%). Over half were family-owned firms, while only a marginal percentage (9.4%) were involved in exports. Regarding the participants, 56.7 percent were owners, almost 70 percent were male, and 61.9 percent had secondary and/or vocational schooling. Finally, an almost equal split was noticed in terms of those respondents aged over 45 years (49.3%) and those younger (51.7%).

Table 1

Results

Measures of success in facing the GFC

In analysing the most prominent critical success factors to face the long-term crisis, the questionnaire asked prospective participants: "From a personal perspective, how important are the following 'critical success factors' in the performance of this business since the 2008 GFC? A five-point Likert-type scale afforded options between 1 (not at all important) and 5 (very important). This section of the questionnaire provided items illustrating the dimensions previously presented (Table 2), with the first being 'financial value', which encapsulates the effective management and allocation of the firm's finances (cash flow, operating costs).

The second, 'personal/intrinsic value' denotes one's passion and personal aspiration to grow the business, and investment of time. Aligned with this dimension, and in a crisis, passion is suggested as a process triggering entrepreneurs' will to survive (Boussema, 2023). The third dimension, 'knowledge-based value' suggests the relevance of past experiences or continuous knowledge enhancement, while the fourth 'strategic value', refers to activities and initiatives to strengthen the firm's resilience and coping capabilities. Finally, the 'adding value' dimension, extends from 'strategic value', with the firm executing initiatives and activities destined to enhance customers' experience and with it, its resilience/coping.

When analysing measures of success and genders, the mean scores underline that female owners/managers only partly differ from their male counterparts. Regarding intrinsic and non-financial rewards, running independent samples t-test revealed a statistically significant difference ($p < 0.001$), where female participants perceived work-life balance more importantly than did males. Furthermore, while female entrepreneurs exhibited a similar perceived reward concerning public recognition, they were similarly driven by a need to grow

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3 the business. These initial findings contrast those of recent research (Mucha, 2020)
4 identifying a more defensive approach by female family entrepreneurs in the advent of the
5 COVID-19 crisis.
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8 A statistically significant difference was revealed within the financial management value
9 domain, with female participants agreeing more strongly with allocating resources as needed.
10 Third, and associated with one's intrinsic value, female entrepreneurs agreed more strongly
11 with passion as a key ingredient in promoting the firm. Conversely, males' responses were
12 stronger concerning the need to be inquisitive and scan the environment to identify the latest
13 developments ($p < 0.05$). Thus, barring the above few differences, both genders share
14 comparable behavioural patterns regarding success factors in the aftermath of a severe long-
15 term crisis.
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22 Table 2 Here

23 Exploratory factor analysis further helped illuminate aspects related to participants'
24 perceptions, and with it, their entrepreneurial behaviour, concerning success factors in facing
25 the GFC (Table 3). Overall, while both groups place similar importance on prospective and
26 analyser types of strategic organisations, there are some subtle differences. The first factor
27 illustrates an almost equally dynamic approach, using technology, adopting/imitating others'
28 strategies, developing new products, or focusing on specific niche markets. However, the
29 second factor highlights a predominance of the prospector type, with females favouring a mix
30 of prospector and analyser types, where efficiency through formalised approaches (Pinto and
31 Curto, 2007) emerge, notably, through their focus on managing cash flow and costs, while
32 investing **their time** and communicating with customers. Males, in turn, place more
33 importance on passion and accumulated experience/knowledge.
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43 Table 3 Here

44 *Firms' performance after the GFC*

45 Similar to the previous section of the questionnaire (Table 2), a second section presented a set
46 of criteria encompassing relevant aspects **of** firms' performance after the year 2008 (Table 4).
47 Here, participants were asked to rate these aspects in terms of importance using a 5-point
48 Likert-type scale. As the mean scores indicate, both female and male entrepreneurs perceived
49 the importance of factors related to their firms' performance since the 2008 GFC in similar
50 ways. For instance, they considered the importance of direct gains through controlling
51 operating costs in very similar terms. Thus, there is an alignment in the groups' behaviour,
52 notably, in how they approach the aftermath of a deep crisis. Both groups also viewed the
53 higher quality of their suppliers as a tool to enhance the firm's future performance. Similarly,
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3 male and female participants **agreed on** the importance of being innovative in their product
4 range and/or service offerings to maintain and achieve higher client/customer satisfaction **or**
5 **improve efficiency** by reducing the time spent undertaking tasks. These shared perceptions
6
7 underscore a similar business mindset, with implications for businesses' adaptive measures in
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9 the aftermath of a damaging long-term crisis.

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12 Table 4 Here

13
14 When conducting exploratory factor analysis, **several** subtle differences between both
15 groups were observed. First, five factors were aligned with how male participants viewed
16 their firms' performance since 2008 against only three among their female counterparts
17 (Table 5). Here, female participants considered operational improvements, together with
18 direct and indirect gains, as the most important performance indicators; thus, suggesting a
19 mix of analyser (A) and prospector (P) types of strategic organisation. In contrast, males
20 mainly viewed direct and indirect gains as key performance pillars, followed by performance
21 enhancements as an additional factor. In these two factors, the prospector was the only
22 emerging type. Second, differences were also noticed in the make-up of the factors. For
23 instance, while female participants' third factor provided a mix of operational
24 improvements/advances, controlling costs, strengthening firm-customer relations, and
25 indirect gains through assets, males' fourth and fifth factors included similar performance
26 criteria.
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36 Table 5 Here

