

How Perceptions of the Global Economic Slowdown Impact and Local Risks Adversely Affect Perceived Opportunities and Subsequent Startup Activities

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Abstract

The Great Recession which began in 2008 is the worst global recession since World War II. Arguably, this global economic slowdown began with failures in financial regulation and housing policies. Undisputable are the adverse effects of this global financial crisis. Worldwide wealth was destroyed. Unemployment rose precipitously. Small businesses and medium businesses found it difficult to access funding sources. Large businesses reduced investments. However, little has been empirically established regarding the effects of the global slowdown on entrepreneurial startups. This study applies a cognitive lens to examine the effects of the perceived global slowdown impact along with the effects of perceived local risks on startup activities when mediated by perceived opportunities. All hypothesized relationships are found to be significant. Equally important, perceived opportunity is found to fully mediate the relationship between perceived global slowdown impact and startup activity. It is also found to partially mediate the relationship between perceived local risks and startup activities. Hence, this manuscript establishes the basis for beginning to understand how the perceived global slowdown impact is relevant for global startup activity.

Keywords: Cognition, Great recession, Perceived risks, Perceived opportunities, Startup activity

1. Introduction

The recent global economic slowdown which is often referred to as the Great Recession has overwhelming implications for small, medium, and large businesses around the world. A considerable amount of wealth was lost among large financial institutions. Unemployment rose precipitously as small, medium, and large companies laid off workers due to reduced demand for services and products in the market. Small companies experienced limited access to financing programs needed to address negative cash flow problems. Personal and commercial real estate pricing plummeted and bankruptcies ascended rapidly among small and medium companies. Beginning in 2008, it is considered the worst global recession since World War II with devastating consequences for businesses of all sizes.

While the economic implications of the global economic slowdown are apparent for small, medium, and large businesses, they are less known for entrepreneurial startups particularly from a cognitive perspective where existing and potential entrepreneurs make decisions based on their interpretation of the world around them (Gregoire, Corbett, and McMullen, 2011). Existing studies and research have applied an economic lens to understand the phenomena of entrepreneurship in the context of the global economic slowdown (Fairlie, 2013; OECD, 2009). Clearly, such an approach offers meaningful insights. However, it tends to ignore the reality that individuals make decisions based on their perceptions of opportunities and threats under risky and uncertain conditions (Keh, Foo, and Lim, 2002; Palich, and Badgy, 1995; Tversky, and Kahneman, 1974). Hence, some decisions may not adhere to economic assumptions of rationality. Equally important, economic models tend to ignore how existing objective economic realities are subjectively understood and leveraged to produce important entrepreneurial outcomes such startup activity.

This study addresses this gap (i.e. global economic slowdown impact on entrepreneurial startups) by applying a cognitive lens (Estes, 1975) to examine startup activity on a global scale during the early stages of Great Recession. More specifically, we focus on entrepreneurial cognition. In so doing, we answer the call for a more cognitive perspective in entrepreneurship (Gregoire, Corbett, and McMullen, 2011) by addressing the following research questions: (1) Is perceived global economic slowdown impact associated with perceived opportunity? (2) Is perceived local risk associated with perceived opportunity? (3) Is perceived opportunity associated with startup

activity? (4) Does perceived opportunity mediate the relationship between perceived global economic slowdown and startup activity? (5) Does perceived opportunity mediate the relationship between perceived local risk and startup activity?

The paper is organized as follows. First we establish the theoretical basis used to examine the entrepreneurial phenomena of interest. In so doing, we identify constructs of interest along with testable hypotheses. Figure 1 illustrates the theoretical model developed.

