Turbulence and Adaptations to the Coronavirus Crisis: Resources, Coping and Effects on Stress and Wellbeing of Entrepreneurs

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Abstract

The COVID-19 crisis has substantial consequences for entrepreneurs. Specifically, our model assumes that the task environment turbulence – changing employment rates within industries and geographic locations – forces entrepreneurs to adapt and change their work organization which, in turn, increases their stress and reduces their wellbeing. In building on the conservation of resource theory, we posit that resources will have a positive effect on stress and wellbeing, whereas coping strategies will have either positive or negative effects depending on the type of strategy used. We tested our model on a sample of 496 entrepreneurs. Our results demonstrate the strong effect of environmental turbulence on changes in work organization and, ultimately, the stress and wellbeing of entrepreneurs. Avoidance-oriented and task-oriented coping strategies are both important in reducing stress and improving wellbeing, while emotion-oriented coping has a negative impact on stress. Having access to relational resources reduces stress and improves wellbeing, and access to organizational resources reduces stress and positively moderates the negative effect of stress on wellbeing.

Keywords: Entrepreneurial stress; wellbeing; COVID-19; coping strategies; environmental turbulence

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1. Introduction

The COVID-19 crisis has affected almost every country in the world and resulted in substantial economic consequences as well as real physical and mental problems for individuals. While entrepreneurs face uncertainty in general (McMullen and Shepherd 2006), shocks such as the COVID-19 pandemic accelerate substantial uncertainty for entrepreneurs as they affect "the rules of the game" in many ways (Marino et al. 2008), p.157. With 22 percent of business owners exiting entrepreneurship within the first two months of the crisis in the USA (Fairlie 2020), the high turbulence caused by the lockdown in many countries, the sanitary measures imposed by governments to deal with the pandemic, and uncertainty about the future are likely to affect stress and wellbeing. As such, the escalating uncertainty could be expected to have severe consequences for entrepreneurs.

To date, we have little knowledge about how such turbulence affects the wellbeing of entrepreneurs. Wellbeing is referred as a state "[…] in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community."(WHO 2014; Stephan 2018). A fine-grained understanding of the specific effect of turbulence in an industry (and the resulting uncertainty) on wellbeing remains to be demonstrated. The pandemic crisis provides a unique opportunity to observe how turbulence brings about changes within organizations, the ensuing stress, and how entrepreneurs manage stress and can rely on specific resources to weather the storm. Unexpected events are exceptional opportunities to further test our "taken-for-granted" knowledge through what is considered a natural experiment (Morgan 2013). A natural experiment is when an unpredicted exogenous event induces a cause-to-effect change similar to a laboratory manipulation in an experimental setting. This is especially true in psychology, where highly uncertain events or

natural disasters induce stress and force people to adjust and react to it (Nolen-Hoeksema and Morrow 1991).

Previous entrepreneurship research on crisis situations has adopted a perspective in which the crisis is observed as a singular consequence in which people react in different ways (e.g. Williams and Shepherd 2018; Salvato et al. 2020). To put it differently, while these studies essentially contribute by showing how individual characteristics can come into play in observing the heterogeneity of response to the shock, most neglect to consider the specific characteristics of the disaster itself and its impact on the individual. Even in "normal" times, very few studies other than the work of Hmieleski and Baron (2009) consider that the heterogeneity of the external environment interacts with individual characteristics, leading to a specific individual response, beyond the individual's perceptual assessment of the environment. Thus, our knowledge of how individuals interact with objective external changes to adjust their psychological wellbeing is quite limited, especially in a time of crisis where an increase in entrepreneurial uncertainty can trigger significant psychological responses on the part of entrepreneurs.

This study developed a model based on the Stressor-Strain-Outcome (SSO) model (Koeske and Koeske 1993) and conservation of resources (COR) theory (Hobfoll 1989, 2011) to test our hypotheses on 496 Canadian entrepreneurs recruited in June and July 2020 in order to learn about the impact of the crisis on their business and their psychological health. We used multilevel modelling of environmental turbulence as having an exogenous effect on work organization, leading to increased stress and decreased wellbeing. This has several potential contributions.

Firstly, we consider the COVID-19 crisis as a context that will have a heterogeneous effect on the level of uncertainty based on the industry- and province-specific turbulence induced by the government responses to the crisis. These responses also induce several changes in the firms, from a temporary (or definitive) closure to a sudden growth surge for some products, something to which

the entrepreneur will have to adapt. This contributes to demonstrating how turbulence in the external environment measured by objective measures of changes in employment (per industry/province) directly influences tasks within firms, leading to a psychological effect on stress and the wellbeing of entrepreneurs. As most of our knowledge is based on subjective assessments of environmental turbulence (e.g. Honig and Samuelsson 2020), this has serious consequences and limitations in understanding this concept and its impact on the entrepreneurship process. We thus introduce a new approach that would be valuable to entrepreneurship and strategic management fields of research.

Secondly, in addition to causing various types of reorganization within firms, COVID-19 in and of itself induces anxiety and stress among entrepreneurs (Rossi et al. 2020). The way people cope with this new stressor has a significant effect on stress and wellbeing (Dawson and Golijani-Moghaddam 2020). Although we know some of the coping mechanisms that are effective for entrepreneurs (e.g. Uy et al. 2013), we do not know to what extent they remain relevant when dealing with the combined effect of stress induced by the pandemic, the reorganization that is required, and uncertainty about the future. We have theorized and found that stress coping strategies effective in normal times may be different from those required in times of crisis. We thus contribute to highlighting which coping strategies are most valuable when pressure increases under conditions of high uncertainty.