37 *Perceived actual performance of the firm in the aftermath of the GFC*

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39 A final section of the questionnaire was concerned with how **participants' firms had**
40 **performed** between 2008 and 2016 in relation to a range of criteria to be measured using a 5-
41 point Likert-type scale (Table 6). Here again, when comparing mean scores, the large
42 majority of items related to firms' performance criteria between 2008 and 2016 demonstrate a
43 very similar level of importance, with only **a** few differences being emergent. While in two of
44 the criteria groups (perceptive, applied measures) the scored means are either above the
45 neutral level (mean= 3), or approximate the importance level, the group 'counting on others'
46 was by far the least rated. Receiving financial or non-financial support from institutions
47 suggests entrepreneurs' perceived lack of the need to rely upon institutional support. In turn,
48 the reliance on significant others, such as family and friends, was by far the most importantly
49 perceived form of support. This finding is in agreement with recent work among micro-small
50 firms (Bressan et al., 2021), which identified the fundamental role of one's family in
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60 confronting the recent COVID-19 crisis.

Table 6 Here

Unsurprisingly, the ‘counting on others’ dimension did not transpire in the subsequently undertaken exploratory factor analysis. Instead, the analysis further underscored the already marginal/subtle gender differences. For example, while males’ perceptions can be encapsulated into three factors and those of females into five (Table 7), there is a clear affinity regarding the first factor, which highlights entrepreneurs’ agility, dynamism, and commitment, with clear implications for improving the firm’s performance.

Table 7 Here

Discussion

Small business research highlights the crucial concern represented by the lack of cash-flow (Duarte Alonso and Bressan, 2015), as well as the significance for firms to count on cash reserves, particularly in the present COVID-19 regime (Cowling et al., 2020). Not surprisingly, Nitani et al. (2020) posit that a key reason for small businesses’ failure is associated with poor financial decisions. The ‘financial value’ dimension illustrated in participants’ responses highlights their awareness, efforts, and overall skills in their journey to overcome the long-term crisis. This dimension is partly aligned with the notions of uncertainty and ‘affordable loss’ (Haneberg, 2021), where entrepreneurs’ actions following their assessments to survive a financial crisis entail risks that could lead to both scenarios (survival or failure). Similarly, the ‘personal/intrinsic value’, ‘knowledge-based value’, ‘strategic value’ and ‘adding value’ dimensions suggest vital implications for the future sustainability of the firm. As Forsman (2008) explains, success or failure in a particular business area has the potential to spill-over into the overall performance of the firm.

Also concerning perceived success factors, the apparent perceived importance of effective financial management among both gender groups over ‘allocating finances’ suggests a preference to be in control as opposed to relying on external sources of financial support. This finding is also in agreement with previous contributions (Harrison and Baldock, 2015; Popov and Udell, 2012), which underline SMEs’ perennial difficulties in accessing bank financing.

In accord with the objectives of exploratory research (Sue and Ritter, 2012), and based upon the findings, the following conclusion is made: In confronting a long-term crisis, both female and male entrepreneurs almost equally adhere to the measures of firm success associated with the prospector and analyser types of strategic organisations, notably, by notably focusing on financial, intrinsic, knowledge-based, and strategic value, as well as adding value to their consumers’ experience. Therefore, while subtle differences exist,

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3 overall, H1 is not fully supported.

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5 Furthermore, concerning participants' views on firm performance after the GFC, the
6 results of the independent samples t-tests highlight similar perceptions. Similarly, the
7 performed exploratory factor analysis confirms only nuanced differences. For instance, males
8 perceived direct/indirect gains, emphasising the 'prospector' dimension, while female
9 participants' responses emphasised both the 'analyser' and 'prospector' dimensions.

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11 Through this evidence, it can be concluded that H2 is only partly supported. Moreover, in
12 confronting the aftermath of a long-term crisis (2008), both female and male entrepreneurs
13 place a similar level of importance on their firms' performance, with the prospector and
14 analyser types of strategic organisations illustrated through various forms of action, including
15 enhancing the quality of their chosen suppliers, strengthening firm-customer relations, or
16 improving the time to complete tasks.

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18 Finally, when comparing female and male owners-managers and firm performance over
19 an extended period (2008-2016), again, the overall results (independent samples t-test)
20 demonstrate that, for the most part, both groups share similar perceptions. Furthermore, while
21 the exploratory factor analysis resulted in a more varied number of dimensions about such
22 perceived performance between 2008-2016, both genders' perceptions appear to share more
23 commonalities than differences.

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25 Given these findings, the following conclusion could be suggested:

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27 In confronting the extended period in the aftermath of a major crisis (2008-2016), both
28 female and male entrepreneurs display similar types of organisational strategies (defender,
29 prospective, and analyser). These similarities are demonstrated, for instance, through
30 strategically significant perceptive/behavioural traits (e.g., learning from mistakes),
31 applied/hands-on measures (actively participating in industry groups), and building
32 resources/capabilities. Therefore, based on the above evidence, H3 is only partly supported.