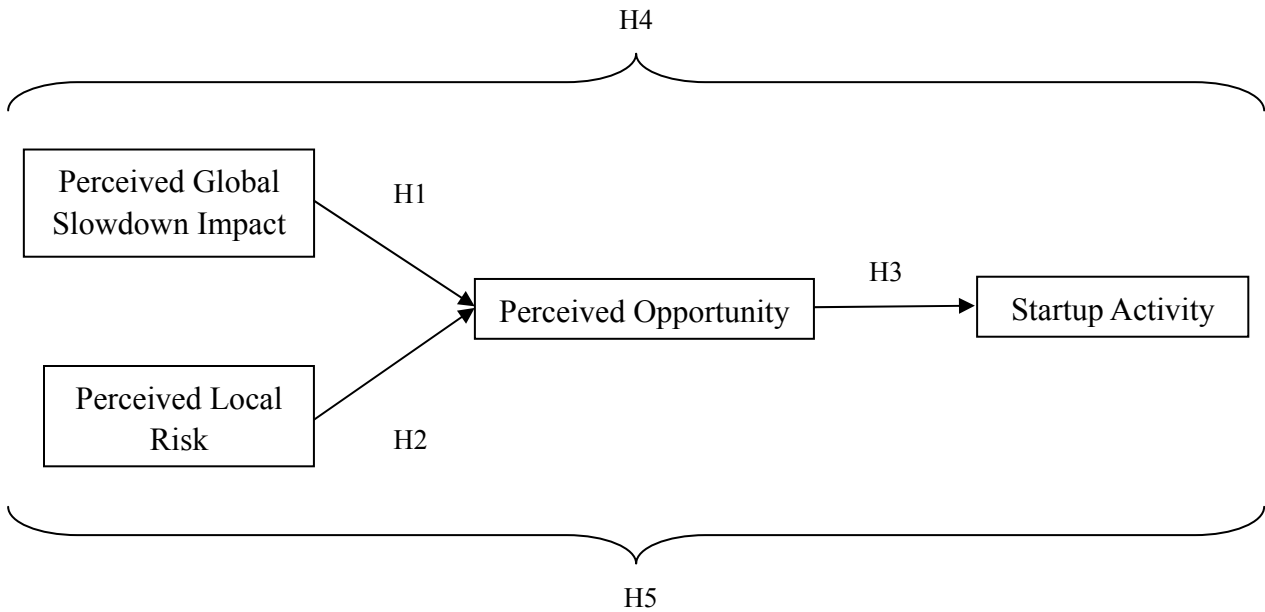


Figure 1. Theoretical Model

Table 1 presents a synopsis of the research questions, testable hypotheses, and results. Second, the methodological approach used to select the sample and test the model is discussed. Over six thousand data points from over fifty countries around the world were collected and analyzed to test the mediated model presented. Third, we discuss the results from the study. The results provide support for all hypotheses as indicated in Figure 3. Fourth, we discuss implications of these results for both theory and practice.

Table 1. Summary of Research Questions, Hypotheses, and Findings

Research Questions	Hypotheses	Results
Is perceived global economic slowdown impact associated with perceived opportunity?	<i>Hypothesis 1:</i> Perceived global economic slowdown impact is negatively associated with perceived opportunity.	Supported
Is perceived local risk associated with perceived opportunity?	<i>Hypothesis 2:</i> Perceived local risk is negatively associated with perceived opportunity.	Supported
Is perceived opportunity associated with startup activity?	<i>Hypothesis 3:</i> Perceived opportunity is positively associated startup activity.	Supported
Does perceived opportunity mediate the relationship between perceived global economic slowdown and startup activity?	<i>Hypothesis 4:</i> Perceived opportunity mediates the relationship between perceived global economic slowdown impact and startup activity.	Supported
Does perceived opportunity mediate the relationship between perceived local risk and startup activity?	<i>Hypothesis 5:</i> Perceived opportunity mediates the relationship between perceived local risk and startup activity.	Partially supported

2. Theoretical Background

We apply cognitive theory (Estes, 1975) to explain and test the hypothesized relationships presented in this manuscript. Neisser (1967) defines cognition as those processes that transform, reduce, elaborate, store, recover, and utilize sensory input. A cognitive approach to research identifies the individual as an important interpretation mechanism by which entrepreneurship-related phenomena such as those actions that differentiate entrepreneurs from non-entrepreneurs are explained (Gartner, 1985). Applying such a theoretical lens to the study of entrepreneurship provides unique insights (Byrne and Shepherd, 2013; Gregoire, Corbett, and McMullen, 2011) and explains entrepreneurial behavior such as those activities associated with starting a new business (Shaver and Scott, 1991) based on various perceptions such as risks, opportunities, and threats (Cooper, Dunkelberg, and Woo, 1988; Forlani and Mullins, 2000; Palich and Bagby, 1995).