Thirdly, resources play a major role in helping entrepreneurs face the pandemic crisis and cope with stress, in addition to having an impact on wellbeing. We contribute to investigating the effect of two different kinds of resources: organizational resources and relational resources. If the latter (e.g. social support) have been demonstrated to reduce stress and improve the wellbeing of entrepreneurs (e.g. Pollack et al. 2012), knowledge about the impact of organizational resources (e.g. access to financial resources) on stress and wellbeing and the moderating effect of stress on

wellbeing is scarce despite a few recent contributions (Bhuiyan and Ivlevs 2019; St-Jean et al. 2022). Although we know that entrepreneurs use resource-induced coping heuristic that help them maintaining access to different resources required to develop and survive (Lanivich 2015; Lanivich et al. 2021), we specifically contribute in pointing out two types of resources particularly important to reduce stress and maintain wellbeing in times of important uncertainty.

Lastly, this study contributes to improving our understanding of wellbeing in entrepreneurship as "[…] the theory of individual well-being at the firm-level is underdeveloped" (p.582) (Wiklund et al. 2019). Health-related issues in entrepreneurship (Klofsten et al. 2020) and wellbeing as a dependent variable are gaining popularity among researchers (Stephan 2018; Patel and Wolfe 2020). This study contributes to this literature, taking into consideration environmental turbulence, organizational changes, resources (organizational and relational), stress, and coping strategies to understand the wellbeing of entrepreneurs in times of pandemic. Thus, in combining environmental-level, firm-related dimensions and individual characteristics, this study opens new perspectives in the study of entrepreneurial wellbeing.

2. Literature Review – Theoretical Foundations

2.1 Turbulence, Uncertainty and Entrepreneurship

The COVID-19 outbreak has already caused deep disruptions in world trade, affecting both the supply and demand sides of the global economy (Gruszczynski 2020). Many governments have ordered a temporary closure of non-essential manufacturing facilities, while numerous corporations have either taken such measures voluntarily (e.g. because of the reduction in the supply of labor) or simply decreased production due to disruptions in their supply chains (Kang et al. 2020). The pandemic has had considerable effects on all sectors of activity (Nicola et al. 2020). However,

some have been more affected than others. The COVID-19 crisis has had a strong negative short-term impact on employment as well as self-employment in Canada, especially in the arts, culture and recreation (Beland et al. 2020). This has been most visible in the international service sector (international tourism, air travel, etc.) like the tourism (Gruszczynski 2020; Sigala 2020). Faced with this turbulence, entrepreneurs have had to adapt, at the very least, or innovate, and even reinvent themselves, all of which adds considerable weight to the workload of entrepreneurs (Kuckertz et al. 2020; Ebersberger and Kuckertz 2021). Many, if not all, have been affected by this increased workload as entrepreneur's and employees' work have required to adapt (Carnevale and Hatak 2020). Depending on the industry in which they operate, entrepreneurs may experience more or less turbulence, with an associated workload increase and need to reorganize their business.

The COVID-19 pandemic has led to considerable social and economic upheaval. Starting in March 2020, Canadian provinces have imposed confinement measures on individuals and closed down certain businesses or industries. Some were able to continue their operations but had to reorganize their workplaces to comply with the guidelines set forth by public health authorities. During the period from March to July 2020, these restrictions increased and were subsequently relaxed on a gradual basis, notwithstanding a few exceptions. However, no business was able to escape the new public health guidelines. We focus on a specific effect of the COVID-19 crisis induced by a government health decision: the Great Lockdown. In closing many sectors of the economy and forcing others to scale down to the bare minimum, the lockdown has had a very strong impact on employment (Pedauga et al. 2021), stress and mental health (Codagnone et al. 2020) as well as inducing many other issues. Many sectors have been unable to fully recover a year after March 2020 (e.g. tourism, bars, etc.) and lays-off were for most at least temporary, but still in effect for others. To support laid-off workers, the Canadian government introduced the Canada Emergency

Response Benefit (CERB)[1] that provided financial support of up to CAN$500 per week to people who were directly affected by COVID-19. Although this measure was clearly helpful for many people, it complicated the human resources management of entrepreneurs who were looking for employees to restart their firm or simply pursue new opportunities created by the pandemic (Etemad 2020). All of this generated much turmoil that increased changes in the organization of work in SMEs. This leads to our first hypothesis:

H1: Turbulences in the task environment (based on employment variations by industry/province) cause changes in organization of work. To put it differently, the greater the turbulences, the greater the changes in the organization of work.

2.2 Stressors, Stress and Wellbeing

Entrepreneurship is undoubtedly a stressful career with the uncertainty associated with business creation and development (Rauch et al. 2018). Stressors are specifically harmful to the wellbeing of entrepreneurs (Lerman et al. 2021). Entrepreneurial stressors are numerous (Grant and Ferris 2012) and the COVID-19 pandemic is likely to magnify the impact of these stressors on stress and wellbeing. In fact, uncertainty constitutes a powerful stressor and has strong implications regarding health-related issues (Greco and Roger 2003). Changes in the organization of work caused by the lockdown and the related turbulence in the business environment would then likely generate stress among entrepreneurs. This is especially true because of the uncertainty surrounding the pandemic and its evolution. This then leads to the following hypothesis:

H2: Changes in the organization of work (from the pandemic) generate stress for the entrepreneur.

[1] https://www.canada.ca/en/services/benefits/ei/cerb-application.html

Wach et al. (2021) have further demonstrated that the impact of stressors on wellbeing is related to an entrepreneur's ability to detach himself or herself from these stressors (ref.: Sonnentag and Fritz 2015) and recover the next day. From a stressor-strain-outcome (SSO) perspective (Koeske and Koeske 1993), the ability to detach oneself or other coping strategies may reduce the entrepreneur's strain level, which is assessed through perceived stress.