33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 **Conclusions**

49
50 This study fulfils various key objectives. Empirically, it responds to calls to consider the
51 gender dimension of entrepreneurship and to assess whether or not female-male
52 entrepreneurs differ in the ways in which they opt for solutions when navigating through an
53 economic downturn (Buratti et al., 2017). By considering the conceptual underpinnings of
54 Miles and Snow's (1978) typology, it proposes a theoretical framework, which depicts strong
55 relationships between participants' perceived success factors and firm performance, for
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3 instance, between 2008 and 2016, or following the GFC. Cascading from the empirical
4 findings, the study proposed and tested three hypotheses; through the analysis, and for the
5 most part, these hypotheses were not supported.
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10 *Theoretical implications*

11 Various relationships identified between the findings and the conceptual underpinnings of
12 Miles and Snow's typology led to the development of a proposed framework (Figure 1).
13 Departing from a crisis scenario affecting micro-small enterprises, and, with it, female-male
14 entrepreneurial behaviour, the framework highlights three key examined dimensions. First,
15 under measures of firm success in adapting to a major crisis, the importance of cash/cost
16 management, illustrated by the mean scores, constitutes a reminder of a key element in firms'
17 adaptation and survival. This aspect was equally perceived by both genders.
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24 Similarly, the higher mean scores illuminate the significance of the intrinsic value of
25 passion, investing time and entrepreneurs' growth aspirations, further confirming
26 participants' entrepreneurial behaviour. Some elements of strategic value (building trust,
27 monitoring the latest developments), and adding value to consumers' experience, equally
28 reinforce the notion of entrepreneurial behaviour, through agility, dynamism, and attention to
29 detail. Both the findings and the framework illustrate linkages between the prospector and
30 analyser types of strategic organisations. Moreover, while the items presented to participants
31 were linked to these types, the higher mean scores suggest the strategic significance of paying
32 attention to such elements from an entrepreneurial perspective.
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40 Second, about firms' performance after the 2008 GFC, the findings similarly reveal an
41 almost equal level of perceived importance between female and male entrepreneurs. In this
42 case, however, the mean scores only underline participants' modestly perceived levels of
43 importance. Indeed, enhancing future firm performance vis-à-vis stakeholders, for instance,
44 concerning the quality of suppliers, and strengthening direct firm-customer relations, notably,
45 in relation to client/customer satisfaction, were only among many items scoring close to the
46 level of importance (mean= 4.00). Here again, the items of the questionnaire were strongly
47 associated with the prospector and analyser types of strategic organisations, and despite the
48 lower mean score, they provide some discerning context suggesting the significance of
49 focusing on specific firm performance components as a means to strengthen the firm's
50 adaptive capacity.
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58 Third, and finally, the dimension highlighting the firm's perceived performance between
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2008 and 2016 illustrates two areas (perceptive/behavioural traits, applied/hands-on measures) that approximate or go beyond the level of importance. Once again, both genders' responses confirm similar mean scores. Thus, while the analyser and defender types of strategic organisations were predominant, the lower mean scores cast doubts on the significance of this last component as having supporting value and **therefore being** fundamental to firms' performance. Consequently, the dotted line surrounding 'counting on others' suggests its apparent irrelevance in this research. Nevertheless, those items scoring above the 'neutral' point of importance are suggested to be connected with participants' entrepreneurial behaviour, in seeking to make contributions towards firms' performance and adaptation.

Therefore, as illustrated, the majority of the revealed dimensions, which emphasise different types of strategic organisations and entrepreneurial behaviour, can have important implications in helping the studied firms to be better equipped to confront the complex challenges of a long-term crisis.

Figure 1 Here

Practical and Policy Implications

The research suggests various practical implications. For instance, the apparent similarity in ways in which entrepreneurs of both genders perceive success factors, as well as their firm performance in the aftermath of a major crisis, underlines opportunities and challenges. **Regarding** to potential outcomes, the revealed alignment of both genders in perceiving strategies in times of crisis also suggests a similar mindset and intention to roll out strategies and counteract the impacts of a severe crisis. At the same time, however, by having such a strong alignment, both groups are constrained by their similarities. For instance, the results suggest that when facing a long-term crisis, both groups' leadership **positions**, and reliance on strong ties (family/friends) **are** similar, with limited opportunities to learn from one another.

While both female and male entrepreneurs continue to navigate through the perils of surviving an increasingly challenging business environment (Cowling et al., 2020), the above findings could have further ripple effects. Indeed, with similar perceived success factors and firm performance, there is potential for a higher degree of predictability concerning how businesses owned by both genders approach crisis scenarios.

Recently, Mittal and Raman (2021) concluded that financial and managerial skills limitations, together with macroeconomic uncertainties can prevent growth among smaller firms. More specifically, small firm owners' entrepreneurial experience can strongly dictate their firms' cash flow limitations (Mittal and Raman, 2021). The present study's findings

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3 illustrate the perceived importance of direct and indirect financial gains as a foundation for
4 firm survival when facing a long-term crisis. Thus, there are implications for new generations
5 of business owners, especially in acquiring financial knowledge and business acumen
6 together with gaining a stronger awareness of today's demands operating in a challenging
7 business environment. Here, the role of various stakeholders, including business associations,
8 educational institutions, financial institutions, government agencies, and suppliers (e.g.,
9 equipment vendors), is fundamental in maintaining or enhancing financial and business
10 management skills while equipping and preparing future entrepreneurs for dynamic business
11 settings.

12
13 Another implication relates to the evolving nature of technological uptake among
14 businesses. As previously indicated, since the disruption caused by COVID-19, digitalisation
15 has **gained significance** among smaller firms (e.g., Eller et al., 2020; Radicic and Petković,
16 2023). **The apparent alignment between both genders concerning firm performance and
17 success factors could have implications for their perceived importance of digitalisation and
18 also for their adoption, engagement, and future investment.** A similar argument could be
19 **made about** the degree to which either gender places on embracing different forms of
20 sustainable practices or committing to achieving different forms of sustainability as this
21 phenomenon has also ramifications for smaller firms (e.g., Bai et al., 2021; Bressan and
22 Pedrini, 2020).