According to cognition theory, the person matters more than broad organizational resources or economics particularly since people do not always behave rationally. It represents a theoretical lens that is quite unique when considered among organizational and economic perspectives such as the resource based view, a resource dependence view, transaction cost economics, and industrial economics theories. It is a valuable and unique viewpoint which argues that the person makes subjective sense of an otherwise objective world in ways that are unique to the person's mental models, perceptions, and the world around them. These sense-making activities subsequently affect entrepreneurial behavior such as startup activity leading to venture creation (Shaver & Scott, 1991). Hence, cognitive theory offers an informative perspective that can be applied to entrepreneurship (Byrne & Shepherd, 2013) to help explain why entrepreneurs behave as they do as it relates to startups.

More specifically, we leverage a specific type of cognitive theory, entrepreneurial cognitions (Mitchell, Buseniz, Lant, McDougall, Morse, and Smith, 2002; Mitchell, Buseniz, Lant, McDougall, Morse, and Smith, 2004; Mitchell, Buseniz, Bird, Gaglio, McMullen, Morse, and Smith, 2007), to examine the phenomena discussed in this manuscript. "*Entrepreneurial cognitions are the knowledge structures that people use to make assessments, judgments, or decisions involving opportunity evaluation, venture creation, and growth.*" (Mitchell et al., 2002: p. 97). Understanding such knowledge structures helps to illuminate economically impactful phenomena such as startup activities.

Startup activities, a key aspect of entrepreneurship, are often decided upon based on the mental representations of entrepreneurs (Byrne and Shepherd, 2013). They represent a venture creation decision by the entrepreneur to form an organization and to secure resources required for sustaining ongoing operations (Lee and Wong, 2004). As such, startup activities begin a process in which the possibilities for loss and gain become realized (Cooper et al., 1988; Forlani and Mullins, 2000). While regional factors matter for such entrepreneurial considerations (Kibler, 2013), global matters such as economic slowdowns can have debilitating effects on entrepreneurship outcomes such as startup activities (OECD, 2009).

2.1 Perceived Global Economic Slowdown Impact and Perceived Opportunity

While the economic implications of the global economic slowdown are apparent for small, medium, and large businesses, they are less known for entrepreneurial startups particularly from a cognitive perspective where existing and potential entrepreneurs make decisions based on their interpretation of the world around them. The OECD identified the adverse impact the global crisis had on SMEs and entrepreneurship based on downturn in demand for goods and services as well as based on the decreased availability of financing opportunities (OECD, 2009). In so doing, they offer an economic explanation which identifies delays in accounts receivables, lack of access to short-term financing, stagnation in lending, and worsening access to credit as key explanations for SMEs and startups. More specific to new ventures, the OECD identifies a reduction in global venture capital fundraising as a key determinant leading to a decline in startup activity. Entrepreneurship research has devoted little attention to understanding and explaining what impact the Great Recession has had on entrepreneurship (Fairlie, 2013).

Arguably, Fairlie (2013) offers one of the first detailed analyses of how the global economic slowdown has impacted business creation. He leverages Current Population Survey data to better understand patterns of startup activity. Startup activity was found to be associated amidst higher incidents of unemployment. While the effects of the Great Recession have deleterious effects for home ownership, home values, and employment, the presence of slack labor markets represents a type of opportunity that outweighs other negative consequences. These findings provide some initial insights into the effects of a global economic recession, but they do not clearly explain how entrepreneurs perceive the recession as it relates to perceptions of opportunity which represent the essence of entrepreneurship (Keh et al., 2002).

Identifying an opportunity is a cognitive process (Baron and Ensley, 2006; Gregoire, Barr, and Shepherd, 2010) that seeks the possibility for gain and a more favorable future outcome (Keh et al., 2002). It is a subjective process which results in different outcomes depending on the alertness of the potential entrepreneur (Krueger, 1993) and the availability of resources to create new possibilities (Casson, 1982; Shane and Venkataraman, 2000). A reduction of resources such as funding due to lowered home values and employment (Fairlie, 2013; OECD, 2009) would likely limit perceptions of future favorable outcomes. This is particularly true since funding realities such as cash flow denote a unique challenge for new businesses. Moreover, a general perception of favorable future outcomes in a declining marketplace where increasing competition is coupled with fewer customers possessing suitable disposable income is unlikely. Hence, we submit the following hypothesis:

Hypothesis 1: Perceived global economic slowdown impact is negatively associated with perceived opportunity.