Edwards et al. (2014) have demonstrated that the socio-cognitive model of job stress should be taken into account and combined with the challenge-hindrance model. This model focuses on the interaction between person and environment and places greater emphasis on appraisal processes (Lazarus and Folkman 1984; Lazarus 2006). Perceived stress consists of the degree to which individuals appraise situations in their lives as stressful (Cohen et al. 1983). Thus, with this line of reasoning, a stressor will generate a perception of stress, which will then impact wellbeing if the coping strategies employed are not appropriate. This is also consistent with empirical evidence that demonstrates the causality of stress on wellbeing, but not the other way around (Elovainio et al. 2015). Therefore, we posit the following hypothesis:

H3: Perceived stress from the entrepreneur negatively impacts his/her wellbeing.

2.3 Coping Strategies

Coping strategies play a major role in the physical and psychological health of individuals when they are faced with stressful situations. Individuals adopt different reactions (strategies) which can have the effect of reducing or increasing the level of stress in response to particularly stressful environmental and psychological demands (Lazarus and Folkman 1984; Folkman and Moskowitz

2004), and these reactions are deliberate (Norman S. Endler and James D. Parker 1990). Thus, depending on the individual's perception of his or her environment and the related demands, this person will make an effort to manage situations where the demand is perceived to exceed the resources the individual can deploy.

Coping behaviors have been categorized in different ways. One such categorization separates problem-focused from emotion-focused coping (Folkman et al. 1986). While the former seeks to directly address the source of stress and eliminate or reduce it (i.e., act on the stressor), the latter is oriented towards the emotional reactions generated by individuals who seek to "negotiate" with the stress (aggressive, preoccupied, in denial). Problem-focused strategies are considered proactive, whereas emotion-focused strategies are more passive. Entrepreneurs are mostly proactive people and they adopt the former in a greater proportion (Singh et al. 2007). Other authors note that some coping strategies fall under "engagement" and others under "disengagement" (Skinner et al. 2003; Carver and Connor-Smith 2010). As Eager et al. (2019) remind us, according to this taxonomy, engagement strategies seek to manage the stressor and its negative impacts, while disengagement strategies seek to temporarily escape it. This is in line with the active vs. avoidance coping strategies previously used in entrepreneurship (Uy et al. 2013).

There are natural preferences for certain coping strategies, where some individuals tend to mobilize avoidance strategies, while others are more oriented towards solving the problem (Fleishman 1984; Norman S Endler and James DA Parker 1990). However, when the perception of control over the situation is very low as in the case of the pandemic, individuals tend to turn to emotion-focused strategies (Mattlin et al. 1990). N. Endler and J. D. Parker (1990) have developed an instrument

for measuring coping strategies and propose three broad categories of strategies based on these ideas: task-oriented coping strategy, emotion-focused strategy and avoidance-oriented strategy.

Following Uy et al. (2013), we argue that entrepreneurs like to be in action and, therefore, task-oriented strategies should not only help them decrease stress but also increase their well-being. Task-oriented coping strategies involve taking action to solve a problem or reduce the stressor which includes setting goals and making a plan to achieve them or seeking out information to help address the problem (Lazarus and Folkman 1984). These strategies can be effective in decreasing stress because they allow the individual to take control of the situation and take steps to address the source of the stress. For entrepreneurs, task-oriented coping strategies can be particularly useful because entrepreneurship often involves dealing with a high level of uncertainty and unpredictability. By taking a proactive approach to addressing problems and stressors, entrepreneurs can feel more in control of their lives and better able to handle the challenges they face. Therefore, we posit the following hypothesis:

H4: Task-oriented coping strategy negatively affects stress (a) and positively affects wellbeing (b).

Emotion-oriented coping strategies, on the other hand, are generally mobilized when control is weak (as with the COVID-19 pandemic) and are likely to cause an increase in stress and, ultimately, a decrease in well-being. Because emotion-oriented coping strategies do not address the underlying problem or stressor, and may even serve to prolong or exacerbate the stress response (Lazarus and Folkman 1984). As many businesses had to pivot fast in order to survive in the few months following the pandemic (Shepherd 2020; Reardon et al. 2021), emotion stress-coping strategies would not help to reduce the real burden or the workload, which will probably be harmful to stress

and wellbeing. When entrepreneurs rely solely on emotion-oriented coping strategies, they may feel like they are not effectively dealing with their problems and may become frustrated or discouraged. Thus, we propose the following hypothesis:

H5: Emotion-oriented coping strategy positively affects stress (a) and negatively affects wellbeing (b)

Lastly, avoidance-oriented strategies allow entrepreneurs to step back from the situation and should have a stress-reducing effect, resulting in better wellbeing. Avoidance-oriented coping strategies may increase well-being for entrepreneurs as they may provide temporary relief from stress and allow the individual to escape from a difficult or unpleasant situation. Getting outside the business to take time, relax and unwind allow the normally pressured entrepreneur the necessary recovery to continue navigating through these turbulent times (Wach et al. 2021). This suggests the following hypotheses:

H6: Avoidance-oriented coping strategy negatively affects stress (a) and positively affects wellbeing (b)

2.4 Access to Resources

To be successful, entrepreneurs need resources of all kinds, including financial and human. A lack of job resources limits the entrepreneur's ability to fulfill the demands of the job, which causes failure and disengagement (van Woerkom et al. 2016). In contrast, the presence of organizational and personal resources (e.g. social support) leads individuals to manage the challenging components of work (e.g. workload) thereby reducing perceived stress and, ultimately, burnout (Bakker and de Vries 2021). Thus, acquiring and conserving crucial resources is fundamental for

entrepreneurs to aim for entrepreneurial orientation, make the business successful and maintain their psychological health when facing difficult times (Lanivich 2015; Adomako 2021).

