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Editorial Note

The May 2019 issue of the *Journal of International Business Disciplines (JIBD)* has been the result of a rigorous process in two stages:

- Stage 1: all papers that were submitted to 2019 IABD conference went through blind reviews, and high quality papers were accepted for presentation at the conference.
- Stage 2: approximately ten percent of the accepted articles and two invited manuscripts were selected for possible publication in *JIBD*. The respective authors were contacted and asked to resubmit their papers for a second round of reviews. These manuscripts went through a blind review process. In the end, three articles were recommended for publication in the May 2019 issue of *JIBD*.

JIBD is committed to maintaining high standards of quality in all of its publications.

Ahmad Tootoonchi, Chief Editor
Journal of International Business Disciplines

AN EMPIRICAL STUDY OF BEHAVIORAL INTENTION TO USE BLOCKCHAIN TECHNOLOGY

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ABSTRACT

This study specifically explores whether user acceptance of blockchain technology can be predicted using the unified theory of acceptance and use of technology model (UTAUT). This model developed by Venkatesh et al. (2003) served as the primary framework. The survey was distributed to students and faculty of a midsize university and IT professionals in several organizations in the Northeast region of the United States, yielding 127 usable survey responses. Results show that perceived operational usefulness has a positive influence on blockchain use, as well as perceived ease of use. Demographics also indicate the potential for growth in blockchain acceptance, including younger generations and IT professionals who could act as early adoption agents.

INTRODUCTION

Originally designed as a system of recording and verifying cryptocurrency transactions, including the popular cryptocurrency Bitcoin, blockchain has been recognized as an adaptable technology that would potentially transform a wide range of industries. If successfully implemented, blockchain may increase financial sector efficiency by eliminating many of the time-consuming manual tasks associated with transaction processing and replacing the need for neutral third-party intermediaries in verifying and executing financial transactions (Dai & Vasarhelyi, 2017; Lewis et al., 2017; White, 2017). It also can provide real-time evidence of the sourcing or flow of materials within supply chains, or enhance the efficiency of cloud-based manufacturing processes (Francisco & Swanson, 2018; Li et al., 2018). Blockchain may even have the potential to automatically enforce debt covenants or remit tax payments through real-time smart contracts and to reshape many of the tasks currently being completed by accountants and auditors (Dai & Vasarhelyi, 2017). The proposed applications seem almost endless.

The numerous applications of blockchain are a result of its unique design. In its most basic form, it is an append-only list of records that is decentralized and managed by all participants in a peer-to-peer network. The records of all participants in the network simultaneously update when a consensus is reached among them, allowing the blocks to effectively function as a decentralized public ledger. Every party in the network receives the new block of information at the same time and stores a copy of it. The append-only characteristic of its form, and the fact that all network participants receive a copy, limits the potential manipulation of data on the blockchain once a record has been added. As a result, blockchain has the potential to enhance data integrity, transparency and security.

If successful at adapting blockchain technology to new industries, early adopters of blockchain technology could establish an important competitive advantage. However, the scarcity of knowledge and an applied understanding of blockchain technology has so far hindered such widespread applications (White, 2017). This study contributes to the existing debate on whether blockchain can be adopted to these applications by examining the factors that influence user acceptance.

User acceptance of blockchain technology can be predicted through the use of various user acceptance models and by specific independent variables that influence user acceptance. Due to the lack of previous research on blockchain acceptance, this study will examine different independent variables to provide empirical results on which of them affect users' intention to use blockchain. Specifically, this empirical study will attempt to find the correlation of seven specific variables: perceived ease of use, trust with stems to privacy and security, facilitating conditions, and perceived operational usefulness, and the intention to use blockchain technology.

LITERATURE REVIEW

We reviewed articles that evaluate the acceptance of previous IT systems as well as those that discuss the intention to use blockchain technology within several industries such as accounting, healthcare, education, government, finance, and manufacturing. While most articles that discuss potential industry applications share highly optimistic perspectives regarding the revolutionary ways that blockchain technology could improve existing operations, the articles also identify concerns and potential limitations that could hinder the rapid adoption of the technology (Dai & Vasarhelyi, 2017; Iansiti & Lakhani, 2017; Lewis et al., 2017; Nakamoto, 2008; Schaupp & Festa, 2018; White, 2017). Collectively, these authors suggest that blockchain technology has tremendous potential, but that the obstacles may result in a limited number of early adopters. Additionally, realizing the technology's full potential could take a protracted period as industries work through the governmental, regulatory, social, legal, and political implications required to replace existing infrastructures. For instance, Jacob (2011) highlights that blockchain technology is so dissimilar to existing banking processes that it does not fit within the current regulatory definitions and may not be successful at complying with the existing regulatory frameworks. Iansiti and Lakhani (2017) even suggest that the adoption of blockchain technology may be analogous to the development of transmission control protocol/internet protocol (TCP/IP), which

revolutionized computer networking, but took many years since its initial introduction in 1972 to gain widespread acceptance.

Despite the inherent challenges, Crosby et al. (2016), Batubara et al. (2018), Nair and Sutter (2018), and Lewis et al. (2017) also describe a number of prominent applications of blockchain technology. Collectively, these authors suggest that despite the challenges, there are tremendous long-term opportunities for blockchain technology including improving the efficiency, trust, and transparency of transactions involved. Jacobs (2011), Stratopoulos and Wang (2018), Venkatesh et al. (2003), Folkinshteyna and Lennon (2016), and Davis et al. (1989) also detail how it is not unrealistic for a revolutionary technology to take time to implement as it develops and gains acceptance.

While these studies are useful at providing insight into the opportunities and constraints on the adoption of blockchain technologies, limited research has been conducted on user acceptance. If blockchain is to be applied to industry applications, we believe that understanding the factors that influence users' intentions to use blockchain is vital to understanding its path toward acceptance. Specifically, no research has explored what independent variables drive users' intentions to use blockchain. Therefore, we rely on established methods that have previously been used to evaluate the acceptance of other innovative technologies.

This paper utilizes the unified theory of acceptance and use of technology (UTAUT) model developed by Venkatesh et al. (2003) to examine how likely users are to accept the emerging blockchain technology. We chose this model because it is widely recognized as an established tool for determining the acceptance and use of innovative technology. UTAUT was developed to improve upon the eight predominant End User IT acceptance models (theory of reasoned action, technology acceptance model, the motivational model, theory of planned behavior, a combination model of technology acceptance and theory of planned behavior, PC utilization model, and the social cognitive theory). An empirical testing by Venkatesh et al. (2003) determined that the unified model explained nearly 70 percent of the variance in usage intention, which was a significant improvement over any of the eight individual models evaluated. Their testing also suggested three direct determinants of intention to use (performance expectancy, effort expectancy, and social influence), two direct determinants of usage behavior (intention and facilitating behavior), and four significant moderating influences (experience, voluntariness, gender, and age) (Venkatesh et al., 2003). In order to explain more effectively the behavioral intention to use blockchain, we have modified UTAUT by putting the trust variable in place of the social influence factor and focusing on perceived operational usefulness for the performance expectancy factor. We believe that this modified UTAUT can best help us identify, evaluate, and understand independent variables that influence users' intention to use blockchain.

DEVELOPMENT OF HYPOTHESES

Naturally inherent attributes of blockchain such as immediate processing and the potential to automatically execute transactions through smart contracts (Lewis et al., 2017; Dai & Vasarhelyi, 2017) seem likely to positively affect the ease of use. We believe that these intrinsic characteristics

may be perceived by users to be improvements on ease of use, and therefore may influence the rate of blockchain acceptance. Thus, perceived ease of use and adaption should have a positive relationship to an individual's intention to use blockchain.

H1: Perceived ease of use has a positive relationship to an individual's intention to use blockchain.

Since the use and acceptance prediction will be focused on a broad audience in many industries, we believe it is necessary to include social influence as another variable in our model. Since blockchain is a revolutionary technology, certain innovation leaders and early adopters may become the catalysts to lead the widespread acceptance of blockchain. Early adopters of technology may act as role models and spokespeople who will vouch for and legitimize the technology (Venkatesh et al., 2003). Another perspective of the social influence of blockchain technology is that of social ethics and responsibility. Blockchain offers enhanced trust, security, privacy, and other factors in which society can benefit by bridging the trust gap between individual users and business entities in processes that are currently operated away from the public view.

Our second proposed hypothesis is that we believe that "trust, privacy, and security" has a positive relationship to an individual's intention to use blockchain. Blockchain is a shared distributed ledger used in a network to record and verify transactions by a consensus mechanism that creates trust in the network. Gefen et al. (2003) recognized that trust and security are significant factors for the acceptance of e-commerce technologies, and that trust is enhanced by the belief that there are safety mechanisms built into technology platforms. The trust and transparency of transactions could transform the way business transactions occur in the future. We hypothesize that users are more likely to use blockchain if they trust the technology.

H2: Trust has a positive relationship to an individual's intention to use blockchain.

Our third hypothesis is that users consider cost as a very important factor in their intention to use blockchain. We theorize that cost has a negative relationship to an individual's intention to use blockchain. We attribute the negative relationship to the lack of knowledge of what blockchain is and the costs associated with the ledger.

H3: Cost has a negative relationship to an individual's intention to use blockchain.

Facilitating Conditions is tied heavily into user intention (Venkatesh et al., 2003). Therefore, this study hypothesizes that facilitating conditions has a positive relationship to an individual's intention to use blockchain.

H4: Facilitating conditions have a positive relationship to an individual's intention to use blockchain.

Users consider operational usefulness as another very important factor and operational usefulness will have a positive influence on intention to use. What we discovered from the Venkatesh et al. (2003) study is that perceived usefulness is often used to predict user's acceptance to try a new technology.

H5: Perceived operational usefulness has a positive relationship to an individual's intention to use blockchain.

METHODOLOGY

Perceived Ease of Use

This variable is the perceived simplicity that a user holds about using a technology. The Davis et al. (1989) longitudinal study aimed to explain user behavior in accepting innovative computer systems and found that although this variable is less powerful than perceived usefulness, it still influenced the users' intention to use the technology. Since many of the proposed applications of blockchain are outside of the familiarity of existing legacy systems familiar to users, we believe the perceived ease of use to also be relevant to the acceptance of blockchain technology. To measure the perceived ease of use construct, we modified items on the effort expectance construct in Venkatesh et al. (2012) as follows:

Q1: Learning how to use blockchain is easy for me.
Q2: My interaction with blockchain is clear and understandable.
Q3: I find blockchain easy to use.
Q4: It is easy for me to become skillful at using blockchain.

Operational Usefulness

For our research, operational usefulness is technically a new and unused variable in any relevant studies. For the sake of this study, we are considering this variable as related to perceived usefulness. A critical aspect in predicting use is the perceived value that blockchain brings to improving legacy systems. Folkinshteyna and Lennon (2016) suggested that Bitcoin served such a function following the 2008 financial crisis by providing an alternative to the banking system that had suffered a loss of public trust. Also, Davis et al. (1989) combined the traditional TAM and TRA models in an effort to explain intention to use new technology using data from a sample of MBA students at a predominant university. As seen in both models, usefulness was the key factor in predicting use of an IT system. Similarly, we believe that the overall usefulness of blockchain will ultimately determine acceptance and diffusion of the technology. To measure the operational usefulness construct, we modified items on performance expectance from Venkatesh et al. (2012) as follows:

Q17: I find blockchain useful in my daily life.
Q18: Using blockchain increases my chances of achieving things that are important to me.
Q19: Using blockchain helps me accomplish things more quickly.
Q20: Using blockchain increases my productivity.

Facilitating Conditions

Facilitating conditions is a variable chosen due to the nature of blockchain. As seen in the study from Venkatesh et al. (2003), the facilitating conditions variable is tied heavily into user intention. If a potential user feels that the amount of time, effort, and feasibility risk is too high, the user may become turned off from the prospect of using a modern technology. The conditions must be within a manageable range, so that the implementation of blockchain will be perceived as useful. To measure the facilitating conditions construct, we modified items on the facilitating conditions construct in Venkatesh et al. (2012) as follows:

Q13: I have the resources necessary to use blockchain.
Q14. I have the knowledge necessary to use blockchain.
Q15. Blockchain is compatible with other technologies I use.
Q16. I can get help from others when I have difficulties using blockchain.