2.2 Perceived Local Risks and Perceived Opportunity

Risk perceptions are chances for loss (e.g. economic, social, professional, and reputational) based on the subjective interpretations of individuals with implications for startup activity

(Forlani and Mullins, 2000; Gartner, 1985). As possibilities for loss (Forlani and Mullins, 2000), they are negatively associated with the chance for gains (Janney and Dess, 2006). These chances for loss are stark contrasts to chances for favorable outcomes (Robinson and Marino, 2013). Potential entrepreneurs must weigh these possibilities when making entrepreneurial decisions. They can be seen as “the extent to which there is uncertainty about whether potentially significant and/or disappointing outcomes of decision will be realized” (Sitkin & Pablo, 1992: 10). Decision-makers make subjective sense of chances for loss creating an inverse relationship with chances for gain. This suggests that perceived risks are not likely to produce favorable perceptions when associated with future outcomes (Cooper and Fraseruk, 2011; Sitkin and Pablo, 1992).

It stands to reason that those risks which are local (i.e. perceptually and practically closer) have a greater impact than those which tend to be more conceptual or distant. For instant, the local merchant has a much better understanding of customers that do not visit her establishment to purchase goods and/or services since these lost revenues are more proximal. Similarly, a potential entrepreneur considers the nearer risks as they are more “real” and have more predictable consequences. The risks of being considered a failed business person, of being positioned as a social outcast, and of being unable to pursue future opportunities such as new businesses and professional pursuits tend to be more real (i.e. local) since they can affect one’s day-to-day life. These local risks have consequences for perceived opportunities yielding the following hypothesis:

Hypothesis 2: Perceived local risk is negatively associated with perceived opportunity.

2.3 Perceived Opportunity and Startup Activity

The way in which decision-makers perceive opportunities matters for startup activities

(Palich and Bagby, 1995; Shane and Venkataraman, 2000; Venkataraman, 1997). Failing to see a favorable outcome in a game where the chances for loss are greater than the chances for gain (Keh, et al., 2002) will more often than not lead to alternative choices (Das and Teng, 1997; Palich and Bagby, 1995). When presented with the opportunity to create or join a fast growing high tech startup that one believes will increase their personal wealth faster than more stable employment alternatives, individuals may choose to pursue the startup holding all things constant. Clearly, the perceived value of the opportunity matters (Krueger, 2000). This suggests that how an opportunity is perceived will significantly influence startup activity producing the following hypothesis:

Hypothesis 3: Perceived opportunity is positively associated startup activity.

Consistent with theories of mediation (Baron and Kenny, 1986), we argue that the relationship between perceived global economic slowdown and startup activity and the relationship between perceived local risk and startup activity exist through perceived opportunity, the mediator. As such, we present the following hypotheses to test this mediated association:

Hypothesis 4: Perceived opportunity mediates the relationship between perceived global economic slowdown impact and startup activity.

Hypothesis 5: Perceived opportunity mediates the relationship between perceived local risk and startup activity.

In the following section, we provide the basis for testing the hypotheses presented in this manuscript. Subsequently, we provide results and a discussion to highlight theoretical and practical contributions of this research.

3. Methodology

3.1 Data

Data from the Global Entrepreneurship Monitor (GEM) project (Marcotte, 2013) were used for this study. The data collection began in 1999 based on a partnership between London Business School and Babson College who sought to better understand total entrepreneurial activity around the world. Responses regarding attitudes across more than fifty countries are collected annually. The GEM 2009 APS (adult population survey) Global – Individual Level Data is administered to at least 2000 adults in each GEM country. The entire data set consists of 283 variables and 183,074 observations.

3.2 Variables

3.2.1 Startup Activity

To measure the dependent variable, startup activity, respondents were asked to indicate yes or not to whether they are currently trying to start a new business. A new startup activity was defined as one being developed either alone or with others, and included self-employment or selling either goods or services. This variable refers to the presence or absence those actions that are associated with starting a business.

3.2.2 Perceived Local Risk

Respondents were asked how a fear of failing would impact their decision on a startup. To assess risk perception the question asked if a fear of failure would prevent respondents from starting a business, again answered with a yes or no. This variable represents the extent to which a specific measure of fear associated with starting a new business which may have additional implications for the entrepreneur.