23
24 **The study's findings also highlight an overarching policy implication. Indeed, the revealed
25 strategic alignment between females and males could inform future entrepreneurs and
26 industry bodies concerning entrepreneurial expectations, adaptive actions and strategies. The
27 findings could also illuminate industry and government stakeholders, in planning or in
28 devising supportive initiatives.** These strategies could include the organisation and space for
29 conducting upskilling sessions, for instance, in contemporary technological tools that could
30 be directed to further sharpen entrepreneurs' business acumen and strategy inventory.

31 32 *Limitations and Future Research*

33 While the study provides insightful conceptual and practical insights, it nevertheless presents
34 various limitations. First, the research was conducted in Cyprus and Greece, both severely
35 affected by the GFC, thus, gathering only the perceptions of entrepreneurs operating in a
36 specific geographic setting. To address this limitation, future research could consider
37 comparisons between firms in other European or world regions. **Researchers** could consider

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3 studying firms in other nations where the GFC was particularly detrimental, or in those where
4 it had lesser significance. This type of study could further strengthen the results of the present
5 research and illuminate both conceptual and practitioner perspectives that could contribute to
6 understanding dimensions associated with success factors and ways to overcome a severe
7 situation.

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12 Second, the study took place before the start of the COVID-19 crisis; hence, the study
13 lacks potentially valuable pre-and post- firm data-based comparisons between the two events.
14 Future research could consider this aspect, for instance, collecting data from 2020 onwards
15 and making comparisons with previous research (e.g., concerning the GFC). These efforts
16 would result in more in-depth observations, considerations, and overall elucidation of
17 multiple ways of adapting to crises, from long-term and severe, to more recent crises with
18 uncertain outcomes, and from practical to potentially more in-depth conceptual outcomes. In
19 the current COVID-19 regime, it is crucial to examine businesses' developmental paths,
20 particularly micro-small businesses, and find ways to support these for their own sake, and
21 that of the stakeholders (suppliers, employees, and customers) that significantly depend on
22 them. Third, while various disruptive events and trends have emerged in recent years,
23 including changing working habits (e.g., hybrid/remote work) and technologies (e.g.,
24 artificial intelligence), they are not discussed in this research. Future studies could delve
25 deeper into these themes to understand whether and how, for instance, males/females differ in
26 their adaptation, uptake, and learning journey experiencing these events and trends.

27
28 Furthermore, studies could consider mixed methods, where quantitative data could be
29 complemented with face-to-face interviews, on-site observations, and using a longitudinal
30 approach. Together, these steps would help reinforce the approach utilised in this research
31 which entails a quantitative investigation conducted at one point in time. Finally, to assess the
32 value and rigour of the proposed framework (Figure 1), future research could consider its key
33 features and accordingly evaluate them.

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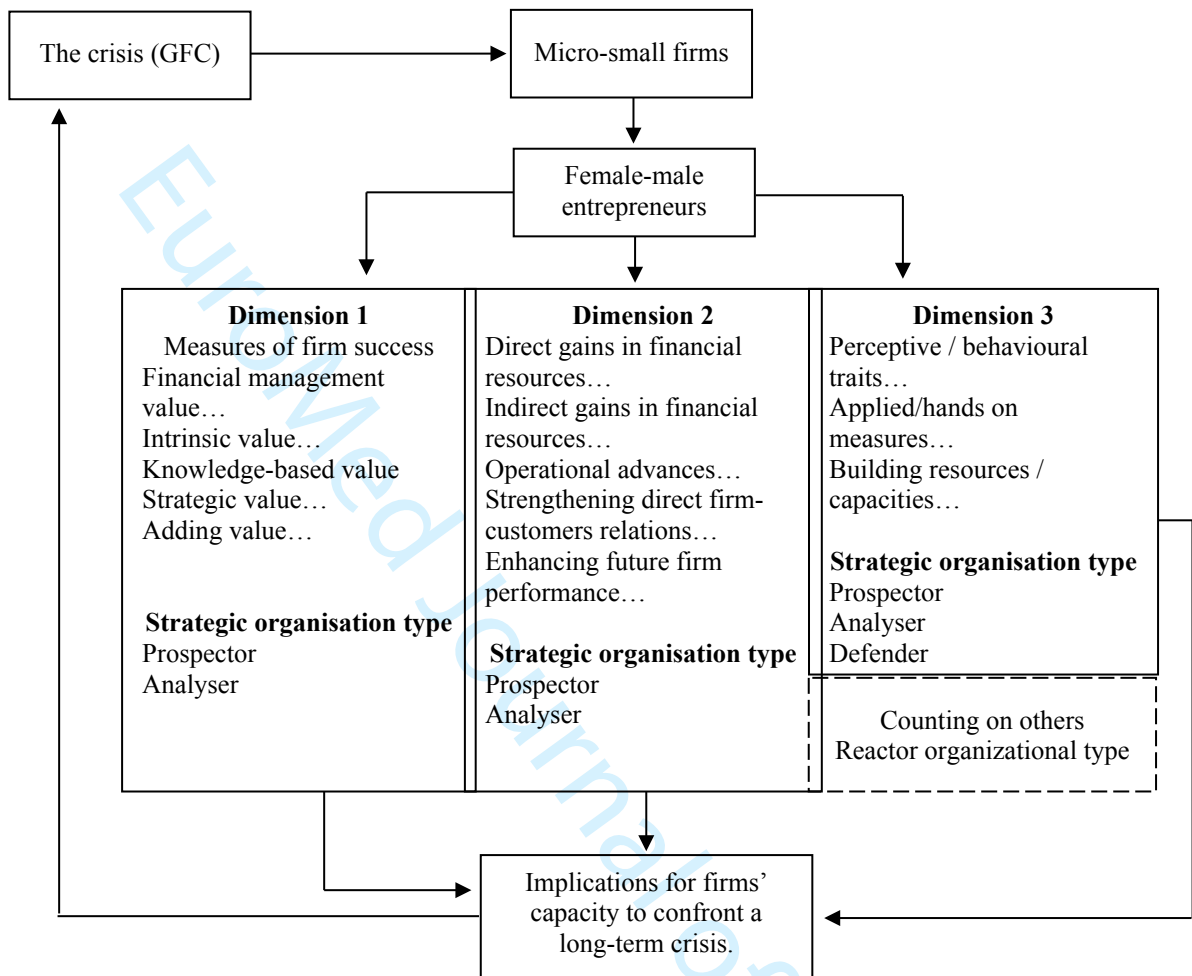
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Figure 1: Conceptualising relationships between the findings and Miles and Snow’s typology
 Source: Miles and Snow (1978); Miles et al. (1978); Figure created by the authors