Trust

Trust, defined by the extent to which the users feel confident that a system such as blockchain, will operate on par to its claimed key attributes on a consistent basis. Since blockchain's primary application is currently that of transaction management, one key aspect that is considered is the role that evolving government regulations can have on influencing the level of trust that users have in the technology. While government regulatory oversight on blockchain applications may slow the rate at which it is applied to additional applications, it also presents the opportunity to gain public trust through legitimacy of being recognized and scrutinized by established governmental regulatory agencies. Consumers often feel more comfortable using technologies that are vetted by trusted third parties to manage personal information, finances or other sensitive information. The guidance provided by government agencies such as the Securities and Exchange Commission or Federal Trade Commission may also assist in promoting the adoption of the technology in the United States and similar economies because the agencies themselves are trusted by customers (Crosby et al., 2018). Additionally, we would expect trust in blockchain to increase as users begin to understand the distributed nature of blockchain recordkeeping and the limited ability to alter prior blocks. To measure the trust construct, we modified items on the trust variable in Wu et al. (2012) as follows:

Q8: Even if not monitored, I would trust blockchain to do the job right.
Q9: I trust that blockchain protects personal information.
Q10: I believe that blockchain is trustworthy.

Security

We hypothesize that trust is dependent on security and privacy. The security variable is measured by the following items from Wu et al. (2012):

Q5: Blockchain explains that the domain takes some steps to provide security for personal information that has been collected.
Q6: Blockchain informs that any personal information will not be disclosed to third party.
Q7: Blockchain has the advanced technology to protect your personal information.

Privacy

We hypothesize that privacy matters in building the trust in blockchain as well. The privacy variable is measured by the following items from Kim and Tadisina (2010):

Q21: I believe that blockchain is eager to provide mechanisms for safe and reliable transactions.
Q22: I believe that blockchain is honest with customers all the time.
Q23: I believe that blockchain is interested in customers' welfare.
Q24: I believe that blockchain does its best to protect customers' welfare.

Cost

The refined Delone and McLean (2003) Information System Success Model has been widely used as a tool for measuring the success of e-commerce technologies. In the model, cost savings is also used as a part of the evaluation of net benefits (Delone & McLean, 2003). Similarly, we believe that the cost variable can possibly hold a negative value on the intention to use blockchain. Since this framework is still being understood on a broad scale, it is assumed that the cost to implement blockchain to replace existing technologies will be substantial. Furneaux and Wade (2011) suggest that the high cost of investing in existing systems will also increase the reluctance to discontinue their use. To define expected operational support costs of blockchain technologies, we modify items on the support cost variable in used by Furneaux and Wade (2011) as follows:

Q11: Supporting the ongoing use of blockchain is costly.
Q12: The ongoing operational costs of blockchain are high.

This study proposes to build two models: a trust model and an intention to use model. Multiple regression models will be utilized. First, this study proposes to build a trust model. In this model the dependent variable is trust, while the independent variables are security and privacy. The regression formula for this model is as follows:

$$X_3 = \beta_0 + \beta_2 X_2 + \beta_7 X_7 + \varepsilon$$

where X_3 = Trust
X_2 = Security
X_7 = Privacy

The second model will employ regression analysis to determine the effect that independent variables, perceived ease of use (X_1), trust (X_3), support cost (X_4), facilitating conditions (X_5), and perceived operational usefulness (X_6) have on the dependent variable, intention to use (Y_1). The regression model is as follows:

$$Y_1 = \beta_0 + \beta_1 X_1 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

where Y_1 = Intention to Use
X_1 = Perceived Ease of Use
X_3 = Trust
X_4 = Support Cost
X_5 = Facilitating Conditions
X_6 = Perceived Operational Usefulness

RESULTS

Descriptive Statistics

The survey questionnaire was constructed based on the prior studies (Venkatesh et al., 2003; Wu et al., 2012; Furneaux & Wade, 2011; Davis et al., 1989; Kim & Tadisina, 2010; Lee et al., 2007) in line with the research hypotheses. Surveys were administered at a business school in a mid-sized public university in the Northeast region of the United States. In addition, the surveys were electronically distributed to IT professionals at several organizations in a nearby city in the same state as the university. If a response was incomplete with multiple missing values, it was discarded. Our sample data includes 127 usable survey responses.

Descriptive statistics indicate a fairly even distribution between undergraduate students (43.3 percent) and individuals with blockchain education/IT professionals/MIS majors (59.9 percent). Descriptive statistics also indicate that 36.1 percent of the respondents had less than a 4-year college degree while 59.1 percent of the respondents had at least a 4-year college degree. 4.7 percent did not indicate their level of education. The majority (77.2 percent) of the respondents were less than 35 years old. 18.0 percent were at least 35 years old and 4.7 percent of respondents did not indicate their age. The mean age for all respondents was 32.76 years old. Males represent 58.3 percent of the respondents and females represented 37.0 percent of the respondents. 4.7 percent of respondents did not indicate their gender.

TABLE 1. SAMPLE DATA

Affiliation	Frequency	Percentage
Undergraduates	55	43.3
MBA with Blockchain Education	29	22.8
IT Professionals and MIS Majors	42	33.1
Other	1	0.8
Education Level		
Some High School	1	0.8
High School Graduate	1	0.8
Some College	34	26.8
2 Year College Degree	10	7.9
4 Year College Degree	63	49.6
Master's Degree	11	8.7
Doctorate	1	0.8
Missing/Preferred Not to Answer	6	4.7
Age Range		
18 – 22	58	45.7
23 – 34	40	31.5
35 – 44	14	11.0
45 – 54	5	3.9
55+	4	3.1
Missing/Preferred Not to Answer	6	4.7
Gender		
Female	47	37.0
Male	74	58.3
Missing/Preferred Not to Answer	6	4.7
Total	127	100.0

The descriptive statistics of the eight constructs are shown in Table 2.

TABLE 2. DESCRIPTIVE STATISTICS OF CONSTRUCTS

Construct	N	Min.	Max.	Mean	Std. Dev.	Skewness		Kurtosis	
						Statistic	S.E.	Statistic	S.E.
Ease of Use (X_1)	127	1.00	7.00	3.5413	1.45936	.105	.215	-.417	.427
Security (X_2)	127	1.00	7.00	4.3163	1.49806	-.345	.215	-.188	.427
Trust (X_3)	127	1.00	7.00	4.1168	1.49651	-.370	.215	-.267	.427
Cost (X_4)	127	1.00	6.67	3.7703	1.18633	-.198	.215	.086	.427
Facilitating (X_5)	127	1.00	7.00	3.6939	1.47916	.021	.215	-.583	.427
Usefulness (X_6)	126	1.00	7.00	3.4577	1.37383	.113	.216	-.223	.428
Privacy (X_7)	126	1.00	7.00	4.1111	1.26038	-.311	.216	.536	.428
Intention (Y_1)	127	1.00	7.00	3.9993	1.41805	-.116	.215	-.250	.427
Experience	126	1.00	7.00	5.0132	1.41509	-.706	.216	.203	.428

The proposed constructs include one dependent variable (Y_1, intention to use) and seven independent variables (X_1 to X_7), and an experience demographics variable. Cronbach's Alpha was utilized to measure the reliability of the proposed constructs. A reliability coefficient of 70.0 percent or higher is considered acceptable. Based on the results of Cronbach's Alpha, we concluded that our survey questions are reliable since all results are greater than 70.0 percent. The results are illustrated in Table 3.

TABLE 3. RELIABILITY ANALYSIS

Scale	Items	Cronbach's Alpha
Perceived Ease of Use (X_1)	Q1 – Q4	93.2%
Security (X_2)	Q5 – Q7	89.2%
Trust (X_3)	Q8 – Q10	91.4%
Cost (X_4)	Q11 – Q12	92.0%
Facilitating Conditions (X_5)	Q13 – Q16	87.4%
Operational Usefulness (X_6)	Q17 – Q20	91.2%
Privacy (X_7)	Q21 – Q24	89.5%
Intention to Use (Y_1)	Q25 – Q28	91.4%
Experience	Q29 – Q31	88.9%

We ran a t-test to determine if the differences between female and male responses to our survey questions are statistically significant. Results indicate that ease of use is statistically significant between females and males (p=0.037) and that males perceive blockchain as easier to use than females. Security is marginally significant between females and males (p=0.054). Males appear to trust blockchain technology more than females, but their differences are not significant (p=0.181). Males also appear to perceive blockchain as costlier than females, but their differences are insignificant (p=0.101). Facilitating conditions is marginally significant between females and males (p=0.076). Males believe that they are better equipped to use blockchain technology than females. Perceived operational usefulness is not statistically significant between females and males (p=0.032). Privacy is marginally significant (p=0.078). Males appear to believe that blockchain will protect user privacy more than females. Intention to use is statistically significant between males and females (p=0.002). Experience construct shows that males display more experience with blockchain than females (p=0.014). The t-test results are illustrated in Table 4.

TABLE 4. T-TEST RESULTS BY GENDER

Scale	Gender	N	Mean	Std. Dev.	df	t	p
Ease of Use	Female	47	3.2021	1.39354	119	-2.115	0.037
	Male	74	3.7736	1.48288			
Security	Female	47	4.0177	1.42198	119	-1.950	0.054
	Male	74	4.5541	1.50724			
Trust	Female	47	3.9433	1.52961	119	-1.345	0.181
	Male	74	4.3131	1.43715			
Cost	Female	47	3.5745	1.20927	119	-1.655	0.101
	Male	74	3.9392	1.16375			
Facilitating Conditions	Female	47	3.4149	1.26971	119	-1.792	0.076
	Male	74	3.9071	1.58736			
Operational Usefulness	Female	46	3.1250	1.12885	119	-2.172	0.032
	Male	74	3.6745	1.46634			
Privacy	Female	46	3.8804	1.26022	119	-1.779	0.078
	Male	74	4.2973	1.24050			
Intention	Female	47	3.5230	1.21120	119	-3.169	0.002
to Use	Male	74	4.3288	1.45099			
Experience	Female	47	4.6028	1.51105	119	-2.500	0.014
	Male	74	5.2523	1.31241			

We also ran a t-test to determine the difference between the responses from respondents with at least a 4-year college degree. Results indicate that ease of use is statistically significant between respondents with at least a 4-year college degree and respondents with less than a 4-year college degree (p=0.001). More educated respondents perceive that blockchain technology is more secure than less educated people, but their differences are not statistically significant (p=0.130). Trust, cost, and facilitating conditions factors are marginally significant between two groups (p<0.10). Perceived operational usefulness and privacy factors are statistically significant (p<0.05), while the intention to use is not statistically significant between the two groups (p=0.180). People with more education show significantly more technology-related experiences than less educated people (p=0.006).

We performed a bivariate correlation analysis between variables, and ran a Pearson correlation test. Evidence shows the dependent variable (intention to use) and all independent variables appear to be strongly correlated. Table 5 reports Pearson correlation results.

TABLE 5. PEARSON CORRELATIONS

	X_1	Y_1	X_6	X_2	X_3	X_4	X_5	X_7	Exp.
Ease of Use (X_1)	1	.542**	.561**	.307**	.366**	.269**	.552**	.256**	.352**
Intention to Use (Y_1)		1	.631**	.584**	.564**	.438**	.652**	.589**	.412**
Usefulness (X_6)			1	.563**	.624**	.437**	.676**	.580**	.306**
Security (X_2)				1	.803**	.399**	.561**	.750**	.437**
Trust (X_3)					1	.424**	.586**	.786**	.367**
Cost (X_4)						1	.587**	.441**	.361**
Facilitating (X_5)							1	.534**	.355**
Privacy (X_7)								1	.385**
Experience									1

** p<0.01 (1-tailed)

We ran a multiple regression analysis. We initially ran a model to determine whether security and privacy were strong predictors of trust. Residual analysis was also run through SPSS to look for outliers. The Casewise Diagnostic test for our initial model indicated an outlier issue with case number 107 and 74, so we excluded the two sample cases. We reran the model for our analysis. Our second model had no issues with outliers. Results indicate a strong statistical significance in the multiple regression model on trust [Adjusted R^2 = .743; $F(2, 121) = 178.930$; p<.001]. The two

predictors, security and privacy account for 74.3 percent of variance in trust. Findings show that security and privacy ($p<0.01$) significantly affect trust. There is no evidence of serious multicollinearity in the model. Variance Inflationary Factors (VIF) for all variables are less than four. The trust model results show in Table 6.

TABLE 6. TRUST MODEL

Dependent Variable = Trust					
Adjusted $R^2 = 0.756$; $F(2, 121) = 191.991^{***}$					
	B	SE	Beta	t	VIF
Constant	-.039	.224		-.172	
Security	.466	.066	.477	7.084^{***}	2.293
Privacy	.524	.078	.455	6.744^{***}	2.293

Note: * $p<0.05$, ** $p<0.01$, *** $p<0.001$

B refers to unstandardized regression coefficient

SE refers to standard error

Beta refers to standardized regression coefficient

We ran a regression analysis on a full model including all independent variables. The overall model shows statistical significance, but only the experience variable is significantly related to the intention to use blockchain ($p=0.021$). Trust is marginally significant ($p=0.088$). The full model presents serious multicollinearity. High VIFs are reported on two predictors: usefulness (5.166) and facilitating conditions (4.079). Table 7 shows the full model results.