3.2.3 Perceived Global Economic Slowdown Impact

Respondents were asked what impact the global economic slowdown had on the business opportunity for this start-up. Respondents were specifically asked if the impact had results in more business opportunities, somewhat more opportunities, no impact, somewhat fewer business opportunities or few business opportunities. The respondent data was recoded to form two levels for this response: more business opportunities or fewer business opportunities. This variable focused on the broader positive or adverse implications for the startup based on the broader economic environment.

3.2.4 Perceived Opportunity

Respondents were asked about their perception of the opportunity climate within their area. Specifically, respondents were asked to indicate yes or not if in the next six months there will be good opportunities for starting a business in the area where they live. This variable takes into consideration those factors that either support or do not support a business environment conducive for starting a business.

3.2.5 Control variables

Several control variables were expected to be associated with the variables of interest and, thus, were included in this study - gender, age (continuous variable) and education (at five levels), along with work status (at three levels) were included in the model. For education and work status, the questionnaire asked respondents to select among a number of choices that identified their highest level of education and their main employment status. These choices were subsequently collapsed into two levels for the work status (working and not working) and two levels for education (college graduate or not a college graduate).

3.3 Variable exploration

The dependent variable, startup activity, is a categorical variable (yes, no). The independent variables are categorical variables with perceived risk (yes, no) - perceived global impact (more business opportunities, fewer business opportunities), and perceived opportunity (yes, no). The control variables are primarily categorical (gender at two levels, work status at two levels, education at two levels), and one continuous variable, age.

Also, in preparing for the modeling analysis the dependent and independent variables were examined. Figure 2 provides analysis regarding the dependent variable, the mediator variable, and the independent variables that show the overall percent indicating positive startup intent is about 7.4%, the risk perception is about 38%, the favorable perceived global impact (more opportunities) is about 46%, and the favorable opportunity perception is about 32%.

The frequency distributions for these variables are shown below. Because the dependent variable and the majority of the independent variables are categorical it is not meaningful to show the more typical result of a correlation matrix.

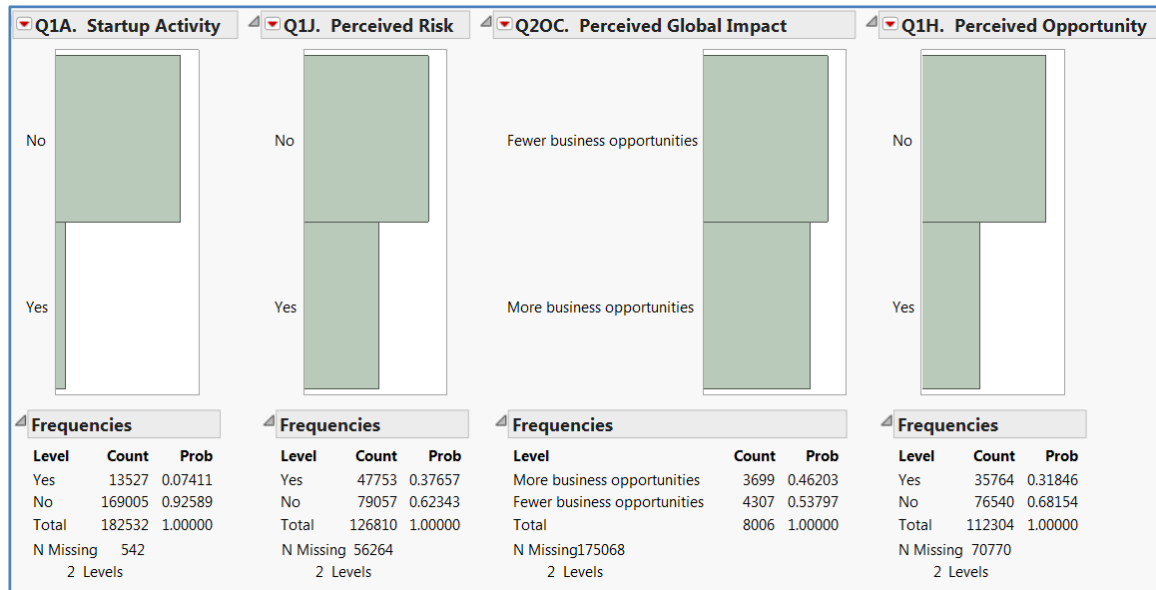


Figure 2. Frequency Distribution of Variables

3.4 Models

We used three logistic regression models (Kessler, 2007; Fiegener, Brown, Dreux, and Dennis, 2000) with a dependent variable startup intent, independent variables of perceived risk and perceived global impact, a mediator variable of opportunity perception, and the following control variables - gender, age, work status, and education. To test the hypothesized mediated relationship, we performed regression analysis following the mediated example of Baron and Kenny (1986).