From the conservation of resources (COR) perspective (Hobfoll 1989, 2011), stress is a reaction to the environment in which there is either a threat of a net loss of resources, a net loss of resources, or a lack of resource gains following an investment of resources. COR theory proposes that individuals are motivated to protect and enhance their personal resources, such as physical, financial, and social resources, in order to maintain their wellbeing and cope with stress. According to the COR perspective, resource loss or depletion can lead to increased stress and decreased well-being, while resource gain or conservation can lead to decreased stress and increased well-being. In a turbulent time such as a lockdown that provokes major reorganizations in business operations, which requires entrepreneurs to invest money, time and energy just to ensure the business will survive, stress will strongly be affected. As such, having access to these important resources entrepreneurs require to get past the pandemic and its effects would likely reduce stress and improve wellbeing.

We conceptualize resources to be mainly related to the two dialogic dimensions of an entrepreneurial career: the organization and the entrepreneur (Bruyat and Julien 2001). In times of turbulence that require strong reorganization, having access to financial resources, advice, training, relevant information to deal with the pandemic, etc. helps keep the business functioning under the uncertainty and pursue its development. These resources help in meeting financial obligations in turbulent times, just as having relevant information in order to take better decisions, all of which should benefit the psychological health of entrepreneurs. Thus, we posit the following hypothesis:
H7: Access to organizational resources reduces stress (a) and increases wellbeing (b).

While these "organizational resources" are important, "relational resources" such as emotional support (encouragement or empathy for example) and family support are crucial for the entrepreneur and his or her mental health (Cubbon et al. 2020). This is particularly true in times of crisis like the COVID-19 pandemic (Giones et al. 2020; Xu et al. 2020) where the timing would make such resources be of greater importance (Klyver et al. 2018). Based on COR theory, an actual or perceived loss of these resources leads to entrepreneurial stress. These resources bring emotional stability and security, which can help entrepreneurs cope with stress. This can also increase well-being by providing a sense of belonging and connection. Having support from peers, such as other entrepreneurs or professionals in the same industry, can provide a sense of camaraderie and validation. This can help reduce stress by providing a sense of community and understanding, and can increase well-being by helping entrepreneurs feel less isolated and more connected. Thus, we posit the following hypothesis:

H8: Access to relational resources reduces stress (a) and increases wellbeing (b).

Furthermore, based on job demand-resource theory (Bakker and Demerouti 2007, 2017), resources can also moderate the negative effect of stress on wellbeing as has previously been demonstrated with salaried workers or in another context (Tadić et al. 2015; Loh et al. 2018). If an entrepreneur feels stressed because of the reorganization caused by the pandemic, having access to resources could lessen the negative effect of stress on wellbeing (Bencsik and Chuluun 2019; Wolfe and Patel 2021). The uncertainty of the pandemic may keep stress high, despite having access to resources, but such resources can prevent wellbeing from declining by maintaining high levels of hope, resilience or self-efficacy throughout the uncertain times (Marshall et al. 2020; Patel and Rietveld

2020). Thus, resources would positively moderate the negative effect of stress on wellbeing. All of these considerations lead to the following hypothesis:

H9: Access to organizational resources (a) and relational resources (b) positively moderates the negative effect of stress on wellbeing.

The research model (Figure 1) illustrates the hypotheses to be tested with our sample.

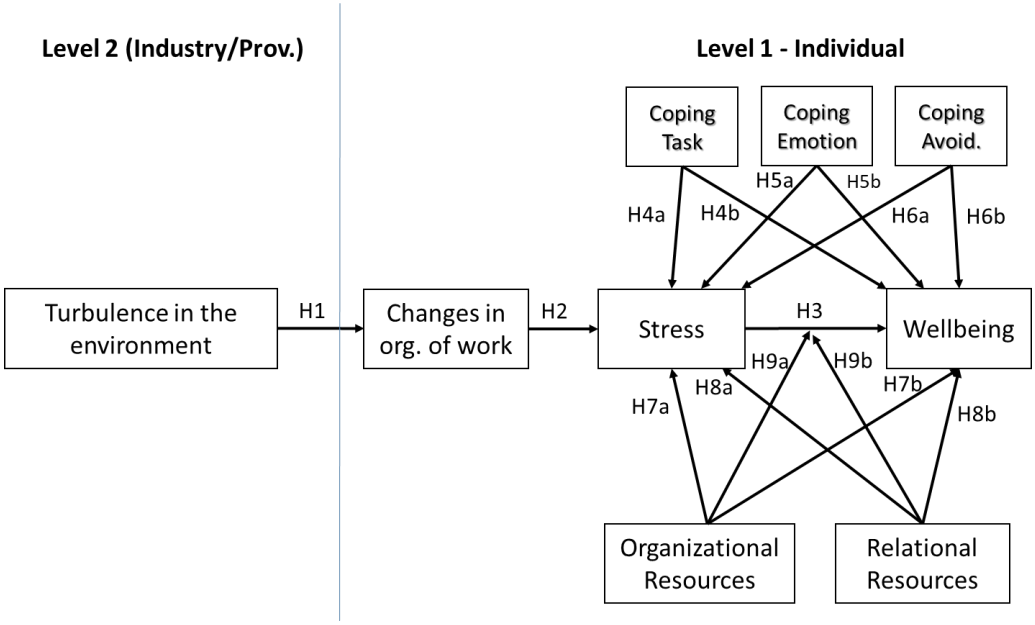


Figure 1. Model to Be Tested

3. Methodology

3.1 Sampling Procedure

We recruited individuals in business through various partners and networks as well as through social media platforms such as LinkedIn and Facebook, and directly with former participants in past studies. The data collection took place between mid-June and mid-July 2020. The website surveymonkey.com was used to manage the survey. The initial sample was composed of 654 individuals found mainly through social media (64.9 percent) and contacts from previous