TABLE 7. FULL MODEL

Dependent Variable = Intention to Use Adjusted R^2 = 0.524; $F(6,116) = 23.421^{**}$					
	B	SE	Beta	t	VIF
(Constant)	.253	.388		.653	
Ease of Use	.168	.110	.173	1.523	3.316
Usefulness	.227	.147	.220	1.552	5.166
Facilitating	.132	.122	.137	1.086	4.079
Cost	.115	.102	.093	1.134	1.720
Trust	.142	.082	.146	1.721	1.849
Experience	.170	.072	.166	2.348^{*}	1.284

* $p<0.05$, ** $p<0.01$

We next ran numerous models to determine the best-fit model for predicting the intention to use blockchain. Based on our analysis, a regression model with five variables appears to be best fit the sample data [Adjusted R^2 = 0.524; $F(5, 117)= 27.826$; $p<0.001$]. Findings show that usefulness ($p=0.007$) and experience ($p=0.020$) significantly affect intention to use. Trust variable shows moderate significance ($p=0.058$) and cost variable marginally affects intention to use ($p=0.077$). Ease of use variable only shows no significance. There is no evidence of serious multicollinearity in the model. VIF for all variables are less than four. Table 8 shows the best-fit model for behavioral intention to use blockchain.

TABLE 8. BEST-FIT BEHAVIORAL INTENTION MODEL

Dependent Variable = Intention to Use Adjusted R^2 = 0.524; $F(5, 117)= 27.826^{**}$					
	B	SE	Beta	t	VIF
(Constant)	.190	.395		.479	
Trust	.156	.081	.160	1.912	1.805
Ease of Use	.158	.110	.164	1.443	3.297
Usefulness	.323	.117	.313	2.758^{**}	3.297
Cost	.163	.092	.131	1.781	1.396
Experience	.171	.072	.167	2.365^{*}	1.283

* $p<0.05$, ** $p<0.01$

Reduced regression models were run to determine if the control variables such as gender, age, education level matter. We investigated whether the intention to use was different among various groups of users. We gathered interesting findings from reduced models for males only, young adults only, and millennials only. A reduced model for males only shows statistical significance in [Adjusted R^2 =0.533; $F(4, 69) = 21.830$; $p<0.001$]. Findings show that facilitating conditions ($p<0.01$) and ease of use ($p<0.05$) significantly affect males' intention to use. Trust and cost show no significant relationship. There is no evidence of serious multicollinearity in the model. Table 9 reports the male model.

TABLE 9. REDUCED MODEL – MALES ONLY

Dependent Variable = Intention to Use Adjusted R^2 = 0.533; $F(4, 69) = 21.830^{***}$				
	B	SE	Beta	t
Constant	.810	.484		1.673
Ease of Use	.283	.109	.289	2.597*
Trust	.106	.103	.105	1.028
Facilitating	.345	.115	.378	2.998**
Cost	.164	.125	.132	1.313

* p<0.05, ** p<0.01, *** p<0.001

Results indicate statistical significance in the reduced model for young adults [Adjusted R^2 = .421; $F(4, 53) = 11.374$; $p < 0.001$]. Facilitating conditions ($p<0.01$) and trust ($p<0.05$) significantly affect respondents (ages 18 to 22) on their intention to use. Ease of use and cost show no significance. There is no evidence of serious multicollinearity in the model. Table 10 reports the young adult model results.

TABLE 10. REDUCED MODEL – YOUNG ADULTS ONLY

Dependent Variable = Intention to Use (Age: 18 - 22) Adjusted R^2 = 0.421; $F(4, 53) = 11.374^{**}$				
	B	SE	Beta	t
Constant	1.662	.434		3.827
Ease of Use	.121	.117	.133	1.032
Trust	.298	.120	.358	2.481*
Facilitating	.343	.122	.395	2.814**
Cost	-.195	.119	-.199	-1.641

* p<0.05; ** p<0.01

Results indicate statistical significance in the reduced model for millennials [Adjusted R^2 = .526; $F(4, 58) = 18.184$; $p < 0.001$]. Findings show that cost significantly affects the millennials (ages 23 – 34 years old) on their intentions to use blockchain. Ease of use variable moderately affects intention to use ($p<0.10$). Trust and facilitating conditions show no significant relationship. There is no evidence of serious multicollinearity in the model. Table 11 reports the millennial model.

TABLE 11. REDUCED MODEL – MILLENNIALS ONLY

Dependent Variable = Intention to Use (Age: 23 – 34) Adjusted R^2 = 0.526; $F(4, 58) = 18.184^{**}$				
	B	SE	Beta	T
Constant	.382	.539		.709
Ease of Use	.298	.155	.288	1.918
Trust	.146	.115	.144	1.272
Facilitating	.239	.149	.243	1.598
Cost	.294	.146	.223	2.006^{*}

* $p<0.05$, ** $p<0.01$

DISCUSSION

First, we hypothesize that the perceived ease of use will have a positive influence on the intention to use. At an objective level, the evidence gathered via data analysis does not support our hypothesis, though this hypothesis has the second highest strength of correlation. We attribute these results due to the fact that blockchain is a very new concept and has not yet become widely understood by general users. This adds a level of uncertainty of how to utilize blockchain technologies. We believe that this evidence likely will hold true for blockchain diffusion until newer applications of the framework become more prevalent and user friendly, such as how perceived usefulness and ease of use motivated the acceptance and dispersion of multimedia messaging service (MMS) (Lee et al., 2007) and other new technologies that have gained acceptance by general users.

Second, we hypothesize that trust will have a positive correlation on intention to use. The evidence from our models shows that there is no significant correlation between the two and that our data does not support this hypothesis. This is likely due to the lack of understanding of not only blockchain technology, but information security as a whole by the general population. While almost every aspect of modern society is dominated by technology, it can be safely assumed that

technical literacy is not common amongst the general population. While information protection, security, and technology trust are in the forefront of many individual's consciousness when dealing with technology, the technical attributes may not be fundamentally understood. We believe that since blockchain is an advanced and fairly new technology, many potential users cannot compare and contrast blockchain with current/standard network security characteristics. This sophomoric understanding may hinder the importance rating of blockchain, which would create results that we have found in our models. With a better education of the potential security offerings of blockchain, we believe that our tools can better predict usage, as seen in previous studies such as with Schaupp and Festa (2018). They examined the intention to use blockchain's applications to cryptocurrency, utilizing the theory of planned behavior. Using linear regression, they found that the intent to use blockchain is related to favorable attitudes, subjective norms and perceived behavioral control.

Third, we hypothesize that cost has a negative impact on the intention to use blockchain. One surprising finding from our data came in the form of this hypothesis. The data collected from our model shows that there is a weak correlation between the two variables, but it is still a positive factor. We attribute this finding to the fact that the sample participants may feel that though the cost of utilizing blockchain will be fairly large in the initial phases, the benefits may be worth it in the future. As with other variable items, we believe that as blockchain technology matures and grows, the general population will become more educated and more literate which will greatly improve the numbers.

Fourth, we hypothesize that facilitating conditions has a positive influence on intent to use. All of the hypotheses set forth by our group in one way or another deal with a direct concept such as trust, ease of use, and perceived usefulness. These factors are strong indicators of acceptance, but one downside they share is that those concepts are evaluated in isolation. We measured facilitating conditions in order to see how the readiness of an organization/individual from a readiness standpoint affects intent to use. Facilitating conditions seemed to affect trust and experience the most from the data we gathered from the sample. We believe this is in part due to the fact that if a user feels that their organization is not ready to adapt logistically, then they will not trust blockchain and its potential.

Lastly, we hypothesize that operational usefulness will have a positive influence on intention to use. The evidence gained in conducting our analysis provided inconclusive and mixed results. Our results show that the statistic proving correlation was at a relatively neutral level, thus barring our group from conclusively determining whether or not it supports or does not support our claim. Though we must conclude that the evidence is inconclusive due to standard statistical practice, we may assert that this variable plays the largest part in predicting intention to use outside of demographic factors due to it holding the highest statistical value ($p=0.652$). This aligns with previous studies in which a common construct, perceived usefulness, is often used to predict acceptance (Venkatesh et al., 2003). We attribute this to the basic theory of cost benefit analysis, in which even though an individual may not understand a certain technology, they will ultimately be open to the idea if it provides a level of inherent value to their lives.

Managerial Implications

Due to these results, there are several managerial implications that may be asserted. Most of our factors (variables) hold a neutral to negative contribution value to the acceptance and intent to use blockchain. This leads us to conclude that most end users will have a challenging time in embracing this new framework.

In order to accommodate the transition, respective organizations will face both direct and indirect costs stemming from change management controls: hiring subject matter experts, educational programs, HR specialists, pilot programs, etc. These measures are key to aiding in the implementation of blockchain throughout an organization. Initiatives like these must be accounted for when determining the cost to benefit ratio of adapting blockchain.

Our results shed light to a strategic path in which managers may exploit to increase the probability of blockchain acceptance and use. In the three reduced models, the results indicated that three demographic groups hold a slightly positive correlation of acceptance (males, ages 18-22, and ages 23-35). In the introduction of blockchain, high-level decision makers should exploit these three demographic groups. The targeted groups of individuals are the early adopters and innovators in which lead the way in acceptance and usage intention. Just like most technological advances, early adopters are the intricate group of people to initially pilot that technology. By introducing blockchain to these groups of individuals, managers should utilize them as a pilot/Beta participant pool, gaining significant constructive feedback on the new blockchain application. By doing so, the decision makers will gain critical insight which should be used to tweak that application of blockchain for the future use and innovation.

While this study provided a set of initial results that can aid managers in a current setting, this newly created tool presents itself as a valuable tool for future research. The development and understanding of blockchain is perpetually growing and in turn a greater number of professionals and students are becoming more knowledgeable in the technology. As this cycle progresses, our model will become more valuable since the primary roadblock in producing solidified data was a lack of general blockchain literacy.

CONCLUSION

This paper successfully applied the UTAUT model to evaluate users' acceptance of blockchain technology. This study performed multivariate statistical models to evaluate seven variables and the acceptance of blockchain technology. Despite the technological potential of blockchain adoption to revolutionize applications across industries, early adoption seems far from certain. Most of the variables held a neutral to negative contribution value to the acceptance and intention to use blockchain. However, the results showed that perceived operational usefulness has a positive influence on blockchain use, as well as perceived ease of use.

Future research can produce a greater level of accuracy with several enhancements. First, our participant pool was a combination of undergraduate students, MBA students, and an array of working professionals. Researchers should aim to distribute the questionnaire to a technically stronger audience such as IT professionals in the networking, finance, architecture, and infrastructure roles as well as graduate students in similar fields. Second, one problem many researchers face with anonymous questionnaires is the validity of the participant answers. Some data may be unreliable due to a lack of incentive or a general lack of integrity of item answers. Managers may take steps to improve on this, which may shift results. Third, the common trend while studying modern technologies such as blockchain is a lack of understanding. Survey participants may often feel required to answer each item with no base of understanding to guide their answer which can greatly affect the data. Managers can provide a brief educational session to provide some level of reference for the participants in order to make a better guided and valid response.

Due to our results, there are several managerial implications that may be considered. While the existing literature suggests that many functions across industries could benefit from the improved efficiencies of blockchain technology, many users may resist using blockchain applications or delay their implementation when they first become available. In order to accommodate the transition, managers may benefit from promoting the usefulness of the technology and operational utility to encourage employees to embrace it. Additionally, managers may benefit by demonstrating the effectiveness of the new technologies with younger individuals and IT professionals who could act as early adoption agents.

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CREATIVE PLACEMAKING: MARKETING COMMUNITIES AND SUCCESS METRICS

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ABSTRACT

Creative placemaking (CP) is a transformative revitalization initiative for cities, small and large. It's described as the coming together of various disparate community sectors to strategically shape the physical and social character of a town through the arts (Schupbach, 2012). Writers and researchers, Jane Jacobs, Anne Gadwa Nicodemus, and Ann Markusen, are the most notable names within the field of creative placemaking. Interested communities often collaborate with arts' organizations, like ArtPlace, Artscape, and the National Endowment for the Arts, to begin planning any art-centric community revitalization project. Successful creative placemaking communities reap the rewards of enhanced marketability through greater visibility and destination-location designation. Gordon Square Arts District in Cleveland, Ohio underwent such a process and, as a result, attracted new businesses, new residents, and tourist dollars; all helped stabilize the once-declining city. The purpose of this paper is to synthesize available materials and share replicable examples of successful creative placemaking through leveraged arts.