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Table 1: Demographic characteristics of the firms and participants
Note: Table created by the authors

Characteristics	Greece		Cyprus		Total	
Size of the firm (in full-time employees)	n=348	% *	n=58	%	n=406	%
0	93	26.7	3	5.2	96	23.6
1-9	213	61.2	29	50.0	242	59.7
10-49	42	12.1	26	44.8	68	16.7
Firms' annual turnover (in Euros)	n=348	%	n=58	%	n=406	%
Less than 50,000	133	38.3	7	12.1	140	34.6
50,000 – 199,999	153	44.1	34	58.6	187	46.2
200,000 – 1,999,999	61	17.6	17	29.3	78	19.2
Age of the firms	n=348	%	n=58	%	n=406	%
2-5 years	29	8.3	0	0.0	29	7.1
6-10 years	65	18.7	6	10.3	71	17.5
11-20 years	158	45.4	39	67.3	197	48.6
21+ years	96	27.6	13	22.4	109	26.8
Industry in which firms are involved in	n=348	%	n=58	%	n=406	%
Hospitality/tourism	144	41.4	27	46.6	171	42.1
Retail/Wholesale	110	31.6	18	31.0	128	31.5
Food production/agriculture/fisheries	37	10.6	0	0.0	37	9.1
Manufacturing	24	6.9	3	5.2	27	6.7
Miscellaneous (e.g., real estate, financial, etc.)	33	9.5	10	17.2	43	10.6
Type of business	n=348	%	n=58	%	n=406	%
Family firm	186	53.4	35	60.3	221	54.4
Non-family firm	162	46.6	23	39.7	185	45.6
Firms' involvement in exports	n=348	%	n=58	%	n=406	%
Yes	34	9.8	4	6.9	38	9.4
No	314	90.2	54	93.1	368	90.6
Role of the participants	n=348	%	n=58	%	n=406	%
Owner	205	58.9	25	43.1	230	56.7
Manager / Director	143	41.1	33	56.9	176	43.3
Gender of the participant	n=348	%	n=58	%	n=406	%
Male	231	66.4	45	77.6	276	68.0
Female	117	33.6	13	22.4	130	32.0
Participants' highest level of education	n=348	%	n=58	%	n=406	%
Master's degree and above	26	7.5	5	8.6	31	7.6
Bachelor's degree	88	25.5	11	19.0	99	24.6
Technical/vocational degree	51	14.8	25	43.1	76	18.9
Secondary/High school	156	45.2	17	29.3	173	43.0
Primary/No school	24	7.0	0	0.0	24	5.9
Participants' age group	n=348	%	n=58	%	n=406	%
26-35 years old	50	14.4	17	29.3	67	16.6
36-45 years old	118	34.0	20	34.5	138	34.1
46-55 years old	96	27.7	15	25.9	111	27.4
56 and above	83	23.9	6	10.3	89	21.9

* Some percentages were rounded off.

Table 2: Male-female comparisons using independent samples t-test – Success factors

Note: Table created by the authors

Measures of firm success (personal perspective)	Males= 276		Females=130		Significance
	Mean	STD	Mean	STD	
Intrinsic, non-financial rewards					
Satisfied customers	4.70	.559	4.71	.664	NS ***
Usefulness/relevance of products/services to customers	4.46	.735	4.45	.695	NS
Work-life balance	4.20	.819	4.57	.693	<0.001
Personal satisfaction	4.18	.843	4.14	1.105	NS
Contributing back to society (e.g., jobs, taxes)	3.37	1.027	3.52	1.136	NS
Public recognition	2.86	1.455	3.03	1.483	NS
Financial/bottom-line rewards					
Business survival/longevity	4.76	.498	4.82	.440	NS
Profitability	4.71	.550	4.66	.677	NS
Business growth	4.19	.942	4.36	.940	NS
Innovating (e.g., solving problems, repairing equipment)	3.56	1.009	3.66	1.217	NS
Measures of firm success (to adapt to the GFC)					
Financial management value					
Managing cash flow efficiently (A*)	4.70	.489	4.74	.475	NS
Managing operating costs efficiently (A)	4.72	.510	4.75	.437	NS
Allocating finances (e.g., banks) as needed (A)	3.39	1.267	3.68	1.276	<0.050
Intrinsic value					
Being passionate about my products/services (P**)	4.32	.831	4.48	.750	<0.050
Investing additional personal time on my firm (P)	4.50	.784	4.48	.728	NS
Personal aspiration to grow the firm (P)	4.39	.772	4.38	.828	NS
Knowledge-based value					
Accumulated experience/knowledge in industry (P)	4.62	.658	4.56	.543	NS
Constantly looking for new knowledge (P)	3.56	1.157	3.74	1.279	NS
Strategic value					
Building trust with external stakeholders (P)	4.63	.704	4.64	.647	NS
Monitoring latest developments in my industry (A)	4.20	.874	4.00	1.085	<0.050
Focusing on specific niche market segments (P)	3.54	1.024	3.71	1.052	NS
Using technology to support the firm's operations (P)	3.46	1.266	3.28	1.347	NS
Imitating/adopting strategies used by others (A)	2.81	1.341	2.88	1.264	NS
Adding value to consumers' experience					
Communicating with customers (e.g., online) (P)	4.59	.759	4.70	.643	NS
Offering a specialised range of products/services (P)	4.03	.859	4.02	.948	NS
Developing new products/services (P)	3.41	1.074	3.39	1.096	NS