Model 1 regressed the hypothesized mediator variable, opportunity perception, on the independent variables. Model 2 regressed the dependent variable, startup activity, on the independent variables. Model 3 regressed the dependent variable, startup activity, on the independent variables and on the mediator variable. All models included control variables. The results of these regression analyses are shown in Figure 3.

All Countries			
Dependent Variable:	Perceived Opportunity	Startup Activity	Startup Activity
Parameter Estimates	B	B	B
Gender	-0.0247	-0.1083**	-0.1019**
Age	0.0019	-0.0073**	-0.0076**
Education	0.0355	0.1313***	0.1370***
Work Status	0.0347	-0.2092***	-0.1897***
Perceived Global Slowdown Impact	0.2680***	0.0702*	0.0544
Perceived Local Risk	-0.1956***	-0.2034***	-0.1806***
Perceived Opportunity			0.1288***
Intercept	0.2533***	2.6776***	2.6495***
Whole Model Prob > ChiSq	<0.0001***	<0.0001***	<0.0001***
RSquare (U)	1.94%	1.43%	1.94%
N	6780	7424	6780
* < 0.10; ** < 0.05; ***<0.01			

Figure 3. Regression Analysis Results

4. Results

In this study we conceptualized a relationship between perceived global economic slowdown impact and perceived local risk on startup activity, mediated by perceived opportunity. The resulting models show that all research questions associated with the hypothesized relationships are all supported or partially supported as summarized in Table 1.

Model 1 tested hypotheses 1 and 2 by examining the association between perceived global slowdown impact and perceived opportunity as well as the association between perceived local risk and perceived opportunity. Both perceived global slowdown impact and perceived local risk were significantly positively associated with perceived opportunity at a p-value of less than 0.01. These results showed strong support for hypotheses 1 and 2, thus suggesting that the independent variables of interest are significantly associated with the hypothesized mediating variable.

Together, Models 2 and 3 examined hypotheses 3, 4, and 5 resulting in a test for mediation. Model 2 examined the association between perceived global slowdown impact and perceived local risk with startup activity. The results found a statistically significant association between perceived global slowdown impact and startup activity at a very high level ($p < 0.10$). A highly statistically significant association between perceived local risk and startup activity ($p < 0.01$) was also established based on the results. Interestingly, the level of significance for the associated independent variables with the dependent variable, while both significant, were significant and noticeably different levels. Perceived local risks were found to be more significantly associated with startup activity when compared to the global slowdown impact.

Model 3 tested for mediation by examining the association between perceived global slowdown impact and perceived local risk along with the mediator variable perceived opportunity on startup activity. There is a highly statistically significant association between perceived opportunity and startup activity ($p < 0.01$), which provides initial support for hypothesis 3. For the two independent variables, perceived global slowdown impact and perceived local risk that were examined and found to be significant in model 2, we found that perceived local risk is highly statistically significant ($p < 0.01$), but perceived global slowdown impact was not significant in model 3. These results lead to a conclusion that supports hypothesis 4, which suggests a mediated relationship between perceived global slowdown impact and startup activity where perceived opportunity acts as a mediator. Hence that model is fully mediated. However, the results only partially supported hypothesis 5 which posited a mediated relationship between perceived local risk and startup activity where perceived opportunity acts as a mediator.

When considered together, all hypotheses are either fully or partially supported providing empirical evidence for the theory presented in this manuscript. The practical and theoretical importance of these findings is more thoroughly discussed in the subsequent section followed by suggestions for areas of future research.

5. Discussion

This study is among the first to examine the impact of the global economic slowdown on entrepreneurship. Few studies have considered the important implications of the Great Recession of entrepreneurship (Fairlie, 2013). Equally important, this manuscript is the first to leverage cognitive theory to and perceptive variables of interest to explain entrepreneurial phenomena of interest. Hence, these findings contribute entrepreneurship research and extend entrepreneurial cognition theory (Mitchell et al., 2002; Mitchell et al., 2004; Mitchell et al., 2007) in meaningful ways by establishing mediated relationships between the perceived global economic slowdown and startup activity and between perceived local risks and startup activities with perceived opportunity as the mediator.