INTRODUCTION

The United States, since its inception, is associated with terms, like innovation, art, and entrepreneurship. Similarly, these words also describe the creative placemaking phenomenon. Ann Markusen of Economic Research Services and Anne Gadwa Nicodemus, Arts' Consultant, coined the term, 'creative placemaking' in late 2000. It is defined as "public, private, not-for-profit, and community sectors partnering to strategically shape the physical and social character of a neighborhood, town, tribe, city, or region around arts and cultural activities" (Schupbach, 2012). Simply put, creative placemaking or CP is the revitalization of a town or community through its culture, creativity, and arts. By leveraging and appreciating the creative and innovative individuals within a community, a once-stagnant city is able to grow and transform. A CP revitalization initiative involves the partnership of artists (all mediums), community leaders, local and state

governments, cultural and civic organizations, and educators. Essentially, creative placemaking "animates public and private spaces, rejuvenates structures and streetscapes, improves local business viability and public safety, and brings diverse people together to celebrate, inspire, and be inspired" (Schupbach, 2012). Ultimately, creative placemaking is about bringing a community together to further enhance its relationships, pride, economy, and opportunities.

LITERATURE REVIEW

Leading Writers and Researchers

Communities, specifically, "downtowns" are looking for ways to revitalize tired buildings, lackluster streetscapes, and dwindling spending/revenues. Jane Jacobs, now deceased, is credited with creating new, community-based approaches to city planning. She was *not* an urban planner, rather a writer whose keen observations and common sense led her to rally community leaders toward more place-based, community-centered urban planning. In other words, find the talented people in the community and get them involved in the revitalization. Construction companies renovate, carpenters detail, painters showcase art on building, spaces feature local artists, painters and sculptors design way-finding signs, and cafes emerge eclectic. Jacobs once said, "lively, diverse, intense cities contain the seeds of their own regeneration, with energy enough to carry over for problems and needs outside themselves" (Project for Public Spaces, 2010). As an urban writer and activist, Jacobs published works, such as *Downtown is for People* (1958) for Fortune Magazine and *Death and Life of Great American Cities (1961),* funded by the Rockefeller Foundation (Project for Public Spaces, 2010).

Ann Markusen is known for years of research, expertise, and consulting in the area of economic restructuring. Economist, Ann Markusen, has been conducting over a decade of research on creative placemaking and its successes. She focused on how individual CP projects developed the length of time the project took, and its overall economic impact on its community. Markusen is a Principal Partner of Markusen Economic Research Services (Markusen & Nicodemus, 2010).

Anne Gadwa Nicodemus, a Principal Partner at Metris Arts Consulting, is a leading voice on arts and community revitalization. She is an expert in the arts, focusing mainly on creative placemaking's cultural enhancement in communities. Metris Arts Consulting provides "data, analysis, and planning support to help communities strengthen the arts and help arts activity strengthen communities" (Markusen & Nicodemus, 2010). Nicodemus actively participates in conversations at conferences and universities, nationwide and internationally. Since 2012, Nicodemus has also held a spot on the nation's '50 most influential people in the nonprofit arts' chart (Metris Arts Consulting, 2018).

Leading Arts' Organizations

Arts organizations also play a vital role in the idea of CP. The National Endowment for the Arts (NEA), ArtPlace, Artscape, and many other organizations are dedicated to not only the art industry, but also how to bring that industry into a place where a wider breadth of people can appreciate it. The National Endowment for the Arts (NEA) is an independent federal agency created by Congress in 1965 to fund and support the American people through their ever-expanding creative ideas, imagination, and participation within the arts community. This organization collaborates with various agencies, local leaders, and philanthropic organizations to assist in providing learning, preserving the diverse American cultural heritage, and allowing the arts to be available to all communities across the nation (NEA, 2018a).

ArtPlace, created in 2011, has a ten-year collaboration with foundations, federal agencies, and financial institutions that strive to position arts and culture as a focal point in comprehensive community marketing and enhancement. The main and ongoing focus of ArtPlace is in creative placemaking, where they strive to strengthen the physical, social, and economic fabric of communities. ArtPlace works under a 50-cell matrix within which they believe the community planning and development field fall. Their goal is to reveal the unique value that culture and arts can add to each of the components within each cell. This matrix consists of government, commercial, nonprofit, civic, social and faith, and philanthropy stakeholders that can help within the agriculture and food, economic development, environment and open space, health and human services, housing, immigration and social justice, public safety, transportation, workforce development, and youth and education sectors. ArtPlace takes action in four different sectors: (1) national grant programs; (2) community development investments; (3) field-building strategies; and (4) continual research strategies. National grant programs help communities with creative placemaking projects, no matter how large or small the community. Community development investments occur within six place-based community planning and development organizations. Field building strategies assist with the connection and growth of field practitioners. Continual research strategies further knowledge, document, and carry out successful creative placemaking methods (ArtPlace America, 2015).

Artscape is a Toronto-based organization dedicated to sharing their creativity and placemaking experiences with communities everywhere (Artscape, 2017). This organization has over 30 years of experience within creative placemaking and research. Artscape has developed a mentorship and coaching program to assist organizations with their placemaking projects. By partaking in this program, an organization would work directly with senior specialist staff to expand capacity in areas such as: project vision development, community and stakeholder engagement and project governance, cross-sector partnership activation, business planning, marketing testing and feasibility analysis, funding, finance, planning and fiscal tools, and so much more (Artscape, 2017). Overall, Artscape is a wonderful tool for initiators to utilize when putting together a plan for a creative placemaking project. It is a great starting point for the economic and social revitalization of a community.

Arts' Contribution to the U.S. Economy

The United States boasts a robust creative economy. According to a report from the NEA, in 2015 the contribution of Arts and Cultural Production in the U.S. economy was $763.6 billion, which was 4.2 percent of the GDP. In 2015, consumer spending on admissions to performing arts events alone was $31.6 billion, $1 billion more than projected (NEA, 2018b).

In 2015, the arts and cultural sector contributed more to the economy than some other sectors, such as agriculture, transportation, and warehousing, exceeding some by more than $200 billion. The main participants of the arts and cultural sector are comprised of the following: broadcasting (excluding sports); motion picture industries; publishing (excluding internet); arts- related retail trade (such as art galleries, book stores, and music stores); performing arts companies and independent artists, writers, and performers; and creative advertising services. The annual growth rate for the arts and culture as a whole was 2.6 percent, which exceeded the growth rate of the nation's overall economy. The arts and cultural sector provided employment to 4.9 million wage and salary workers in 2015 and they collectively earned $372 billion (NEA, 2018b).

On the state-level, there are examples of the Arts adding value to a state's economy. In Illinois, graphic design, an art medium, contributed $589.5 million to its GSP, which is 69 percent above the national rate. In Rhode Island, handcrafted jewelry contributed $224 million, which was 33 times the national rate. In California alone, the value that arts' artisanship added to the state's economy topped $174 billion and employed over 700,000 people (NEA, 2018c). Jason Schupbach is a firm believer that CP is a *strategic* way to incorporate the arts into economic resurgence (2015).

Creative Placemaking through the Arts

Arts and culture can act as an economic, community, and environmental *change agent*, bringing economic and social well-being to a community. The arts can be leveraged for seven functions: overall aesthetics, cultural agglomeration, workforce investments, city building, amenities and livability, creative regions, and community development (Delconte, et. al, 2016).

Jamie Bennett, Executive Director of ArtPlace America, stated *four* necessary *strategies* for successful creative placemaking: (1) anchoring; (2) activating; (3) fixing; and (4) planning (ArtPlace, 2018).

> Anchoring - an arts organization plays the key role in developing the community identity and creating business. Restructuring a movie theatre or renovating a museum to attract local residents and tourists to spend time and money there is a good example of anchoring.
>
> Activating - the community brings visual and performing arts to public places, thereby making the place more attractive, active, and charming. A community organizing types of fairs, carnivals, or festivals to enhance the attractiveness of a location for example.

Fixing - re-visualizing the use of empty and eroded spaces through art and design, thus helping the community use these spaces for developing business opportunities.

Planning is to actively involve community stakeholders through the arts and seek their thoughts and advice in community design.

One particular outlet that can utilize these strategies best is the idea of *crowd mapping*. Essentially, the neighborhood residents are the main participants in the activity. Residents scour the neighborhood on foot, searching for existing creative and cultural assets. They also mark places and particular spots on the map where they identify potential for creative placemaking to occur. An advantage to crowd-mapping is the fact that one can observe how the community is moving around itself, where they are congregating, which streets have the most pedestrian traffic, and popular points of interest. Another positive that comes out of this is that community residents may feel empowered by participating in the activity, giving them a personal stake in future projects in their area. One of the great aspects of crowd mapping is how different humans are, meaning that they all perceive and see things differently. This allows for ideas and spaces, unseen by some, to be utilized by the masses. Leo Vazquez, Executive Director of the National Consortium for Creative Placemaking, had this to say:

> Crowd mapping is a great tool for creative placemaking, or even any kind of community development issue [because] it helps gather important data and crowdsource information about a place. When the groups bring their maps together into one large map, you can see a lot of new connections, opportunities, and gaps. People see this, and come up with even more ideas—it is a social activity that brings people together to learn from one another. (Tianga, 2017)

Art can act as a strong device to engage the community to develop social capital and create a sense of belonging. It can provide a platform to the neighboring people where they can interact with each other, exchange views and opinions, and develop skills and knowledge on various social and economic issues. It can remove the hindrance to active participation and create intense relationships and a strong network within the community. Arts-related activities transform the community into a great place where local, imaginative people can turn their creativity into a productive purpose. It changes the social and physical features of the community all while raising the economic activity that benefits the community at large (Prakash & Spinelli, 2016).

Creative Placemaking in Community Design and Revitalization

Creative placemaking helps in shaping community identity. It is not a mere restructuring of spaces, but fueling collective imagination and thinking, enhancing confidence, and marketing strengths by identifying local assets. CP seeks to bring macro-environmental change to a community (Prakash & Spinelli, 2016). CP focuses on creating people-centered and productive livelihoods through synergistic growth of the creative sector and small entrepreneurial businesses. It ensures social equity and better lives for the local inhabitants, provides an engrossing experience to tourists, and downtown businesses see an upward economic spike (Borrup, 2016). Steele stated the appearance of a small town with empty storefronts in the main street reveals the decay and diminishing state

of that town; the entrepreneurs would not foresee establishing a flourishing business there. Artists can make the place interesting to attract curious shoppers and travelers, thus increasing their attraction in local food, authentic experience, and the tranquility of life there (Steele, 2011).

A long-suffering, ailing, and deprived community is often burdened with the lack of job opportunities, public security, affordable housing, and equal social development. Comprehensive community development requires artists, development practitioners, and people from all sectors (economy, education, housing, public security, infrastructure and transportation sectors) to work in the same table and use their skills and proficiency towards community revitalization. Artists, with their elaborate imaginations and creative thinking, can resolve and redesign neighborhood revitalization in a more meaningful way to meet current and future needs of the inhabitants, as they remain in close contact with the local people (Hughes, 2016). CP can enhance mutual trust, respect, and social cohesion in the neighborhood. It can create buzz to attract the younger generation to become an integral part of the new development plan. Cultural programming, creative urban design, and public art have a strong power to draw attention from media, developers, and concerned authority; they can make the place safer and more vibrant, causing an increase in the amount of foot traffic, which can act as a catalyst to the progress of local businesses and the economic revitalization in that community (Zindell, 2017).

Community resurgence through strengthening the quality of its place is crucial to long-term sustainability. If community leaders and local inhabitants do not care about the place in general, then there is no positive outcome in trying to strengthen the community. The idea of sustainability is thrown by the wayside in situations like these where it is simply irresponsible to take the initiative to try to make a certain place a distinctive and socio-culturally developed entity that would erode the neighborhood in the long-run (Benfield, 2013).

Creative Placemaking Challenges

Uniting people under one umbrella to revitalize and develop the community is not easy. It requires collaboration, mutual support, and enthusiastic participation from all groups of people in the community. People differ in their culture, identity, political ideology, emotional belongingness etc. Therefore, connecting traditional practitioners of planning and community development with arts and cultural development practices is a challenge in implementing creative placemaking (Borrup, 2016). This coupling can be difficult to both forge and sustain. Partnerships require listening, accommodations, sharing of information, and teaching others skills. If these qualities are not present, then a sound partnership does not exist. It is also quite beneficial to know when to abandon unfruitful and conflict-ridden relationships that are hindering or halting progress (Markusen & Nicodemus, 2010).