* Analyser; ** Propsector; *** Not statistically significant.

Table 3: Male-female comparisons and factor analysis – Success factors

Note: Table created by the authors

Factor analysis (firm success and adaptation) - Males	Factor 1	Factor 2	Factor 3	Factor 4
Imitating/adopting strategies used by others (A)	.791			
Using technology to support the firm's operations (P)	.780			
Developing new products/services (P)	.719			
Constantly looking for new knowledge (P)	.694			
Focusing on specific niche market segments (P/D)	.664			
Allocating finances (e.g., banks) as needed (A)	.632			
Monitoring latest developments in my industry (A)	.590			
Being passionate about my products/services (P)		.773		
Personal aspiration to grow the firm (P)		.740		
Accumulated experience/knowledge in industry (P)		.722		
Investing additional personal time on my firm (P)		.580		
Managing operating costs efficiently (A)			.871	
Managing cash flow efficiently (A)			.753	
Communicating with customers (e.g., online) (P)			.687	
Offering a specialised range of products/services (P)				.724
Building trust with external stakeholders (P)				.506
Factor analysis (firm success and adaptation) - Females	Factor 1	Factor 2	Factor 3	Factor 4
Using technology to support the firm's operations (P)	.826			
Imitating/adopting strategies used by others (A)	.762			
Constantly looking for new knowledge (P)	.743			
Monitoring latest developments in my industry (A)	.736			
Focusing on specific niche market segments (P/D)	.669			
Developing new products/services (P)	.661			
Offering a specialised range of products/services (P)	.587			
Investing additional personal time on my firm (P)		.741		
Managing cash flow efficiently (A)		.677		
Managing operating costs efficiently (A)		.668		
Personal aspiration to grow the firm (P)		.629		
Communicating with customers (e.g., online) (P)		.455		
Building trust with external stakeholders (P)			.768	
Allocating finances (e.g., banks) as needed (A)			.631	
Being passionate about my products/services (P)				.834
Accumulated experience/knowledge in industry (P)				.663
Cronbach's Alpha – Standardised items: .803				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .818				
Bartlett's Test of Sphericity				
Approximate Chi-Square: 2047.362				
Degrees of freedom: 120				
Significance: < 0.001				
Total variance (4 factors): 59.281%				

Table 4: How the firm performed immediately after the 2008 GFC using independent samples t-test
 Note: Table created by the authors

Business performance criteria Increase in...	Males= 276		Females=130		Significance
	Mean	STD	Mean	STD	
Direct gains in financial resources through...					
...controlling operating costs more effectively (P*)	3.53	.820	3.52	.925	NS***
...sales (e.g., number of products/services sold) (P)	2.83	1.051	2.74	1.178	NS
...revenue (Gross income) (P)	2.65	.992	2.56	1.258	NS
...net profit (total income minus any expenses, taxes, etc.) (P)	2.60	1.006	2.55	1.208	NS
...liquidity-cash flow/receipts (cash in hand) (P)	2.41	1.028	2.38	1.271	NS
Indirect gains in financial resources through...					
...enhancing the image of the firm/product/service (A**)	3.62	.846	3.58	.806	NS
...purchases (e.g., goods, services) (A)	2.77	.901	2.64	1.100	NS
...assets (e.g., buildings, land) (A)	2.47	.955	2.54	.997	NS
...investment on the firm (e.g., equipment, training) (A)	2.28	1.074	2.24	1.250	NS
Operational advances through...					
...reducing the time required to undertake tasks/utilisation (P)	3.62	.802	3.61	.902	NS
...introduction of new products/services (P)	3.07	1.014	3.01	1.110	NS
...capacity utilisation (e.g., space, facilities, land) (P)	2.95	1.038	3.01	1.053	NS
...innovation (e.g., products, services, process) (P)	2.64	1.152	2.51	1.228	NS
...employment (new employees) (P)	2.43	.910	2.27	1.040	NS
Strengthening direct firm-customer relations. Higher...					
...client/customer satisfaction (e.g., with products, services) (P)	3.96	.839	3.96	.751	NS
...integration with customers/guests (P)	3.49	1.032	3.64	.973	NS
...client/customer base (P)	2.89	.990	2.98	1.210	NS
Enhancing future firm performance vis-à-vis stakeholders. Higher...					
...quality of suppliers (e.g., products, ingredients) (P)	3.96	.843	4.04	.857	NS
...perception of dependability upon the firm's products/services (P)	3.57	1.026	3.66	1.046	NS
...perception of quality in products/services (P)	3.49	.967	3.56	.907	NS
...perception of quality in the process of production/service (P)	3.44	.914	3.50	.966	NS

* Prospector; ** Analyser; *** NS: Not statistically significant.

