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University of Southampton

Faculty of Social Sciences

Business School

**Digital Platforms and Entrepreneurship in Trinidad and Tobago:
An Examination of their Relationships Using
Technology Affordances and Constraints**

by

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Thesis for the degree of Doctor of Philosophy in Web Science

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Abstract

Faculty of Social Sciences

Business School

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Digital Platforms and Entrepreneurship in Trinidad and Tobago:

An Examination of their Relationships

Using Technology Affordances and Constraints

by Keisha Candice Taylor

Digital platforms are used by entrepreneurs globally and have changed the way entrepreneurs interact. However, while digital platforms are expected to change the processes and practices of entrepreneurship their influence on entrepreneurship is insufficiently examined. When influence is considered, culture and social norms are usually ignored, and it is assumed that digital technology can and should be used to overcome barriers entrepreneurs face. Existing research also tends to focus on developed countries and high-growth entrepreneurship. This leaves a gap in our understanding of developing countries and low-growth entrepreneurship, which represents most entrepreneurial activity. This study asks questions about the influence of digital platforms on entrepreneurship in the context of Trinidad and Tobago, a high-income, developing Caribbean country. This multicultural, twin-island state has low levels of high-growth entrepreneurship and is attempting to diversify its oil and gas economy through supporting entrepreneurship.

The research takes an interdisciplinary, multi-method, qualitative approach that includes a pilot study, interviews, focus groups and secondary data. It finds that when entrepreneurs use digital platforms, the benefits accrued are in tension with platform rules that continuously change creating uncertainty, unpredictability and risk. Additionally, culture, social norms and historical structures may limit the potential for entrepreneurs to use digital platforms or capitalise on their benefits. This research contributes to the Technology Affordances and Constraints Theory (TACT) literature, which informs the research method. TACT is used to illustrate how affordances and constraints co-exist and intertwine with societal norms, cultures and structures to influence entrepreneurial activities and outcomes. Additionally, the research adopts the concept of entrepreneurial ecosystem (EE) to provide new insight into the extent to which digital platforms may influence an informal and fragmented EE.

This study provides recommendations to the Trinidad and Tobago government which should help them to understand the influence of digital platforms, that simultaneously aid and mitigate their efforts to support entrepreneurship. For entrepreneurs, it provides recommendations that support a deeper understanding of digital platform use.

Table of Contents

Table of Contents	i
Table of Tables	xi
Table of Figures	xiii
Research Thesis: Declaration of Authorship.....	xv
Acknowledgements.....	xvii
Chapter 1 Introduction	1
1.1 Research Summary	1
1.2 Entrepreneurship	3
1.3 Entrepreneurial Ecosystem (EE).....	4
1.4 Technology Affordances and Constraints and Constraints Theory (TACT)	5
1.5 Research Aim and Objectives	6
1.5.1 Research Aim.....	6
1.5.2 Objectives.....	6
1.5.3 Research Questions	6
1.6 Methodology.....	7
1.7 Research Contributions	7
1.8 Thesis Structure.....	9
Chapter 2 Literature Review: Entrepreneurship, EEs, and Digital Platforms	11
2.1 Chapter Overview.....	11
2.2 The History of Entrepreneurship and Main influences.....	11
2.3 Digital Entrepreneurs, E-entrepreneur, Netentrepreneurs	15
2.3.1 Digital Entrepreneur	15
2.3.2 E-Entrepreneur or Netentrepreneur	16
2.3.3 The Influence of Digital Platforms on Entrepreneurship.....	17
2.3.4 Towards a More Thorough Understanding of Digital Entrepreneurship	17
2.4 Entrepreneurial Ecosystems (EE)	19
2.4.1 An EE Model	20
2.4.2 The Digital in EE	23
2.5 Digital Platforms.....	24