Another aspect to be wary of is the idea of community skepticism, which can make it much harder to earn public endorsement and resources. It can be hard at times to portray creative placemaking in a positive manner to some people. The real problem is that a creative placemaking program for community development does not ensure the generation of equitable economic outcome across all members in the neighborhood. It might lead to income inequality, cultural conflicts, and

gentrification in the community (Borrup, 2016). This could include neighborhoods, organizations, and even art forms that, when left out could possibly complain of inequity, causing the opposition of public support.

One of the main challenges faced in CP is assembling and securing adequate financing to complete the project. Even the very successful Gordon Square Arts District in Cleveland had trouble finding the required funding. Due to the size of the three small organizations that were looking for funds for the project, it was much harder to secure anything. They are not large enough to run capital campaigns and do not have wealthy people working within the organizations. Rather, they had to look to the city, state, and federal governments, along with the foundations and organizations that have provided money for projects like these in the past. Even then, it took nearly a decade to secure all of the needed funding (Markusen & Nicodemus, 2010). Financing is a main inhibitor of the success of creative placemaking, and it takes hard work and persistence to push through over the course of many years.

Regulatory hurdles also pose a threat to the success or progress of a project. Zoning codes could forbid mixing residential and commercial use. In other cases, like that of Seattle's City of Music initiative, problems arose with public safety and anti-music ordinances. It can take time, thought, and capital to change these regulations to better suit the project at hand (Markusen & Nicodemus, 2010). Additionally, maintenance and sustainability need addressed. As hard as it is to finance these projects, it is even harder to *maintain funding* for maintenance and operating expenses in the time that follows completion. Murals, sculptures, and other arts projects need monitoring over time, to ensure proper maintenance to the façade to keep them attractive. The displacement of life-long residents and artists could be an unforeseen drawback of creative placemaking. Regenerating new place-identity and enhancing economic worth of the place would attract the real estate developers toward profitable businesses, which may increase the tax burden for the locals. The poor inhabitants, senior citizens, and local artists could feel they no longer belong in their community and it would result in their displacement (Borrup, 2016).

Faulk stated that the effectiveness of a community revitalization program can be measured by descriptive analysis like, the number of new jobs created, the number of people attending a festival, the spending generated, or the number of buildings rejuvenated (2006). The main problem is that measuring the effectiveness of revitalization programs often lacks proper data. Ashley (2015) stated that many cities have no explicit definition of downtown and they have not collected data as the outcome of revitalization programs. Therefore, data is often unavailable or difficult to collect for evaluating the growth and development of the downtown areas (Faulk, 2006). It does not help that these projects are not occurring in a controlled environment. There are many different things influencing the environment all at the same time, which just increases the difficulty of measuring much of anything.

Creative Placemaking Implementation

Although it may sound easy to paint the side of a building with a beautiful mural or host festivals within a community, CP takes a large amount of planning before events open. The whole process

begins with an initiator; this could be anyone ranging from a business owner who has an idea that could create more foot traffic, an artist who has a vision for a particular sector of the community, or even an organization searching for ways to raise awareness about a certain issue. The initial idea for a creative event or structure becomes the grounds for what could turn into something much bigger. Once an idea is established, the initiator needs to find others who are interested and willing to join and help build momentum to carry out the project. It can be very challenging to get a team together because some ideas may seem too large and can be daunting. It is a constant marketing effort to gain members of a project board that believe in the movement as much as the initiator. The established project board will then devise a plan and prospective results they wish to see from this project. The planning step could range from a few months all the way to a couple of years before any action is taken because becoming financially stable enough to complete the project could prove difficult. This group of planners is the most important part of the entire project, because they lay the foundation for the rest of the project. All of the hope, belief, ideas, and work come from this group of planners, so it is crucial that this group remain strong throughout the whole process. If one cog comes loose or out of place within the group, the whole project could fail.

Groups require financial assistance to see fully a project through to completion. This is where local and state governments, business owners, and grants can help. Most local governments do what they can to help because hearing about new ideas on ways communities can be livened up, generate more business, or gain more residents is something in the forefront of all local leaders' minds. Business owners who are seeking more business and growth within their communities also prove to be adequate providers in projects. Owners can supply space for events or functions to happen, some financial backing, and overall support to the project. Fundraising is another avenue of gaining enough financial backing to complete the project. Engaging civic leaders to pursue this route has proven effective, local chambers of commerce or Rotarians (NEA, 2018d).

In the past decade, grants have become more popular and have helped many communities. ArtPlace has currently invested over $100 million in community development through supporting artists. ArtPlace invested that money in 279 creative placemaking projects within 208 communities, alongside investing in six different community development organizations (ArtPlace, 2018). The National Endowment for the Arts realized the need for community revitalization and began a grant program alongside ArtPlace in 2011, 'Our Town.' Our Town is a grant program that requires at least two primary partners: a nonprofit organization and a local government entity. On top of that, one of the primary partners must be an arts or design cultural organization. Since the implementation of Our Town in 2011, 478 projects were supported totaling more than $36 million in all 50 states and the District of Columbia (NEA, 2018e). Design projects, arts engagement, and cultural planning projects constitute clear quality and character of their communities. Projects that fall into this segment could be awarded a grant ranging from $25,000 to $200,000 to help fund a project and must have the required partnership. Other grants are awarded to arts and design service organizations, university organizations, or industry organizations that provide technical assistance to the groups or organizations putting the place-based work into action. These organizations can receive $25,000 to $100,000 (NEA, 2018d). Although there are many other organizations that provide funding to put a project into action, a project plan that is well written and provides many details is required by all organizations before receiving any funds. After funding is acquired, a project can then move to the next step. A project can be a mural on the side of an older building in

the community, restoration of an industrial building that is transformed into an art gallery or creative space, or creation of a festival park with sculptures and space for festivities.

Anne Gadwa Nicodemus believes that, within smaller communities, it could be easier to have a successful creative placemaking project. She uses the example of Arnaudville, Louisiana. This small town did not necessarily have enough funding itself, but the community reached out to its parish tourism offices and the French Consulate in New Orleans and attempted to build bridges in order to receive resources and assistance to fulfill their project. Smaller communities are not always looking to just bring in crowds from outside, but rather serve the local residents. Local residents can help projects tremendously when they see the vision the initiator has and realize how it could benefit their community (Markusen & Nicodemus, 2010). Ann Markusen has stated that, "most good creative placemaking grounds itself on distinctive features and capabilities of the community, and service for the community" (Schupbach, 2012). Some projects, by design, can intend to help the community itself and this will appeal to local residents, business owners, and governments.

Creative Placemaking and Measuring Profitability

Gauging the 'success' of any project is dependent on what the end goals were as stated within the original plan. Did this project generate more traffic through the community? Did it bring together arts and everyday life? Did it move anyone in any kind of way? What were the economic effects on the community as a result of the project? These are all questions that can and should be asked, but the answers can only be evaluated as a success by the planning team.

When measuring the economic value to a community of investing in any asset, 'Return on Investment Percentage' (ROI %) is a measure used [ROI % = (Net Profit/Investment) 100]. The investment is generally plant, property, or equipment and is readily quantifiable. The ratio represents the relationship between the net profit generated from the investment and the original investment made. As a performance measure, the higher the ROI % the more favorably the investment is considered in relation to its cost. The ROI % as described here (as with other popular profitability metrics) is a short-term measure and not 'present value' adjusted. It also presents problems when trying to compare two or more investments of vastly varying size. However, with limitations in mind, community leaders can still utilize it as a benchmark to identify the efficiency of an investment or a group of different investments with significant confidence.

When assessing the profitability of any project, such as a large-scale 'creative placemaking' undertaking, the immediate benefit (sales or profits) from it is not clear. Whether the benefits are clear or not, project initiators, often marketers, are expected to provide direct evidence that, their expenditure-decisions contribute directly to the generation of profits. Traditionally, the ROI % is utilized when evaluating plant and equipment, as opposed to any marketing project, like a CP venture, that has always been considered an operational expenditure and expensed in the period in which it is incurred. In very recent decades, attempts to measure the profitability of investments in marketing have been made using the 'Return on Marketing Investment' (ROMI) and adapting the ROI % metric [ROMI = (net profit attributable to marketing project/marketing amount invested or

risked)] (Luo and Kumar, 2013). If the ROMI is positive, the marketing expenditures are generally considered justifiable. The term ROMI has become more acceptable since the publication of *Return on Marketing Investment* (Powell, Groves & Dimos, 2011).

Project Initiators have traditionally attempted to track a market's response to a 'project' in terms of sales and profits. However, there are still major concerns that sales and profits measured, in the short term, may not completely or fairly assess all aspects of marketing 'projects.' Projects, like CP initiatives, typically have a range of objectives, where the 'return' may not be reflected immediately in sales or profits. In the case of creative placement projects, the investment may aim to change the perception of an area of a city or town. This alone will take many months to determine success. In addition, even then, it is very difficult to quantify. Correctly measuring an investment in a CP project with many objectives would require complex formulas and algorithms to factor dozens of different variables. Of course, towns in need of revitalization may not have access to such sophisticated measures.

It would be the ideal situation to have solid data to support revitalization efforts. Expecting that one can measure and track all CP investments and potential quantifiable returns in the short and long-term may simply *not* be doable. A mid-ground may be to have a general idea of the project's success by attempting to measure and track as much as one can. One can add more measures as time progresses. The worst scenario is for these CP projects to go un-evaluated. One may 'think' the project has worked, but has no measurements in place for verification. Thinking of CP, like a business project, one would consider the marketing *expenditure* an 'expense' and not an 'investment,' and, therefore, not expected to 'return' anything to the community stakeholders. With ill-informed stakeholders today, that approach will certainly not garner more money in the future.

CASE STUDIES IN CREATIVE PLACEMAKING

Creative Entrepreneur Project: San Jose, California

The Silicon Valley is known as a great technology hub with its many technology-based museums and theatres, but San Jose wanted to make its downtown the city 'center.' The ZERO1 Biennial festival joins art and technology, while actively engaging local art organizations and artists to share their works and spaces (Schupbach, 2012). This event is designed to allow locals to view their location as arts-rich and diverse, rather than just "geeky." As a partnership between forty Silicon Valley arts organizations and ZERO1, the festival encompasses visual and performing arts, theater music, and public art installations offered to the public at little or no cost (Markusen & Nicodemus, 2010). Specifically, San José's ZERO1 directly addresses Silicon Valley's lopsided concentration of innovative scientists and engineers and underrepresentation of artists, seeking to link these creative occupations to spur new ideas and animate the city.

The festival, a CP project, has brought thousands of visitors to the area including artists, filmmakers, architects, engineers, designers, and many more from all over the world. In just the

first few years, ZERO1 Biennial was attracting 55,000 people and generating millions in local sales, all while creating jobs and furthering cultural industry businesses through projects based in both art and technology (Markusen & Nicodemus, 2014). This successful festival showcases how diverse and wonderful the Silicon Valley is and locals are reaping the financial rewards. These goal-oriented outcomes make the locals feel more involved with their own community.

Revolve Detroit: Detroit, Michigan

Revolve Detroit is an ArtPlace America-funded project which was undertaken in the year 2013. This program aimed to exhibit art in empty storefronts and underperforming public places on a stretch of Livernois Avenue, between Seven and Eight Mile Roads in Detroit. It intended to entirely change or creatively rethink the image and potential of Detroit's historic neighborhoods through the active engagement of art and entrepreneurship. The local residents had worked to fill up these storefronts with different types of pop-up shops and art installations. It was an effective approach to build a lively, attractive community hub where people could join and interact on a regular ongoing basis. It integrated arts into broader community revitalization and placemaking efforts. The program was viewed as such a success that many of the initial pop-up retailers have actually moved into a permanent retail space. These pop-up venues included an art studio, theater productions, design festivals, and an old-fashioned soda fountain shop. These programs supported the growth and development of local businesses, art, and culture, which strengthened the community and promoted social welfare (Project for Public Spaces, 2015). Besides Revolve Detroit, a multitude of other arts projects took place around a similar time. Festivals and celebrations such as the Detroit Design Festival, DLECTRICITY, and Art X-Detroit showcased many different forms of art that attracted thousands of people to Midtown Detroit to participate. Power House Productions reclaims land and houses for a small amount of money and transforms them into energy sources, cultural spaces, art installations, and community centers. Young Nation transformed an alley in Southwest Detroit into a permanent outdoor exhibition space for street art through the Alley Project (Rapson, 2014). Overall, many efforts are being taken to utilize the arts in Detroit to rebuild the city and attract newcomers.