studies (23.6 percent), the others come from partners who distributed the survey to their contacts. Participants were offered CAN$20.00 as compensation in order to stimulate participation in both rounds of data collection. Respondents recruited from social media platforms may have been drawn in by the compensation and could have provided lower quality responses. In order to control for this potential problem, we performed logical analyses on the responses and identified the respondents whose speed of completion did not meet the minimum requirements for thoughtful responses. In addition, as a quality check, in order to receive the compensation, they had to confirm their year of birth as well as their company's industry segment. Respondents who could not answer these questions correctly were eliminated (n=150) as were those who completed the questionnaire too quickly (that is, taking less than 8 minutes to answer a questionnaire that should take between 16 and 20 minutes) and did not agree to take the questionnaire again (n=60). As some were identified by both procedures to be problematic, this resulted in 496 respondents. The Table 1 presents the characteristics of the sample. The sample is not fully representative of the entrepreneurs' population in Canada. It should be noted that one province (Nova Scotia) and two territories (Nunavut and Yukon) are missing, but that the latter two are very sparsely populated.

3.2 Measures

A bilingual questionnaire was developed for this study (in English and French). For the measures and questions initially written in English, two fully bilingual researchers translated them into French, compared their translations, and discussed the differences to reach an agreement. A third translator helped for the most difficult items. The same process was used for translation from French to English.

Table 1. Characteristics of the sample

Gender	**Male**	**Female**
	52%	48%
Education	**Less than undergraduate**	**Undergraduate or more**
	52.2%	47.8%
Age	**Range**	**Mean/median**
	20-74 years old	41.33/40
Born in Canada	**Yes**	**No**
	88.1%	11.9%
Province	Quebec	55.8%
	Ontario	14.8%
	Alberta	11.7%
	British Columbia	7.2%
	Saskatchewan	5.5%
	Manitoba	2.9%
	Newfoundland	1.4%
	New-Brunswick	0.2%
	Prince Edward Island	0.2%
	Northwest Territories	0.2%
Years of operation	5 years (median)	
Pre-pandemic annual turnover	$400,000 to $499,999 (median)	
Pre-pandemic employees	15 (average)/ 6 (median)	
Business activity sector	Professional, scientific and technical services	24.4%
	Manufacturing	17.1%
	Other services	9.0%
	Retail trade	7.9%
	Information and cultural industry	7.5%
	Entertainment and recreation	5.9%
	Wholesale trade	4.7%
	Other sectors	23.5%

3.2.1 Wellbeing

We measured wellbeing using the WHO-5 scale. The scale has been validated in various contexts with good psychometric properties (e.g. Henkel et al. 2003; Krieger et al. 2014). Respondents have to indicate the frequency of the following situations over the las two weeks, with a scale ranging from 0-At no time, 1-Some of the time, 2-Less than half of the time, 3-More than half of the time,

4-More of the time, to 5-All of the time. Items are: 1-I have felt cheerful and in good spirits; 2-I have felt calm and relaxed; 3-I have felt active and vigorous; 4-I woke up feeling fresh and rested; and 5-My daily life has been filled with things that interest me. Cronbach's Alpha is 0.796.

3.2.2 Stress

We measured stress using the Perceived Stress Scale (PSS-4) developed by Warttig et al. (2013) (e.g. In the last month, how often have you felt you were unable to control the important things in your life?). The scale ranges from 1-Never to 5-Very often. Cronbach's alphas is 0.723.

3.2.3 Access to Resources

We measured access to resources based on the items developed by Hanlon and Saunders (2007) using a 7-point Likert scale. As with any adaptation of an existing scale, we ran an exploratory factorial analysis to ensure the unidimensionality. After dropping one item with low factor loading, we found a two-factors solution. We divided the scale into two separate constructs. Four items represented access to ***organizational resources*** (quality consulting services, useful and quality training, quality feedback on my project, and enough financial support under appropriate conditions) and three items measured access to ***relational resources*** (quality business contacts, quality emotional support, and rich opportunities to interact with other entrepreneurs). Cronbach's alpha for *organizational resources* is 0.785, and 0.770 for *relational resources*. We used the average scores of these subscales for this study.

3.2.4 Coping Strategies

We developed a measure based on previous scales for this study: The *Coping Inventory for Stressful Situations* (CISS), initial version (N. Endler and J. D. Parker 1990) and revised version

(Cosway et al. 2000), and the items generated by the Canadian Mental Health Association as coping strategies used by entrepreneurs (CMHA 2019). We ran an exploratory factorial analysis to ensure the factorial dimensions were associated with the relevant items.[2] We dropped five items because of low factor-loadings. They were mostly the items that came from the CMHA listing of coping strategies. All of the remaining items were correctly classified into the different coping styles. **Task-oriented coping** has three items (Made intuitive decisions; Identified and adjusted your priorities; Analyzed a problem before acting). **Emotion-oriented coping** also has three items (Blamed yourself for having procrastinated; Daydreamed about better days or places; Been preoccupied by what you were going to do). Lastly, **Avoidance-oriented coping** has four items (Taken breaks (e.g. gone for walks); Exercised regularly; Spoken to someone (e.g. a friend); and Taken time off to get out of the situation). Cronbach's Alpha are 0.610, 0.569 and 0.712, respectively. Although a bit low, the main implication is that this could potentially underestimate any relationships between these variables and other measures in the study, thereby reducing the effect sizes and potentially the capacity to confirm hypotheses (Schmitt 1996).

3.2.5 Change in the Organization of Work

Respondents were asked to answer to what extent the COVID-19 pandemic had had an impact on the changes to the organization of work, and the scale varied from 0 = No changes to work organization to 10 = Completely different work organization.