Table of Contents

2.5.1	Varied Perspectives on Digital Platforms	24
2.6	Four (4) Relevant Defining Characteristics of Digital Platforms	25
2.6.1	Digital Platforms as Intermediaries	26
2.6.2	Network Externalities or Network Effects	26
2.6.3	User Interaction and User Data	27
2.6.4	Generative Socio-Technical Systems	28
2.7	Platform Ecosystem	28
2.8	Chapter Summary	29
Chapter 3	Literature Review: TACT	31
3.1	Chapter Introduction	31
3.2	The Rationale for Using TACT	31
3.3	A Brief History of Affordances	32
3.4	An Explication of Affordances	33
3.5	Identified Technology Affordances and Constraints	34
3.6	Seven (7) Principles of TACT - Application to Research Method	35
3.6.1	Principle 1: Focus on the Relationship	36
3.6.2	Principle 2: Recognition of Duality and Interconnectivity of Affordances	36
3.6.3	Principle 3: Use of Verbs	36
3.6.4	Principle 4: Goal-orientation	37
3.6.5	Principle 5: Recognition of Unintended Consequences	37
3.6.6	Principle 6: Potential/Perceived Affordances	37
3.6.7	Principle 7: Technology as Providing Rules and Resources	37
3.7	Identified Affordances and Constraints of Digital Platforms	38
3.7.1	Easy Access	38
3.7.2	Storing/Archiving/Retrieving	38
3.7.3	Increased Visibility	39
3.7.4	Identifiability and Levels of Control	39
3.7.5	Context Collapse, Invisible Audiences, and Risk	40
3.7.6	Communication and Collaboration	40
3.7.7	Positioning of Self in Relation to Others	41
3.7.8	Psychological Implications and Social Influences	41

3.8	Limitations of Affordances and Constraints	41
3.9	TACT: Research on Entrepreneurship/E-commerce	42
3.9.1	Crowdfunding Platform	42
3.9.2	Crowdsourcing Platform	43
3.9.3	Online Social Commerce – The Chinese Context	43
3.9.4	Entrepreneurship through E-commerce in Rural Areas – Chinese Context	44
3.9.5	Gig-Economy Affordances and Constraints	44
3.9.6	Social Affordances and Trust.....	45
3.9.7	Collaboration with Businesses Through Social Media Platforms.....	45
3.10	Synthesis of Affordances and Constraints.....	45
3.11	Chapter Summary	56
Chapter 4	Entrepreneurship in Trinidad and Tobago (T&T)	57
4.1	Chapter Introduction.....	57
4.2	Social, Economic, and Digital Technology Environment	57
4.2.1	Socioeconomic environment	57
4.2.2	Information Communications Technology (ICT) Infrastructure.....	58
4.3	Research on Entrepreneurship in T&T	59
4.3.1	Literature Search	59
4.3.2	The Creative Sector.....	61
4.3.3	Relationship of Ethnicity/Family Ties to Entrepreneurship	62
4.3.4	Government Support and Micro-entrepreneurship	62
4.3.5	Entrepreneurial Attitude Orientation (EAO).....	63
4.3.6	Global Entrepreneurship Monitor T&T.....	64
4.3.7	Use of Digital Platforms for Entrepreneurship in T&T.....	67
4.4	Chapter Summary	69
Chapter 5	Methodology.....	71
5.1	Chapter Introduction.....	71
5.2	Epistemological Underpinnings	71
5.3	Literature Informed Methodology	72
5.4	Research Aim	73

Table of Contents

5.5	Objectives	73
5.6	Research Questions.....	73
5.7	Research Design.....	73
5.7.1	A Multi-Qualitative Method	73
5.8	Ensuring Validity	76
5.9	Sampling	76
5.10	Participant Information.....	78
5.11	Type of Entrepreneurs (Interviews).....	79
5.12	Type of Businesses Represented	81
5.13	Type of Participants (Focus Groups)	83
5.14	Stakeholders	84
5.14.1	Interviews	86
5.14.2	Focus Groups.....	87
5.14.3	Secondary Data	88
5.14.4	Reports from Entrepreneur Stakeholders and Media	88
5.14.5	Platform Data	88
5.15	Data Analysis.....	90
5.15.1	Finalising Analysis for Presentation	92
5.16	Chapter Summary	93
Chapter 6	Discussion: Entrepreneur Interaction Using Digital Platforms	95
6.1	Chapter Introduction.....	95
6.2	Entrepreneur Interaction using Digital platforms	95
6.2.1	Intermingling of Online and Offline Interaction	96
6.2.2	Mirroring Culture	100
6.2.3	Trial and Error	104
6.2.4	Psychological Manipulation and Distraction	107
6.2.5	Trickery	109
6.2.6	Balancing Personal and Professional Information, Relationships and Spaces 113	
6.3	Chapter Summary	116