Rebuilding the Center: Pendleton, South Carolina

Pendleton, South Carolina is listed on the National Register of Historic Places and is comprised of 3,000 residents. Like many other traditional towns, this small rural community was gradually decaying over the years as they faced a lack of investment. The adjacent properties of the historic town square were identified as 'disadvantaged' and the community was devoid of a strong focal point. A master plan had been designed to restructure the town square. The NEA had provided financial assistance to help the community become stronger and more alive. The Clemson Little Theater and five local organizations are working with landscape architects and urban designers to develop the plan. It incorporates designs for adjacent streetscape, public art, and performance places to raise cultural programs. Although the community is only 3,000 strong, Pendleton attracts around 50,000 visitors each year, making the project worthwhile (Benfield, 2013). Two projects

that fall under this downtown master plan are Mechanic Street and Exchange Street. Mechanic Street, a street directly parallel to Exchange Street, was a streetscape project that was completed last year. The project resulted in new sidewalks, crosswalks, street lighting, public seating, plantings and the repaving of the whole street. Exchange Street is a project currently in progress that will add a multitude of features such as more parking for motorcycles and disabled persons, a patio and other outside furniture, new stairs, and revamped crosswalks (Town of Pendleton, 2018).

Gordon Square Arts District: Cleveland, Ohio

The Gordon Square Arts District (GSAD) located in Cleveland, Ohio underwent a $30 million revitalization plan that was intended to generate over a half-a-billion in economic development in a Cleveland inner city neighborhood (Markusen & Nicodemus, 2014). The project was launched during the 2008-2009 recession under a collaborative effort from the Cleveland Public Theatre, Near West Theatre, and Detroit Shoreway Community Development Organization to collectively raise the money rather than go at it alone. The project was led by the community development corporation and funds were raised from philanthropic and public sources to renovate two theaters and to build a new home for a third. Approximately $9.5 million came from public sources with the following breakdown: $5.4 million from the city of Cleveland, $3.1 million from the state of Ohio, and $1 million from the federal government. The private funding came from a multitude of different foundations as well as individuals and corporations. This neighborhood beautification project was successfully completed in 2014 and added parking, created a Cleveland Public Theatre campus, formed the first Special Improvement District in Cleveland beyond downtown, reopened a long-shuttered Capitol Theatre, and built a fully accessible, passive-design theater for Near West Theater (Americans for the Arts, n.d.).

From this $30 million revitalization project, new residents were attracted, more than 75 new businesses found a home, and attendance at arts events throughout the year is upwards of roughly 100,000 (Litt, 2014). Population has stabilized, while the trend in the rest of the Cleveland area is on a downslope. The addition of hundreds of new housing units have been added with hundreds more to come. An influx of young professionals and young families have been seen as a result of this revitalization along with this area being named the number one housing market in Cleveland. This project took many years and a very strong core team to make it happen. The partnership therein was so successful because each partner was able to recognize their skills and resources and learn how those could be leveraged in terms of the project as a whole. Lead staff of each partner had to actually devote around a third of their time just to this project for as long as five years (Markusen & Nicodemus, 2014). The Gordon Square Arts District is now an economic cornerstone of Cleveland's West Side, creating new jobs for residents by its combination of housing and new business with arts at the core (Americans for the Arts, n.d.). What is now a nationally recognized model of how arts can increase economic development and job creation, many would consider the Gordon Square Arts District a very successful creative placemaking project. Even the nationally known Anne Markusen stated that Gordon Square was an example of how "most good creative placemaking grounds itself on the distinctive features and capabilities of the community, and service for the community." The National Endowment for the Arts former-Chairman Rocco Landsman had this to say: "I wish I could transplant what is happening in Gordon Square all around

the country, because not only are they engaging their own artists and their own artistic ethos, but they are transforming a neighborhood, a community (Litt, 2014).

Moving forward, Gordon Square organizations will work with Columbus urban design and MKSK, a planning firm, to formulate new ideas on how better to enrich the community. More specifically, the district has stated that the plan will "explore opportunities for physical, economic and artistic growth of the District, and connectivity with nearby areas" (Litt, 2014). Gordon Square was such a success that in 2013, Governor Kasich, alongside Mayor Jackson, announced the state would be giving $20 million to fund the Cleveland Waterfront District Plan that was announced back in 2002. When complete, the project will show a multitude of results. A plethora of new intersections, roads, walkways, and bike paths will be installed. There will be more waterfront and usable space available, along with new marinas, beaches, industrial property, and parkland. The potential for new and current neighborhood development will be higher than ever. In terms of sustainability and growth, there are increased opportunities across the board, especially regarding the ideas of economic growth and the opportunity to become a "green city" (City of Cleveland, 2006).

Gordon Square Arts District is now thriving, creating and maintaining initiatives that support the arts. Starting at the beginning of 2018, the Gordon Square Artist Residency program was created to support the artist and projects they look to fulfill. Four artists will be hosted in 2019, one each quarter. Looking to expand these types of programs, Gordon Square will host its first musician over the course of 10 weeks, who will provide free music programs and performances to the surrounding community. In fact, the musician, Ariel Clayton Karaś, was found saying that the work will be, "Impactful. Beautiful. Interesting. Always free. Always public" (Gordon Square Arts District, 2018).

CONCLUSION

Creative placemaking (CP) is by no means a cookie-cutter method for community revitalization and has no set way of working for every community. Rather, it is a process that takes great planning, time, and commitment. The end-results could be life changing for a CP community. Creative placemaking is a cultural shift in the way communities self-identify. CP creates communities that promote coming together, enjoyment, and fostering charm. No matter the community's size, whether large or small, creative placemaking can be implemented anywhere.

Typically, the CP process intends to build a distinctive downtown, which attracts new development and allows diverse socio-economic people to come downtown on evenings and weekends with family, friends, kids, and others to enjoy spending time and money. Community gatherings lead to increased community involvement and cooperation, new business formation, transformation of the image of the downtown to a livelier, family-friendly, and more welcoming place, which helps to retain current inhabitants and attract new residents. It acts as the center of gravity for the community and brings in diverse tourists who might never have traveled there (Delconte, Kline & Scavo, 2016). Creative placemaking makes a community vibrant, enhances its aesthetic beauty,

and rejuvenates the economic activities within, thus making the community a happy and great place to both work and reside.

IMPLICATIONS FOR COMMUNITIES

Communities that successfully implement creative placemaking reap benefits. These benefits include such things as increased foot traffic from both residents and tourists, new job creation, and a greater visibility, regionally, even nationally. The economic benefits for communities include rejuvenated sales in the CP-designated area and visibility as an attractive place for people to live and work, thus generating the need for new housing and business locations. In general, the money spent inside the CP city increases. By engaging artists of all mediums in the creation of CP-related projects, communities are transformed into almost unrecognizable new entities. Community pride is restored or burgeons.

Examples of successful creative placemaking projects, like those herein, exist. However, discovering and studying the projects that have fallen short of the predicted goals would be beneficial as well. Project managers can learn from both successful and unsuccessful CP ventures. Additionally, communities will need more dollars in the future and accountability is the key. In the end, project initiators must find better ways to evaluate CP ventures, not traditionally considered "investments." Whether funded through tax dollars, donations from the public or non-profit organizations, project managers must be good stewards of the funds and provide reliable evidence that the money was well spent.

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THE IMPACT OF SOCIO-ECONOMIC FACTORS AND REGIONAL DIFFERENCES ON ENTREPRENEURIAL ACTIVITIES IN VIETNAM

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ABSTRACT

To date there are limited studies on how special contextual factors in the external environment and how regional variety may trigger firms' entrepreneurial activities in emerging economies. Vietnam is an emerging economy and the Swiss Development Cooperation in Vietnam 2017-2020 reports that further research is required to underpin and improve county specific issues in handling entrepreneurial activities in Vietnam. To address this gap this paper aims to theoretically address the question of how socio-economic factors and regional differences may impact innovation and entrepreneurial activities in Vietnam. Referring to the German School of Thought and partly, the dynamic capabilities theory, this paper develops propositions that could be foundations for further studies in the development of region-specific entrepreneurial policy and programs, as well as future entrepreneurship studies.

INTRODUCTION

Previous studies have stressed the importance of studying the role of context variety (Wright and Hitt, 2017), and regional differences in entrepreneurship, as there is a link between regional performance, new firm formation, and entrepreneurial activities (Komlosi et al., 2015; Acs et al., 2012; Giannetti and Simanov, 2009). The extent and the magnitude of regional disparities such as the availability and accessibility of crucial infrastructure, the strength of socio-economic institutions, and the availability of quality human capital influence firms' entrepreneurial activities (Komlosi et al., 2015; Acs, et al., 2012). Previous research suggests to study the key contextual characteristics in the external environment, especially in emerging economies, to better underpin the nature of entrepreneurial activities (Giannetti and Simanov, 2009; Bruton, Ahlstrom and Obloj, 2008).

To date, there still are limited studies on how special contextual factors in the external environment and regional variety may trigger firms' pursuing entrepreneurial activities in emerging economies (Giannetti and Simanov, 2009; Bruton, Ahlstrom and Obloj, 2008). To address this gap, this paper aims to theoretically address the question of how socio-economic factors and regional variety may impact innovation and entrepreneurial activities in an emerging country. An emerging country, Vietnam, and the country's two contrasting regions (i.e. Lower South and Northern Mountainous regions) are provided as an example. Referring to the German School of Thought and partly, the

dynamic capabilities theory, this paper develops propositions on the impact of socio-economic factors in entrepreneurial activities in Vietnam with an aim to increase understanding on the nature of entrepreneurial activities and contribute to future entrepreneurship studies.

THEORETICAL FRAMEWORK

The framework of this paper is based mainly on the German School of Thought and partly the dynamic capabilities perspective. The German School of Thought associated with the work of Schumpeter is an economic thought that ties entrepreneurial activities to "innovation" requiring the entrepreneur to innovate in a number of areas such as new service, quality, process market, technologies, source of supplies and industry (Schumpeter, 1934). Therefore innovation involves seizing opportunities, adding new wealth-producing capacity and new value to existing resources, responding to process needs, to changes in industry structure, and to outside events. (Drucker, 1985; Gartner, 1990; Kuratko and Hodgetts, 1998; Bruyat and Julien, 2001). Through this innovative approach entrepreneurs introduce new goods, services and processes into the market that will compete with the existing goods, services and processes. As innovators, entrepreneurs engage in creative destruction, which disturbs market equilibrium, destroys existing demand and supply, and creates new demand and supply (Schumpeter, 1934). Therefore, entrepreneurs as innovators stimulate economic growth and wealth (Baumol, 1993). In sum, the German School of thought stresses the importance of innovation in entrepreneurial activities and the economic growth process (Schumpeter, 1934). The German School of Thought considers entrepreneurial activities as radical socioeconomic innovations that lead to new possibilities and opportunities. Searching for information about the external environment, industry, and the marketplace helps entrepreneurs to seize a need for improvement, to be aware of new possibilities and leads them to recognize more entrepreneurial opportunities in their industry, and thereby, increase entrepreneurial activities.

Dynamic capabilities refer to the ability of a firm's competencies and resources to keep up with the changing business environment. (Helfat *et al.*, 2007). Dynamic capabilities emphasize adapting and integrating behaviors. Dynamic capabilities involve a company's sensing opportunities and threats in the environment and then mobilizing and combining company resources to adapt certain capabilities to fit to their surroundings (Teece, 2007). Although it is difficult to fully measure the impact of dynamic capabilities and its relationship with many other factors in the external environment, (Li and Liu, 2014; Giniuniene and Jurksiene, 2015) this theory is still referenced as a framework in some studies for understanding companies' competitive advantages and firms' performance (Arend and Bromiley, 2009; Foss et al., 2011; Frank, Güttel, Kessler, 2017), family businesses (Chirico and Nordqvist, 2010; Wang, 2016) and entrepreneurial capability (Wilson and Martin, 2015) in changing environments. In order to build a longer-time competitive advantage companies engage in entrepreneurial activity through various renewing or transformation actions such as reformulation of existing resources, capabilities; development of new product functions, manufacturing, and new methods of distribution channels. Previous studies found a significant correlation between external environment dynamism and firms' dynamic capabilities in innovation and entrepreneurial activity (Frank et al., 2017; Wang, 2016; Teece, 2014; Lidija and Hisrich, 2014).