3.2.6 Turbulence in the Environment

The March 2020 lockdown and restrictions imposed on businesses had several consequences in different industries, and in different regions. Some provinces were more restrictive than others and

[2] Further details available upon request.

some industries were classified as essential services in one province but not in another. This situation had a dramatic effect on employment. To calculate turbulence in the environment, we calculated seasonally adjusted monthly employment changes by industry, and by province, from March to May inclusively. We retrieved the data from the Labour Force Survey (LFS) produced monthly by Statistics Canada (www.statcan.gc.ca), available online. We downloaded the data and produced a monthly compilation of employment changes for each industry and for each province, and computed the coefficient of variation (standard-deviation/mean), which is a very good relative dispersion measure used in many organizational studies (Bedeian and Mossholder 2000). This represents the turbulence level in the business environment. This is a second-level variable as every industry/province coefficient can be associated with more than one respondent in the database. To pair this measure with the respondents, we used the North American Industry Classification System (NAICS) and the province as indicated in the questionnaire.

3.2.7 Control Variables

We controlled for gender (Ayala and Manzano 2014) and education (Mo et al. 2020) since these variables can influence stress and wellbeing. We also controlled for the estimated profits for the year after the pandemic started as well as the number of employees (size of the business), as they are two important components related to the organization of work, stress and wellbeing.

3.3 Analytical Procedure

To test our hypotheses and model, we used Mplus (6.1) Multilevel Structural Equation Modeling (Multilevel SEM). Multilevel structural equation modeling (Multilevel SEM) is a statistical method that allows researchers to examine relationships between variables at different levels of a hierarchical data structure, such as individuals nested within groups (Rabe-Hesketh et al. 2004;

Byrne 2013). It allows researchers to test hypotheses about the relationships between variables at different levels of the hierarchy and to estimate the variance of variables that is due to differences between the levels. The procedure evaluates the fit of the model by examining goodness-of-fit statistics, such as the chi-square statistic, the root mean square error of approximation (RMSEA), and the comparative fit index (CFI). The variable "turbulence" is at a 2nd level (between-level) and all of the other variables are at a 1st level (within-level).

4. Results

Table 2 present the means, standard deviations and correlations of the variables used in this study.

Table 3 shows the results of the initial multilevel SEM. The graphic representation of the model is shown in Figure 2.

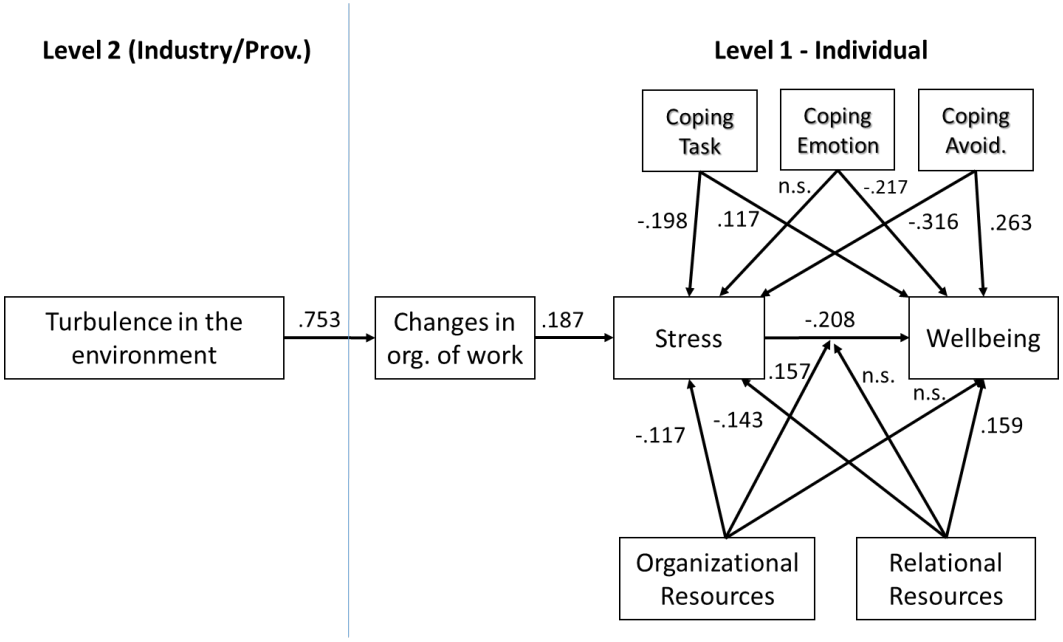
The structural model shows excellent fit (χ^2=23.071 (d.f.=18), p=0.1879; RMSEA=0.026; CFI=0.984; SRMR=0.021 (within); SRMR=0.001 (between)), all of which are better than the recommended thresholds (Kline 2004). One of the important things to note is the very strong effect of turbulence on changes in the organization of work (Std.β=0.753, p=0.000). This confirms the very strong effect of our objective measure of turbulence on the reorganization of SMEs (H1 confirmed). R^2 is 0.567, which is the strongest explanatory power of the structural links. Changes in the organization of work increase the stress level (Std.β=0.187, p=0.000) (H2 confirmed), and stress reduces wellbeing (Std.β=-0.208, p=0.001) (H3 confirmed).