Table 5: Female-male comparisons – Factor analysis – How the firm performed after the 2008 GFC
 Note: Table created by the authors

Factor analysis (firm success and adaptation) - Males					
	F 1	F 2	F 3	F 4	F 5
Direct gains... through net profit (total income minus any expenses, etc.) (P)	.818				
Direct gains... through liquidity-cash flow/receipts (cash in hand) (P)	.782				
Direct gains through... revenue (Gross income) (P)	.775				
Strengthening direct firm-customer relations: client/customer base (P)	.676				
Indirect gains in financial resources enhancing the image of the firm (P)	.495				
Enhancing future firm performance... Perception of dependability (P)		.857			
Enhancing future firm performance...: Process of production/service (P)		.833			
Enhancing future firm performance...: Perception of quality (P)		.810			
Strengthening direct firm-customer relations: Integration with guests/customers (P)		.750			
Operational improvements through innovation (e.g., products/services, etc.) (A)			.857		
Indirect gains in financial resources through purchases (e.g., goods, services) (P)			.632		
Indirect gains in financial resources through investment... (equipment, etc.) (P)			.614		
Operational improvements through employees (number of new jobs) (A)			.582		
Operational improvements through introduction of new products and services (A)			.527		
Operational improvements through capacity utilisation (e.g., space, facilities) (P)				.890	
Indirect gains in financial resources through assets (e.g., buildings, land) (A)				.765	
Direct gains in financial resources through sales... (P)				.621	
Strengthening direct firm-customer relations – Higher client satisfaction (P)				.505	
Operational advances... reducing the time required to undertake tasks (P)					.819
Direct gains... controlling operating costs more effectively (P)					.711
Enhancing future firm performance... Higher quality of suppliers (P)					.658
Factor analysis (firm success and adaptation) - Females					
	F 1	F 2	F 3		
Indirect gains in financial resources through investment... (equipment, etc.) (P)	.885				
Direct gains... through liquidity-cash flow/receipts (cash in hand) (P)	.884				
Direct gains through... revenue (gross income) (P)	.877				
Direct gains... through net profit (total income minus any expenses, etc.) (P)	.831				
Operational improvements through employees (number of new jobs) (A)	.795				
Indirect gains in financial resources through purchases (e.g., goods, services) (P)	.792				
Operational improvements through innovation (e.g., products/services, etc.) (A)	.756				
Direct gains in financial resources through sales... (P)	.687				
Operational improvements through introduction of new products and services (A)	.559				
Enhancing future firm performance... Process of production/service (P)		.897			
Enhancing future firm performance... Perception of dependability (P)		.862			
Enhancing future firm performance... Perception of quality (P)		.838			
Strengthening direct firm-customer relations: Integration with guests (P)		.698			
Indirect gains in financial resources enhancing the image of the firm (P)		.587			
Enhancing future firm performance... Higher quality of suppliers (P)		.548			
Strengthening direct firm-customer relations: client/customer base (P)		.547			
Operational improvements through capacity utilisation (e.g., space, facilities) (P)				.707	
Operational advances... improvement of the time required to prepare tasks (P)				.704	
Direct gains... controlling operating costs more effectively (P)				.668	
Strengthening direct firm-customer relations – Higher client satisfaction (P)				.580	
Indirect gains in financial resources through assets (e.g., buildings, land) (A)				.520	
Cronbach's Alpha – Standardised items: .945					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .930					
Bartlett's Test of Sphericity					
Approximate Chi-Square: 6751.751					
Degrees of freedom: 210					
Significance: < 0.001					
Total variance (4 factors): 71.438%					

Table 6: How the firm performed between 2008-2016 using independent samples t-test
Note: Table created by the authors

Business performance criteria Perceptive/behavioural traits	Males= 276		Females=130		Significance
	Mean	STD	Mean	STD	
Learning from own mistakes-past failures (D*)	4.17	.714	4.17	.695	NS*****
Managing time efficiently to complete tasks (A**)	4.20	.748	4.11	.760	NS
Prioritizing tasks in order of relevance/urgency (A)	4.05	.866	4.05	.786	NS
Focusing on short-term priorities (e.g., buying supplies) (D)	3.94	.957	3.90	.955	NS
Having an informal decision-making process (A)	3.80	.774	3.67	.781	NS
Recognising the weaknesses/vulnerabilities of this firm (D)	3.71	.699	3.72	.809	NS
Identifying threats for this business early (e.g., competition) (P**)	3.66	.757	3.60	.894	NS
Flexibility to make changes to this business in response to turbulent events (e.g., change pricing strategy, special offers) (D)	3.23	1.161	3.25	1.272	NS
Having the capacity to respond to turbulent events (e.g., able to invest extra capital, get an expert opinion) (A)	2.61	1.098	2.58	1.070	NS
Applied/hands-on measures					
Constantly seeking new business opportunities... (A/P)	3.65	.959	3.62	1.044	NS
Diversifying the current product/service offer (A/P)	3.24	.858	3.32	.989	NS
Constantly innovating/offering solutions to problems (A/P)	3.29	1.011	3.25	1.102	NS
Swiftly responding to challenges in this industry/sector (e.g., to negative marketing, trends, increased costs) (P)	3.11	1.047	3.17	1.142	NS
Constantly improving the quality of products/services/logistics (P)	3.05	1.057	3.02	1.188	NS
Actively participating in industry/sector groups... (A/P)	2.89	1.118	2.78	1.080	NS
Building resources/capacities over time					
Creating new knowledge (e.g., asking customer feedback) (A)	3.61	.990	3.60	1.016	NS
Consistently managing established links within this industry... (A)	3.62	1.187	3.50	1.234	NS
Learning by networking with other firms (A)	3.45	1.079	3.35	1.092	NS
Educating consumers (e.g., share tips, explain about products) (A)	3.11	1.126	3.18	1.126	NS
Collaborating with other firms/entities to search for new opportunities (e.g., combine strengths) (A)	2.92	1.164	2.67	1.151	p<0050
Counting on others					
Having the support from others (e.g., family, friends) (R/D****)	4.17	.888	4.00	1.004	NS
Receiving non-financial support from the government... (R/D)	1.68	1.072	1.45	.864	p<0.050
Receiving support/access from banks/financial institutions (R/D)	1.57	.889	1.49	.838	NS
Receiving financial support from the government (R/D)	1.42	.732	1.42	.805	NS