Dynamic capabilities develop in response to changing conditions in the external environment (Zahra, Sapienza, and Davidsson, 2006) and relate to the managerial perception of the situation of the changing environmental conditions (Ambrosini, Bowman, and Collier, 2009). Changing environmental conditions trigger firms into increased renewal activities and towards reconfiguring and adapting new dynamic capabilities. In sum, firm competencies are renewed to respond to shifts in the business environment and to cope with the market environment.

In this paper, based on these two theories, we intend to develop propositions that relate to entrepreneurial activities of firms in two contrasting regions in Vietnam and highlight potential opportunities and challenges in local entrepreneurial firms' embracing entrepreneurial innovation.

WHY VIETNAM?

Vietnam is an emerging economy. Recent research on the strategic planning of Vietnamese companies pointed out that companies in Vietnam rely more on traditional thinking than forecasting external environment (Hai, 2016). The Global Entrepreneurship Monitor Report (GEM) 2013 stated that focusing on innovation will be crucial for the future development path of Vietnamese companies (Amoros and Bosma, 2013). The GEM Report 2014 pointed out that the entrepreneurial activities in Vietnam have low orientations for innovation (Singer, Amoros, and Arreola, 2014). The 2014-2015 Global Competitiveness Report ranked Vietnamese companies' innovation as 142 out of 144 (where 1 is the best) (Schwab and Martin, 2014). The 2015-2016 Global Competitiveness Report ranked Vietnamese innovation environment as 3.2 out of 7 (where 7 is the best) (Schwab and Martin, 2015). The 2013-2016 Swiss Economic Cooperation and Development on Vietnam Country Strategy reported that further research is required to underpin and improve county specific issues in handling entrepreneurial activities in Vietnam. Previous research found that there are also socio-cultural variations between Northern and Southern regions of Vietnam (Nguyen and Mujtaba, 2013). In fact external environment plays an important role in firms' entrepreneurial activities (Komlosi *et al.,* 2015).

Therefore, based on the previous research and studies, this paper aims to address the possible influence of a few socio-economic factors in the external environment to highlight the innovative entrepreneurial activities in two regions of Vietnam.

Based on the Vietnam Provincial Competitiveness Index (2016) Vietnam has 63 provinces and is divided into several regions. Vietnam Provincial Competitiveness Index (2015) reports a significant difference between the Northern Mountainous region and the Lower South (Southeast and Mekong River Delta) regions with regard to ranking and provincial competitiveness index. According to the Vietnam Provincial Competitiveness Index (PCI) 2016, most provinces in the Northern Mountainous region have a lower ranking and provincial competitiveness index than most provinces in the Lower South (Southeast and Mekong River Delta) regions.

TABLE 1. PROVINCAL COMPETITIVENESS INDEX, RANK AND RATING FOR NORTHERN MOUNTAINOUS AND LOWER SOUTH REGIONS (VIETNAM COMPETITIVENESS INDEX, 2016)

		NORTHERN	Mountainous	Region	…..Lower	South	Regions
PCI	Rating	Province	PCI	Rank	Province	PCI	Rank
70-62.79	Excellent				Đồng Tháp Bình Dương Vĩnh Long TP HCM Cần Thơ	64.96 63.57 62.76 61.72 61.14	3 4 6 8 11
61.82-60.07	High				Bến Tre Kiên Giang Long An BRVT Tây Ninh Sóc Trăng	60.91 60.81 60.65 60.5 60.14 60.07	12 13 15 16 20 22
59.68-56.93	Mid-High				Bình Thuận Đồng Nai Hậu Giang An Giang Bạc Liêu Trà Vinh	58.2 58.32 57.82 57.79 57.66 57.64	32 34 37 38 41 42
56.80-56.21	Mid-Low	Hao Binh Dien Bien Lạng Sơn	56.8 56.48 56.29	52 53 55			
55.49-53.63	Low	Son La Hà Giang Bắc Kạn	55.49 55.4 54.6	58 59 60			
53.46-52.99	Very Low	Lai Chau Cao Bằng	53.46 52.99	62 63			

Because of the sharp contrast in terms of ranking and competitiveness index, in this paper we will review the socio-economic setting of the Lower South and Northern Mountainous regions of Vietnam to comment whether the socio-economic differences between these two regions relate to innovative entrepreneurial ventures. The difference of economic and social growth between South and North regions has created many benefits and challenges in terms of infrastructure development, government spending on infrastructure development, and socio-cultural differences in these regions (Nguyen and Mujtaba, 2013).

In sum, based on these specific report findings on Vietnam and the call to study the nature of entrepreneurial activities in emerging economies, we intend to highlight the role of socio-economic factors and regional variety on the nature of innovative entrepreneurial activities in Vietnam and possibly assist future entrepreneurship studies on the initiation and advancement of region specific policy and programs.

NORTHERN MOUNTAINOUS AND LOWER SOUTH REGIONS OF VIETNAM

A significant difference between the Northern Mountainous region and the Lower South (Southeast and Mekong River Delta) region of Vietnam is reported with regard to socio-cultural variations, economic condition, and the provincial competitiveness index (Tran, 2014; Tran, 2015). The Lower South region has the highest firm density: on average 6 firms/1000 persons, whereas the Northern Mountainous provinces with mountainous and rural areas have generally not been the location choice for entrepreneurs (Santarelli and Tran, 2013).

Northern Mountainous Region

This region has large areas of mountainous land and is located in the Northern Mountainous part of the country. The region has a high poverty rate (Tran, 2014; Tran, 2015). A reported 26% poverty rate is three times higher than the national average (Viet Nam News, 2015). The poverty rate of Dien Bien province is 38.6 percent and Son La province is 29.4 percent, compared to the national average at 9.8 percent (Tu, 2015). Northern Mountainous Vietnam includes Northwest and Northeast. Northwest has four provinces and the region's 17 districts are included in the extreme poor districts list of the Government's support program for sustainable poverty reduction (Tu, 2015). It is estimated that roughly 80 percent of the population's livelihoods are based on agriculture. The number of poor accounts for nearly 70% of the whole country (Viet Nam News, 2014). It was reported that harsh natural conditions, remote villages, cultivation, poor and limited access to infrastructure, transportation and resources, such as credit, play a role in the region's poverty rate (Viet Nam News, 2015; World Bank, 2012). The Northern Mountainous region also has difficulty in all aspects of economic and social dimensions (World Bank, 2012) including the lack of a quality workforce, a poor economic infrastructure, natural disasters, and reported to be the most difficult region of Vietnam in terms of attracting foreign investments (Tran, 2014; Tran, 2015; Viet Nam News, 2014).

The region has a low number of entrepreneurial firms (about 13 businesses per 1000 people) and has a high ratio of ethnic minorities compared to the rest of the county. Ethnic minority groups live mainly in rural areas. About 71 percent of ethnic minority groups live in the mainly mountainous regions of the country (Dang, 2010). About 73 percent of poor ethnic minorities who have limited access to education and substantial living services and infrastructure live in this region (Cuong, 2012; World Bank, 2012). The World Bank Report (2016) indicates ethnic minorities are one of the greatest challenges in the socioeconomic development of the country.

Ethnic minorities constitute half of the poor in the country and represent 15 percent of the population (World Bank, 2016). According to the Analysis of the 2014 Vietnam Household Living Standards Survey and UNICEF's 2014 Multiple Indicator Cluster Survey, ethnic minorities have a higher mortality rate (45% to 10%); lower sanitary conditions (50% to 90%), and lower rates of education (40% to 75%) compared to the ethnic majority (World Bank, 2016). Analysis of the National Institute of Nutrition Surveys and UNICEF's Multiple Indicator Cluster Survey 2014 indicate large gaps between the ethnic minority and the ethnic majority in child health and nutrition (World Bank, 2016). World Bank 2016 reports poor education (low ethnic minority enrollment at tertiary and upper-secondary levels), malnutrition, and low access to sanitation as major challenges for ethnic minorities.

The determinants of accessibility to formal credit and its effects on living standards from 2010 to 2012 were investigated in Northern Mountainous Vietnam and it was found that the level of education, owned farm land, residential area and poverty play a role in accessing credit (Tu, Viet and Loi, 2015). Especially high poverty and low economic growth rate constrain access to credit as residents in poor Northern Mountainous region usually lack collateral due to low assets value or production land (UNDP, 2012).

Lower South Region of Vietnam

For the purpose of this paper we will consider both Southeast and Mekong River Delta regions as the Lower South region. We believe zooming in on both regions provides a better overview on the situation of the Lower South region as a whole in terms of entrepreneurial companies' innovative attempts.

Southeast Vietnam

This region is in lowland southern Vietnam. It is the most developed region in Vietnam with a strong and stable economy, foreign direct investment, high GDP and advantageous natural conditions (Viet Nam News, 2014). With many production facilities of major multinational companies and many large industrial zones for both domestic and international enterprises, the region shows great potential for scientific and technological activities. The industrial production of the region is about 20% of the total value of Vietnam's industrial output (Viet Nam News, 2014). The country's biggest commercial city, Ho Chi Min City (HCMC), is in this region. HCMC has an estimated population of 6.2 million. Increasing urbanization and migration in the city generate the highest population density in the country with an average of 9,294 people per km2. Ho Chi Minh City is one fastest growing highly-urbanized cities in Vietnam largely contributing to the economic development of the country (Murayama et al., 2017). Economic activities are heavily concentrated in the Southeast region as HCMC is considered an important business hub and attracts the bulk of investments (Dang, 2012; Geertman, 2007). The city has high-tech enterprise and supporting services and attract lots of infrastructure development projects (Murayama *et al*., 2017); it also has 20 industrial parks and export-processing zones and plays a

crucial role in the national economy (Shira, D. 2013). The city's economy contributes about 20 percent to Vietnam's overall GDP, and also about 25 percent of its total industrial production (Shira, 2013).

Mekong Delta River region

The region has a population of over 17 million people, an advantageous geographical position, highly productive land, and a very strong socio-economic development (22% GDP) (Viet Nam News, 2014). The region produces about 45 percent of Vietnam's agricultural products and has a growing tourism industry (Wise and Pichel, 2013). It is reported that the growth of new start-ups and private enterprise initiations helped the growth of the economy and the GDP of the region and created employment opportunities (Lensink and Nam, 2008).

SOCIO-ECONOMIC FACTORS

The Global Entrepreneurship Monitor (GEM) 2014 Global Report introduced the term "national entrepreneurial framework" conditions. The GEM 2014 Report indicates that the economic structure of the different regions impact the quality of the entrepreneurial framework conditions and therefore directly affect the extent and quality of the entrepreneurial activity in that region (Singer, Amoros, and Arreola, 2014). The drivers of entrepreneurial activity differ from region to region and among countries due to the differences of national entrepreneurial framework conditions such as socio-economic factors among countries (GEM, 2014, Li and Zahra, 2012). National entrepreneurial framework conditions are positively related with the rate of entrepreneurial activity of that region (Zacharakis, Meyer, and DeCastro, 1999). Socio-economic factors are crucial parts of the national entrepreneurial framework conditions and largely impact the extent of inventive entrepreneurial activities of a society (Li and Zahra, 2012). In this paper we focus on a few select socio-economic factors that relate to the national entrepreneurial framework conditions such as government spending, economic freedom and financial freedom in Northern Mountainous and Lower South Vietnam.

Government Spending

Government spending, as a socio-economic indicator, includes government spending on infrastructure and human capital provisions. For the purpose of the paper we will mainly focus on the "government spending on infrastructure". The strength of infrastructure plays a crucial role in the extent of the entrepreneurial activities in countries as a well-developed infrastructure system could facilitate companies' entrepreneurial pursuits. Infrastructure development includes access to electricity, transportation, infrastructure projects, and a good communications network. The 2012 Global Competitiveness Report shows a poor rating for Vietnam's infrastructure (World Economic Forum, 2012). The World Economic Forum (2014-2015) indicated that inadequate infrastructure

is a major problem in the country's competitiveness. Global Competitiveness Report 2014-2015 ranked Vietnam's infrastructure 139 out of 144 (i.e. 1 is the best) and innovation as 142 out of 144 (i.e. 1 is the best). Due to the challenges in Vietnam's infrastructure, the government provides increasing efforts to sustain infrastructure projects and investment (Thanh and Dapice, 2015). Limited access or constraints to adequate and quality infrastructure hinders firms' entrepreneurial activities. Based on the 2009 World Bank Investment Climate Survey Vietnamese firms stated "transportation infrastructure" as one of the top three obstacles in the business sector (Triodos Facet, 2013). The World Economic Forum's Global Competitiveness Report 2010-2011 reported that access to financing and the inadequate infrastructure supply are amongst the top five constraints in doing business in Vietnam.