Table 2. Means, Standard-Deviations and Correlations Among the Variables in the Study

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1-Gender	0.480	0.500	1											
2-Education	5.677	1.246	0.123	1.000										
3-No. Empl.	15.071	19.044	-0.129	0.020	1.000									
4-Est. profits	2.438	1.151	0.018	0.050	-0.118	1.000								
5-Env. turbulence	-0.803	1.156	0.090	-0.033	-0.123	0.061	1.000							
6-Change in work org.	4.890	2.834	0.114	0.049	-0.025	-0.025	0.153	1.000						
7-Org. Resources	4.656	1.304	0.046	0.095	0.173	0.200	-0.044	-0.056	1.000					
8-Rel. Resources	4.653	1.437	0.050	0.041	0.191	0.169	-0.052	-0.080	0.612	1.000				
9-Coping-Task-oriented	3.870	0.626	0.055	0.085	-0.061	0.031	0.111	0.048	0.148	0.175	1.000			
10-Coping-Emo.-oriented	3.433	0.812	0.045	0.002	0.124	-0.292	-0.025	0.038	-0.129	-0.143	-0.008	1.000		
11-Coping-Avoid.-oriented	3.312	0.838	0.030	0.179	0.162	-0.050	-0.010	-0.007	0.193	0.216	0.196	0.020	1.000	
12-Stress	2.658	0.746	0.004	-0.079	-0.171	0.001	0.012	0.146	-0.324	-0.348	-0.275	0.198	-0.377	1.000
13-Wellbeing	2.837	0.980	0.014	0.096	0.047	0.153	0.029	-0.008	0.367	0.411	0.279	-0.341	0.395	-0.543

Table 3. Multilevel SEM Parameters

	Estimate	S.E.	Est./S.E.	p-Value
Wellbeing (within level)				
Stress	-0.208	0.060	-3.459	0.001
Org. Resources	0.060	0.073	0.827	0.408
Relational Resources	0.159	0.067	2.373	0.018
Stress X Org.Res.	0.157	0.060	2.629	0.009
Stress X Rel.Res.	0.049	0.061	0.804	0.421
Coping-Task oriented	0.117	0.048	2.441	0.015
Coping-Emotion oriented	-0.217	0.051	-4.256	0.000
Coping-Avoidance oriented	0.263	0.045	5.837	0.000
Gender	0.020	0.038	0.533	0.594
Education	0.051	0.039	1.305	0.192
Size (No. empl.)	-0.041	0.042	-0.976	0.329
Est. profits	0.040	0.029	1.402	0.161
Stress (within level)	**Estimate**	**S.E.**	**Est./S.E.**	**p-Value**
Change in work org.	0.187	0.050	3.727	0.000
Org. Resources	-0.117	0.051	-2.321	0.020
Relational Resources	-0.143	0.060	-2.362	0.018
Coping-Task oriented	-0.198	0.039	-5.127	0.000
Coping-Emotion oriented	0.117	0.063	1.847	0.065
Coping-Avoidance oriented	-0.316	0.049	-6.390	0.000
Turbulence in env. (between level)	**Estimate**	**S.E.**	**Est./S.E.**	**p-Value**
Change in work org.	0.753	0.122	6.156	0.000
R-Square	**Estimate**	**S.E.**	**Est./S.E.**	**p-Value**
Stress (within level)	0.319	0.051	6.234	0.000
Wellbeing (within level)	0.473	0.027	17.661	0.000
Change in work org. (between level)	0.567	0.184	3.078	0.002
Fit Indices				
$\chi 2$=23.071 (d.f.=18), p=0.1879; RMSEA=0.026; CFI=0.984; SRMR=0.021 (within); SRMR=0.001 (between)				



χ^2=23.071 (d.f.=18), p=0.1879; RMSEA=0.026; CFI=0.984; SRMR=0.021 (within); SRMR=0.001 (between). * All coefficients are significant at $p \leq 0.05$

Figure 2. Results of the Multilevel SEM Tested

In line with our hypotheses, task-oriented coping strategies reduce stress (Std.β=-0.198, *p*=0.000) and improve wellbeing among entrepreneurs (Std.β=0.117, *p*=0.015) (H4a and H4b confirmed). Emotion-oriented coping strategies have a strong effect on reducing wellbeing (Std.β=-0.217, *p*=0.000) (H5b confirmed), but is not significant in terms of increasing stress (Std.β=0.117, *p*=0.065) (H5a rejected). Avoidance-oriented coping strategies appear to have the strongest effect of all strategies on reducing stress (Std.β=-0.316, *p*=0.000) and improving wellbeing (Std.β=0.263, *p*=0.000) (H6a and b confirmed).

The results also show that access to organizational resources is effective in reducing stress (Std.β=-0.117, *p*=0.020) (H7a confirmed), but not in improving wellbeing (Std.β=0.060, *p*=0.408) (H7b rejected). However, having access to this type of resources has a moderating positive effect on the relationship between stress and wellbeing (Std.β=0.157, *p*=0.018). To put it differently, high access to organizational resources lessens the negative effect of stress on the wellbeing of

entrepreneurs (H9a confirmed). Figure 3 shows the interaction graph. Lastly, having access to relational resources reduces stress (Std.β=-0.143, *p*=0.018) and improves wellbeing (Std.β=0.159, *p*=0.018), which confirms H8a and H8b. However, relational resources do not reduce the negative effect of stress on wellbeing (Std.β=0.049, *p*=0.421). H9b is therefore rejected.

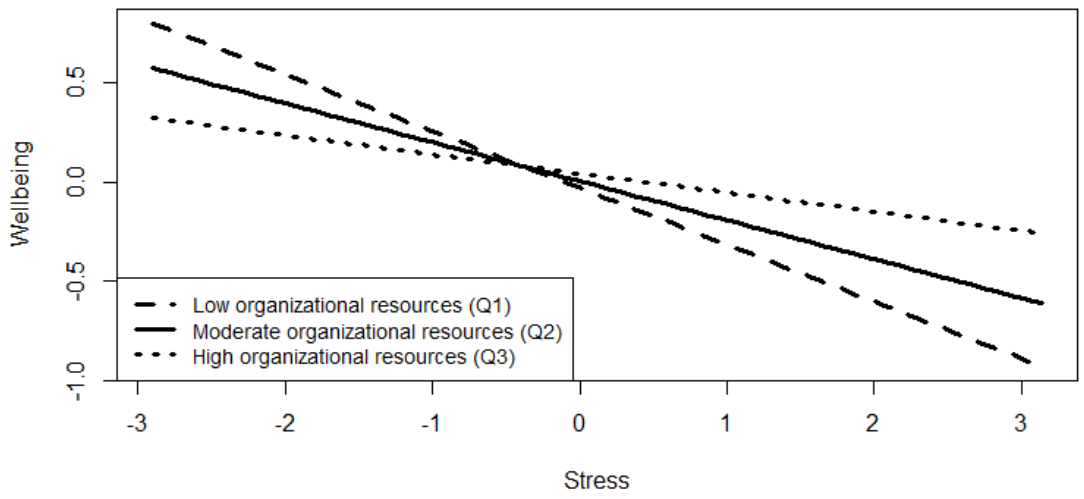


Figure 3. The Moderating Effect of Organizational Resources on the Effect of Stress on Wellbeing