Chapter 7	Influence of Digital Platforms on EE in T&T	117
7.1	Chapter Introduction	117
7.2	An Overview of the Complex, Informal and Fragmented EE in T&T and Reflections on the Limitations of Digital Platform Influence	117
7.2.1	Perception of EE: Siloed, Informal, Fragmented and Unstructured	117
7.2.2	Perception of the EE: Primary/Secondary Education and Culture Unsupportive	119
7.2.3	Perception of EE: Easy to Start a Business, Difficult to Finance Growth	121
7.2.4	Perception of EE: Government Support and Entrepreneurs' Ambitions	123
7.3	Influence of Digital Platforms on the EE in T&T	125
7.3.1	Online Learning	127
7.3.2	Copying	128
7.3.3	Customer Data and Targeted Advertising	132
7.3.4	Supplies Intermediary	135
7.3.5	Encouraging Micro-Entrepreneurship and New Business Ventures	138
7.4	Chapter Summary	141
Chapter 8	Affordances and Constraints	143
8.1	Chapter Introduction	143
8.2	Affordances	143
8.2.1	Collaboration	144
8.2.2	Accessibility and Immediacy	147
8.2.3	Flexibility	150
8.2.4	Local and International Visibility	152
8.2.5	Supporting Learning	157
8.3	Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	161
8.3.1	Lack of Control (Platforms)	164
8.3.2	Lack of Control (Users)	171
8.3.3	Lack of Control (Copying)	172
8.3.4	Time Consuming (Information Overload)	177
8.4	Constraints in the EE	179

Table of Contents

8.4.1	Online Payment Limitations.....	180
8.4.2	Inability to Ship and Transport.....	183
8.4.3	Not Buying Local Things Online	186
8.4.4	Criminal and Corrupt Activity	189
8.4.5	Lack of Training/Expertise Required	190
8.5	Discussion of Affordances and Constraints: Coexistent, Overlapping and Intertwined	192
8.6	Chapter Summary	196
Chapter 9	Discussion of Theoretical Implications and Recommendations	197
9.1	Theoretical implications	197
9.1.1	A TACT Template for Research on Digital Technology Interaction.....	197
9.1.2	EEs as Siloed, Informal, Fragmented and Unstructured	199
9.1.3	Importance of Other Actors in the EE	199
9.1.4	International Influences on EEs	200
9.1.5	Influence of Psychological Manipulation and Distraction.....	200
9.1.6	Skills: Adaptability and Creativity.....	200
9.2	Entrepreneur Recommendations	201
9.2.1	Dealing with Copying.....	201
9.2.2	T&T Branding	201
9.2.3	Entrepreneurs Working Together to Lobby Government.....	202
9.2.4	Finding Ways for Offline Engagement.....	202
9.2.5	Time Management.....	202
9.2.6	Opportunities for Local Platforms.....	202
9.2.7	Managing Information Storage.....	203
9.2.8	Supplement Learning Online	203
9.2.9	Leveraging International Connections and Networks.....	203
9.3	Policy Recommendations	204
9.3.1	Current Issues and Limitations in Developing E-commerce Transactions Locally	204
9.3.2	Making Shipping Overseas Reliable and Cheaper.....	205
9.3.3	Support from Digital Platforms for Diversification	205

9.3.4 Gender and Age Balance Amongst Entrepreneur Stakeholders	205
9.3.5 Public Relations Campaign: Supporting Positive Representation of T&T	206
9.3.6 Support with Intellectual Property Rights	206
9.3.7 Encouraging Links to Diaspora and Caribbean Networks.....	206
9.3.8 Support for a Venture Capitalist (VC) or Business Angel Network and Incentives for Funding Entrepreneurs	207
9.3.9 International Mentorship	207
9.3.10 Support for Creativity, Entrepreneurship and Digital Literacy in Education .	208
Chapter 10 Conclusion, Limitations, and Suggestions for Future Research	209
10.1 Conclusion.....	209
10.2 Limitations	213
10.2.1 Inability to Verify Stage of Business	213
10.2.2 Limited Information on Use of Gig-Economy Platforms and Need for more Data on the use of Local Digital Platforms.....	213
10.2.3 More Focus Groups and Location-Based Information	213
10.2.4 Stakeholder Personal Perceptions	214
10.3 Potential for Future Research	214
10.3.1 The Importance of Offline Networks in Using Digital Platforms.....	214
10.3.2 Further Research on Gig Economy Platforms and Local Platforms	215
10.3.3 Exploration of Family and Funding and Ethnicity Influencing Entrepreneurship 215	
10.3.4 Including Online Observation in Qualitative Research.....	215
10.3.5 Country Comparisons	216
10.3.6 Research into EE Informality and Silos	216
10.3.7 International Influences on the EE	216
10.3.8 Insights from Born Global and International Entrepreneurship Research	217
10.3.9 Further Interdisciplinary Research (Marketing, Psychology, and Performativity)	217
10.3.10 Research on Entrepreneurs Using Digital Platforms in the Creative Sector 217	
10.3.11 Copyright and Replicative Entrepreneurship	218
10.3.12 Trust	218