Infrastructure development is crucial for the enterprise development in a region. Yet compared to the Northern Mountainous region, the Lower South region has more infrastructure development projects planned and underway. For example, the Mekong Delta River region's development is revitalized by important infrastructure projects such as the six-plus years of Mekong Delta Transport Infrastructure Development Project, which commenced in 2010. The project is co-funded by the World Bank and Australia and aims to strengthen economic development, reduce poverty, and increase multimodal transport in the region. (Wise and Pichel, 2013). The Transport Development and Strategy Institute, under the Ministry of Transport, proposed 4 billion USD that includes numerous infrastructure development projects in the Mekong Delta region during the 2016-2020 period (Nhi, 2016).

Private sector investment in the Northern Mountainous region is still very small (less than 5%) due to "high risk and low economic efficiency", especially in agriculture (ILRI, 2014) . It is stated that many enterprises have decreased production in agriculture (ILRI, 2014). Although through various projects on rural infrastructure development in the Northern Mountainous region and increased government efforts, the mountainous terrains, remote locations and low number of population still pose challenges in investment on infrastructure development projects (ILRI, 2014).

The dynamic capabilities theory states that dynamic capabilities develop in response to changing conditions in the external environment. In the Lower South and Northern Mountainous regions the difference of the supply of infrastructure creates new demand and supply curves. This in turn impacts the extent of dynamic capabilities of the entrepreneurial companies in those regions. Dynamic capabilities are required for new ideas and resources for entrepreneurial innovations. Yet the limited access to a quality infrastructure of the firms in the Northern Mountainous region may pose challenges for entrepreneurial firms' dynamic capabilities in accessing markets and coming up with innovative entrepreneurial ideas. Also regions with high population density and vast infrastructure projects, such as the Lower South region, may have higher rates of entrepreneurial start-ups than rural areas such as the Northern Mountainous region due to better access to large and differentiated markets for production factors such as capital, labor and services (Santarelli and Tran, 2013). The Lower South region has a unique start-up culture, great value, and a solid entrepreneur community due to easier access to well-developed infrastructure and credit. Moreover, agglomeration economies may favor firms' access to the knowledge spillovers of both academic institutions and other firms located in the region. The concentration of firms in agglomerated locations may increase due to the pooled market for high-skilled labors; non-

pecuniary transactions, or production of non-tradable specialized inputs; and informational spillovers (Santarelli and Tran, 2013).

On the other hand, inadequate supply of infrastructure in the Northern Mountainous region may create an obstacle in firms' dynamic capabilities, such as access to input and technology, access to markets, capacity building, and thereby hinder Vietnamese firms' entrepreneurial attempts for innovation. In sum, Northern Mountainous Vietnamese firms' perceived difficulty accessing an adequate infrastructure may hinder firms' handling ambiguous and adverse circumstances in their entrepreneurial attempts. Therefore, firms may incline towards embracing entrepreneurial innovations in the Lower South region more than that of the Northern Mountainous region.

Proposition 1A.

Government spending on infrastructure, a socio-economic factor, plays a role in the difference of Vietnamese companies' entrepreneurial attempts in Lower South and Northern Mountainous regions.

Proposition 1B.

Government spending on infrastructure, a socio-economic factor, plays a role in the difference of Vietnamese companies' inclination for embracing innovations in Lower South and Northern Mountainous regions.

Economic Freedom

Economic freedom refers to the freedom to participate in markets, secure and protect individual's property rights and voluntary exchange in markets. The Global Economy Index includes four broad categories for the economic freedom: Rule of Law refers to property right and freedom of corruption; Government size refers to fiscal freedom and government spending; Regulatory Efficiency refers to business freedom, labor freedom, monetary freedom; Open Markets refers to trade, investment and financial freedom (Index of Economic Freedom, 2015). Economic freedom is highly correlated with the level of the entrepreneurial activities in a country (Wiseman and Young, 2013) as the extent of economic freedom promotes and facilitates the growth of entrepreneurial dynamism in a country (Miller and Kim, 2015).

The 2015 Global Index of Economic Freedom reports Vietnam's economic freedom score as 51.7 out of 100 and ranks its economy as 32nd out of 42 countries in the Asia–Pacific region (Global Economy Index, 2015; Index of Economic Freedom, 2015). According to the 2015 Economic Freedom Index the overall score of Vietnamese economic freedom (that includes government and monetary spending) is 60.4 out of 100 with a regional average (58.5 out of 100). Global Property

Right Index 2015 ranks Vietnamese economic freedom in "mostly unfree" category addressing the rank as the great level of government interference in the economy and less economic freedom.

The Vietnam Provincial Competitiveness Index (PCI) 2016 ranked the Northern Mountainous region districts "very low" (Lai Chau and Cao Bằng); "low" (Son La, Hà Giang and Bắc Kạn) and "mid low" (Hoa Binh, Dien Bien and Lạng Sơn) while in the Lower South regions it ranked the provinces Dong Thap, Bình Dương, Vĩnh Long, TP HCM and Cần Thơ "excellent", Bến Tre, Kiên Giang, Long An, BRVT, Tây Ninh and Sóc Trăng "high", Bình Thuận, Đồng Nai, Hậu Giang, An Giang, Bạc Liêu and Trà Vinh "midhigh". PCI 2014 Report indicates that the business competitiveness index in the lower south region outperformed that of the northern mountainous region. PCI (2014) competitiveness index reports that socio-economic development in the lower south region, such as in Dong Thap, creates favorable investment conditions for the innovative and dynamic businesses and is much valued by local enterprises. The PCI 2014 report also highlights HCMC in the Southeast region as a lucrative business hub for the local and foreign investors due to the operational efficiency in government operations and developments in the city. The districts that are ranked "high" are also listed among the areas that have the best governance and the places that attract foreign investment.

Based on the previous reports on the economic condition of the Northern Mountainous and Lower South regions of Vietnam, the perceived difficulty in accessing economic freedom regarding trade, monetary, labor, etc. may hinder firms' handling entrepreneurial attempts in Northern Mountainous region compared to the Lower South region.

Proposition 2A.

Economic freedom, a socio-economic factor, plays a role in the difference of Vietnamese companies' inclination for embracing innovations in Lower South and Northern Mountainous regions.

Proposition#2B.

Economic freedom, a socio-economic factor, plays a role in the difference of Vietnamese companies' inclination for embracing innovations in Lower South and Northern Mountainous regions.

Financial Freedom

Financial freedom is defined as access to an unrestricted banking environment. The Global Entrepreneurship Monitor (2013) focused on the need for financial resources to sustain entrepreneurial activities. Access to finance is a crucial factor for an entrepreneurial venture (Drori,

Honig, and Wright, 2009). Heavily regulated banks or the lack of adequate credit or access to credit or could pose an obstacle for entrepreneurial activities. Strong socio-economic institutional structure and access to credit and necessary financial resources are highly correlated to the level of innovation in that country (Huang and Xu, 1999). According to the Swiss Economic Cooperation and Development on Vietnam Country Strategy 2013-2016 "insufficient investments, the lack of sustainable financing of critical urban infrastructure" (p.10) and "maintaining a stable macroeconomic environment, building up strong institutions and promoting sound economic framework conditions for private sector development" (p. 14) are reported as some of the challenges for Vietnamese companies. Limited access to credit is among the major constraints that could hinder entrepreneurial activities in Vietnam (GEM 2013 Report, Triodos Facet, 2013).

Although the Vietnamese business sector considers regulations, accessing credit, bureaucracy and cost of doing business as among the major obstacles in their entrepreneurial activities (Tran and Santarelli, 2013) based on the Vietnam Provincial Competitiveness Index (PCI) 2015, provinces in the Northern Mountainous region have a lower ranking than provinces in Lower South region in business support; transparency and access to information; and land access to security and tenure.

TABLE 2. PROVINCE; LAND ACCESS TO SECURITY AND TENURE, TRANSPERENCY AND ACCESS TO INFORMATION, BUSINESS SUPPORT AND PCI INDEX (VIETNAM COMPETITIVENESS INDEX, 2016)

REGION	Province	Land Access to security and tenure	Transparency and access to information	Business support	PCI
Lower South	Đồng Tháp	6.57	6.92	5.49	64.96
Lower South	Bình Dương	6.52	6.99	5.57	63.57
Lower South	Vĩnh Long	6.99	6.57	5.79	62.76
Lower South	TP HCM	5.45	6.5	6.82	61.72
Lower South	Cần Thơ	6.22	6.02	5.76	61.14
Northern Mountainous	Lai Chau	5.22	6.13	4.55	53.46
Northern Mountainous	Cao Bằng	4.78	5.52	5.36	52.99

(Transparency is defined as a "business environment contributes to increased confidence in the effectiveness of administration by the state's management agencies, improving the efficiency of resource allocation by businesses while increasing their equality of opportunity" in the Vietnam Provincial Competitiveness Index (PCI) Full Report 2014 (pp. 49).

The perceived difficulty in accessing credit and financial freedom in the external environment may hamper firms' dynamic capabilities in stimulating entrepreneurial initiatives. Entrepreneurial innovations usually require high and risky transaction costs. The perceived difficulty in accessing to financial credit may hinder some firms' handling unpredicted changes or ambiguous and adverse

circumstances in their entrepreneurial attempts in the Northern Mountainous region compared to the Lower South region.

Proposition 3A

Financial freedom, a socio-economic factor, plays a role in the difference of Vietnamese companies' inclination for embracing innovations in the Lower South and Northern Mountainous regions.

Proposition 3B

Financial freedom, a socio-economic factor, plays a role in the difference of Vietnamese companies' inclination for embracing innovations in the Lower South and Northern Mountainous regions.

CONCLUSIONS

In this study we provided an overview of the Lower South and Northern Mountainous regions of Vietnam and highlighted some possible unique challenges in these regions that could play a role in firms' entrepreneurial pursuits. We also developed propositions that could be foundations for further studies in the development of region specific entrepreneurial policy and programs. We think that as Vietnam integrates into the global economy, region specific entrepreneurial studies could assist Vietnamese firms' entrepreneurial attempts in accessing to necessary resources and help reducing the obstacles arising from international economic integration.

The development of infrastructure in the rural areas of Vietnam has been slow and this is one reason rural areas are less attractive for investment. Income diversification activities are also limited with the majority of rural households relying on agriculture. Social services (such as education, medical treatment, and insurance), although available, are still poorly provided in rural areas. As noted above, low incomes, low quality of social services (such as healthcare and education) and a lack of access to markets contribute to a reduction in the welfare of the rural population in Vietnam, and this is more evident in the Northern Mountainous region.

There are other region specific suggestions that might encourage entrepreneurship entrepreneurial innovation in the Northern Mountainous region (Nguyen and Mujtaba, 2013; Ozgen and Minsky, 2007). Previous research (e.g., Iakovleva *et al.*, 2014) pointed out that the most important perceived barriers to starting one's own business were lack of funds and lack of skills. For example, the government might want to support education and business training, technical assistance, and strategic planning strategies to increase the level and growth of human capital in the rural regions. Another idea is to promote the formation of small business development centers to support

entrepreneurship and innovation. It might also be worthwhile to address capital financing, access to venture capital, access to debt and equity capital. Another initiative could include offering incentives for starting entrepreneurial ventures in the Northern Mountainous region.

Also in responding to changing demands and market opportunities and thereby increasing firms' innovative activities firms' external networking with various stakeholders such as customers, suppliers ect. (Asmawi and Mohan, 2011; Duygulu *et al*., 2015) and collaboration with external entities such as universities and public support mechanisms (Duygulu *et al*., 2015) could play an important role. The extent of companies' cooperation from different institutions in the external environment or their access to social networks could vary in Northern Mountainous and lower south regions. Therefore another future research path could be to explore the relationship between the innovative entrepreneurial activities of firms and their access to external support mechanisms and collaboration opportunities in these two regions.

In a future entrepreneurial research we also suggest looking at other socio-economic indicators such as the extent of regulation and legislations, investment and trade freedom, labor freedom, fiscal freedom, the literacy rate, etc. that could each play a crucial role in Vietnamese firms' entrepreneurial attempts.

In conclusion we suggest that regional differences and context variety could play an important role in firms' entrepreneurial activities. Thus, concurring with previous studies (Wright and Hitt, 2017; Komlosi, *et al.*, 2015) we suggest that it could be worthwhile to research various contexts and regional differences in emerging countries and thereby assist region specific entrepreneurial programs and the development and strengthening of new theories in entrepreneurship studies.

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