5. Discussion

Firstly, this study confirms the relevance of turbulence in the environment, measured by employment variations within an industry, in a given region, as causing some of the changes in organization of work in SMEs. This measure appears to be a good proxy to account for the pandemic lockdown and the new sanitary procedures that businesses have had to follow since March 2020. Turbulence is a very strong predictor of the organization of work changes, which in turn influence stress, and then wellbeing. This finding contributes to demonstrating that environmental turbulence does not only affect SME performance (e.g. Simón-Moya et al. 2016), entries/exits in an industry (e.g. Baptista and Thurik 2007; Baptista and Karaöz 2011; Hilmersson

2014), or the decision to enter entrepreneurship (e.g. Brünjes and Diez 2013), but also the workload of entrepreneurs, as well as their psychological health and wellbeing. A consideration of the broader context of industry dynamism, and how it interacts with the organization and the people who manage it to investigate health-related issues for entrepreneurs, appears to be a promising research avenue. This seems to be particularly relevant to studying the impact of the pandemic on SMEs and entrepreneurs. Furthermore, previous studies have investigated the task environment through perceived measures of environmental dynamism (e.g. Wang et al. 2015; McKelvie et al. 2018), uncertainty (e.g. Freel 2005), or munificence (e.g. Bacq et al. 2017). Although these perceptual measures are important because individuals act upon their own perceptions, we should also encourage further research that uses more "objective" measures of the task environment, which would also reduce the common method bias (Conway and Lance 2010). Furthermore, we contribute in investigating the multi-level effect of environmental turbulence on wellbeing through its impact on the reorganization in the firm it can create. While many researches look at the effect of environment on the firm performance (e.g. McArthur and Nystrom 1991; Chowdhury and Endres 2021), we provide a more complex understanding on the different effect of turbulences to impact the wellbeing of entrepreneurs. While many studies look at main drivers of wellbeing of entrepreneurs (e.g. Amorós et al. 2021), we contribute in the understanding of how, and under which condition, entrepreneurs can maintain there wellbeing.

Secondly, our results show that coping strategies can reduce stress and improve wellbeing. Specifically, avoidance-oriented and task-oriented coping strategies both reduce stress and improve wellbeing, while emotion-oriented coping strategies only reduce wellbeing, but are nearly significant in generating stress (p=0.065). This contributes to highlighting the importance for entrepreneurs to use the appropriate coping strategies to manage their psychological health. Particularly in a pandemic context where both the organization of work and the overall workload

are impacted, avoidance-oriented strategies such as taking breaks, going for a walk, or taking time to talk to friends and relatives appear to be the best way to maintain an appropriate level of stress and wellbeing. This contributes to demonstrating the relevance of the three types of coping strategies developed by Norman S. Endler and James D. Parker (1990) in entrepreneurship, especially in a pandemic context. Furthermore, this study contributes to moving beyond viewing stressors according to the challenge-hindrance (e.g. Lerman et al. 2020; Wach et al. 2021) categorization by using the socio-cognitive model of job stress (Edwards et al. 2014) that places greater emphasis on appraisal processes (Lazarus and Folkman 1984; Lazarus 2006). This provides a strong managerial contribution to entrepreneurs and the people who support them by suggesting the best type of coping strategy to help to deal with the pandemic-induced changes in the organization of work and the resulting inherent uncertainty. This further contributes to previous recommendations for entrepreneurs to keep their wellbeing high (Williamson et al. 2021).

Lastly, our findings highlight the important role of resources in the psychological health of entrepreneurs. In particular, having access to relational resources reduces stress and improves wellbeing, while access to organizational resources only reduces stress. However, having access to organizational resources positively moderates the negative impact of stress on wellbeing. To put it differently, having high access to organizational resources reduces the negative effect of stress on the entrepreneur's wellbeing. This contributes to illustrating the relevancy of considering these two types of resources, related to both the business (organizational) and the entrepreneur (relational), but which carry that influence in different ways. The effect of the entrepreneur's support has been widely studied (e.g. St-Jean and Tremblay 2020; Xu et al. 2020), but we know less about how organizational resources may help in maintaining sound psychological health in entrepreneurship. Therefore, we provide strong managerial implications for people and organizations that support entrepreneurs, as well as for entrepreneurs themselves.

6. Limitations

This research is not without limitations. Firstly, although the sample is diversified in terms of industry, gender, education, provinces, etc., it is not completely representative of the SMEs in Canada. Consequently, generalizations cannot be made on the basis of our results. Secondly, the measure of emotion-oriented coping strategies has a Cronbach's alpha that is lower than the generally accepted threshold. As this could increase type-II errors, this may explain why we did not have a significant value for its impact on stress (p=0.065). This would indicate that a better measure could have yielded a more significant value, which suggests the use of more suitable measures of coping strategies for entrepreneurs. Other measures developed from this research may not fully capture the phenomenon of interest, especially the change from the organization of work or the measures of access to resources. Thirdly, despite the fact that our theoretical framework is strongly rooted in known theories, we cannot demonstrate causality through our cross-sectional research design. Further studies using longitudinal data would therefore be required.

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