We find that perceived global economic slowdown impact is negatively associated with perceived opportunity. This supports existing research which highlights how a reduction in available resources may be associated with negative perceptions of opportunities (Casson, 1982; Fairlie, 2013; OECD, 2009; Shane and Venkataraman, 2000). Using data collected shortly after the Great Recession which began in 2008, we show that potential entrepreneurs perceived the global economic slowdown is adversely associated with their perception of opportunities. This provides a contrast with research that has focused primarily on non-cognitive relationships when explaining entrepreneurial phenomena (Fairlie, 2013). Together this research and past research open avenues of discussion as nations and communities work to rebound from the Great Recession.

We also find that local risks matter for potential entrepreneurs' perceptions of opportunities. Risks essential represent the chances for failure. Whereas the global economic slowdown matters in a conceptual way, the reality of local risks also matter in very significant ways. The findings here suggest that perceived local risks are negatively associated with perceived opportunities. Hence, potential entrepreneurs are motivated by the realities of possibilities for failure.

As expected, risk is a strong and persistent motivator. Entrepreneurial types tend to be alert to opportunities, but those opportunities are not void of the reality of the associated risks to the startup.

The relationship between perceived opportunities and startup activities is established in this study. Opportunities are chances for success that have important consequences for startup activities (Cooper et al., 1988; Keh et al., 2002). Entrepreneurs create businesses to produce favorable outcomes in their lives, in their communities, and in the marketplace. They interpret a set of circumstances as chances for new possibilities that require the creation of new businesses to fully exploit said new possibilities. The absence of perceived opportunities will likely not subsequently produce new businesses given their high failure rates.

Finally, this research argues and establishes the perceived opportunity mediates the relationship between perceived global economic slowdown impact and startup activities as well as the relationship between local risk perceptions and startup activities. As expected, perceived opportunity fully mediates the relationship between perceived global economic slowdown impact and startup activities. This suggests that potential entrepreneurs make sense of the global economic slowdowns like the Great Recession for startup activities through the prism of perceived opportunities. Interestingly, the mediated relationship between local risk perceptions and startup activities is only partially mediated by perceived opportunities. Hence, local risk perceptions have more persistent implications for startup activities making it a stronger driver of entrepreneurial behavior.

There are important practical implications for this research. First, this research makes clear the important role that entrepreneurial confidence plays in startup activity. Much is made of consumer confidence in economic research. It is assumed that an increase in consumer confidence will drive most economic behavior. However, entrepreneurial research doesn't make such assumptions. Confidence or overconfidence of the entrepreneur will help to drive important entrepreneurial activities (Robinson and Marino, 2013). Making abundant those resources to sustain a startup is of critical importance for the potential entrepreneur's level of confidence. It is important to reemphasize that entrepreneurs are not necessarily rational since they often choose to play a game where the chances for lost are relatively high (Keh et al., 2002; Palich and Badgy, 1995). They form their own perceptions (i.e. cognitive constructs) (Estes, 1975; Neisser, 1967) and arrive at their own decisions based on rational and irrational considerations.

Second, those challenges that are most real to a potential entrepreneur are those that are most proximal. This suggests that policies should be crafted to help change the perception of local conditions. National efforts to promote entrepreneurial activity should focus on changing the reality of local markets particularly since this is the level at which many startup activities are reached. Additionally, this makes clear that efforts at the national level should be carefully coordinated with state, city, and community efforts. Hence, this supports the need for more comprehensive and fully integrated policy-making policies as opposed to more distributive approaches.

Future research should address theoretical and practical areas of interest. The Great Recession provides a unique context for understanding how external economic conditions are associated with entrepreneurship. Hence, this unique and valuable context provides a wonderful atmosphere for contextual research. For instance, continuing to tease out the impact of one's subjective reality on entrepreneurship based on the global economic recession provides avenues for future research. Additionally, understanding affective constructs (Baron, 2008; Podoyntsyna, Van der Bij, and Song, 2011) in the context of the Great Recession may provide valued entrepreneurial insights. Moreover, the interplay between cognitive and affective constructs in the context of the global economic slowdown makes unique contributions to entrepreneurial research.

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