* Defender; ** Analyser; *** Prospector; **** Reactor/defender; ***** NS: Not statistically significant.

Table 7: Male-female comparisons – Factor analysis – How the firm performed between 2008-2016

Note: Table created by the authors

Factor analysis (firm performance between 2008-2016) - Males	F 1	F 2	F 3		
Flexibility to make changes to this business in response to turbulent events (D*)	.763				
Swiftly responding to challenges in this industry/sector (P**)	.741				
Constantly innovating/offering solutions to problems (A/P***)	.740				
Collaborating with other firms/entities to search for new opportunities (A)	.693				
Diversifying the current product/service offer... (A/P)	.660				
Having the capacity to respond to turbulent events... (A)	.640				
Identifying threats for this business early (e.g., competition) (P)	.627				
Constantly seeking new business opportunities (e.g., new markets) (A/P)	.611				
Constantly improving the quality of products/services/logistics (P)	.581				
Learning by networking with other firms (A)	.563				
Educating consumers (e.g., share tips, explain about products) (A)	.551				
Creating new knowledge (e.g., asking customer feedback) (A)	.480				
Actively participating in industry/sector groups (e.g., associations) (A/P)	.430				
Prioritizing tasks in order of relevance/urgency (A)		.719			
Managing time efficiently to complete tasks (A)		.655			
Having an informal decision-making process (A)		.585			
Learning from own mistakes-past failures (D)		.560			
Consistently managing established links within this industry-sector (A)		.550			
Recognising the weaknesses/vulnerabilities of this firm (D)		.436			
Focusing on short-term priorities (e.g., buying supplies) (D)		.435			
Receiving non-financial support from the government (e.g., training) (R/D)			.562		
Receiving support/access from banks/financial institutions (R/D)			.557		
Receiving financial support from the government (R/D)			.494		
Factor analysis (firm performance between 2008-2016) - Females	F 1	F 2	F 3	F 4	F 5
Flexibility to make changes to this business in response to turbulent events (D)	.822				
Swiftly responding to challenges in this industry/sector (P)	.806				
Constantly innovating/offering solutions to problems (A/P)	.728				
Constantly improving the quality of products/services/logistics (P)	.710				
Identifying threats for this business early (e.g., competition) (P)	.697				
Having the capacity to respond to turbulent events (A)	.691				
Educating consumers (e.g., share tips, explain about products) (A)	.662				
Constantly seeking new business opportunities (e.g., new markets) (A/P)	.661				
Diversifying the current product/service offer (A/P)	.622				
Creating new knowledge (e.g., asking customer feedback) (A)	.564				
Collaborating with other firms/entities to search for new opportunities (A)	.555				
Receiving support/access from banks/financial institutions (R/D)	.527				
Learning from own mistakes-past failures (D)	.477				
Prioritizing tasks in order of relevance/urgency (A)		.707			
Managing time efficiently to complete tasks (A)		.695			
Focusing on short-term priorities (e.g., buying supplies) (D)		.688			
Having an informal decision-making process (A)		.488			
Receiving financial support from the government (R/D)			.532		
Receiving non-financial support from the government (e.g., training) (R/D)			.473		
Learning by networking with other firms (A)				.630	
Actively participating in industry/sector groups (e.g., associations) (A/P)				.490	
Consistently managing established links within this industry-sector (A)					.578
Recognising the weaknesses/vulnerabilities of this firm (D)					.482
Cronbach's Alpha – Standardised items: .860					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .830					
Bartlett's Test of Sphericity					
Approximate Chi-Square: 3788.510					
Degrees of freedom: 276					
Significance: < 0.001					
Total variance (5 factors): 60.623%					

* Defender; ** Prospector; *** Analyser/Prospector; **** Reactor/defender

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4 **Exploring the gender entrepreneurial dimension during a long-term crisis: the case of**
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6 **Cypriot and Greek micro and small firms**
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11 Nikolaos Sakellarios. Research interests include cultural differences in the hospitality
12 industry, understanding attitudes and predicting social behaviour.
13

14 Abel Duarte Alonso. Research interests include micro, small and medium enterprises, family
15 enterprises, innovation, wine entrepreneurship, tourism, hospitality, and community
16 development.
17
18

19 Oanh Thi Kim Vu. Research interests include tourism, hospitality, community-based tourism,
20 culture, and local entrepreneurship.
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22

23 Seamus O'Brien. Research interests include economics of small business, rural
24 entrepreneurship, innovation, creativity.
25

26 Seng Kiat Kok. Research interests include focuses upon entrepreneurship, public sector
27 management and higher education management.
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