Table of Contents

10.4 Concluding Remarks.....	218
Appendix A An Explication of the Affordances Concept.....	221
Appendix B Summary of Technology Affordances	227
Appendix C Summary of Constraints.....	241
Appendix D Pilot Interview Questions.....	245
Appendix E Ergos Submission Questionnaire.....	247
Appendix F Ergos Application Form	249
Appendix G Ergos Risk Assessment	259
Appendix H Participant Information Sheet (Interviews and Focus Groups)	263
Appendix I Sample Letter to Company.....	265
Appendix J Sample Letter to Organisations/Institutions.....	267
Appendix K Participant Information Sheet (Stakeholders)	269
Appendix L Consent Form (Entrepreneur Interviews)	271
Appendix M Consent Form (Stakeholder Interviews).....	273
Appendix N Consent Form Focus Groups	275
Appendix O Interview Guide (Entrepreneurs)	277
Appendix P Interview Guide (Stakeholders)	281
Appendix Q Focus Group Guide.....	283
Appendix R Debriefing Sheet	285
Appendix S Methodological Guidelines Supported by Examples of the Use of Critical Realism Ontologies by TACT Researchers	287
Appendix T Focus Group 2 (Age, Gender, Income and Number of Employees)	291
T.1 Focus Group 2: Age	291
T.2 Focus Group 2: Gender	291
T.3 Focus Group 2: Annual Income.....	292
T.4 Focus Group 2: Number of Employees	292
Appendix U Digital Platforms Used by Entrepreneurs in the Study.....	293
Appendix V Coding Structure: Research Question 1 (RQ1) – Entrepreneur Interaction Using Digital Platforms.....	295
Appendix W Coding Structure: Research Question 2 (RQ2) EE in T&T.....	299
Appendix X Coding Structure: Research Question 2 (RQ2) - Influence of Digital Platforms on EE.....	305

Appendix Y Coding Structure: Research Question 3 (RQ3) – Affordances.....	307
Appendix Z Coding Structure: Research Question 3 (RQ3): Constraints.....	309
Appendix AA Matrix Query (Entrepreneur Interaction Using Digital Platforms, Affordances and Constraints).....	315
List of References	333

Table of Tables

Table 1:	Eight Pillars and Components of the World Economic Forum's EE Model	21
Table 2:	A Synthesis of Technology Affordances.....	47
Table 3:	A Synthesis of Constraints of Digital Platforms.....	53
Table 4:	Definitions of Micro, Small, Medium and Large Businesses in T&T	60
Table 5:	Research Questions and Methods Applied.....	89
Table 6:	Intermingling of Online and Offline Interaction.....	98
Table 7:	Mirroring Culture.....	103
Table 8:	Trial and Error	105
Table 9:	Psychological Manipulation and Distraction.....	109
Table 10:	Trickery	112
Table 11:	Balancing Personal and Professional Information, Relationships and Spaces.....	114
Table 12:	Online Learning	128
Table 13:	Copying	130
Table 14:	Customer Data and Targeted advertising.....	133
Table 15:	Supplies Intermediary.....	136
Table 16:	Encouraging Micro-entrepreneurship and New Business Ventures	139
Table 17:	Affordance: Collaboration.....	146
Table 18:	Affordance: Accessibility and Immediacy	149
Table 19:	Affordance: Flexibility.....	151
Table 20:	Affordance: Local and International visibility	154
Table 21:	Affordance: Supporting Learning	159
Table 22:	Constraints: Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	163

Table of Tables

Table 23:	Constraint: Lack of Control (Platforms).....	167
Table 24	Constraint: Lack of Control (Users)	171
Table 25:	Constraint: Lack of Control (Copying)	175
Table 26:	Constraints: Time Consuming (Information Overload)	178
Table 27:	Constraint: Online Payment Limitations	181
Table 28:	Constraint: Inability to Ship and Transport	185
Table 29:	Constraint: Not Buying Local Things Online	188
Table 30:	Constraint: Criminal and Corrupt Activity	189
Table 31:	Constraint: Lack of Training/Expertise Required	191

Table of Figures

Figure 1:	Types of Interview Participants.....	79
Figure 2:	Entrepreneurs: Gender	80
Figure 3:	Entrepreneurs: Level of Formal Education	80
Figure 4:	Entrepreneurs: Age.....	81
Figure 5:	Entrepreneurs: Employment Status	81
Figure 6:	Stage of Business.....	82
Figure 7:	Businesses: Number (No.) of Employees.....	83
Figure 8:	Business: Annual Income/Sales (\$TT)	83
Figure 9:	Stakeholders: Gender	85
Figure 10:	Type of Stakeholder.....	85
Figure 11:	Stakeholders: Age.....	86
Figure 12:	Hierarchy Chart (Subcodes for Impact of Digital Platforms on EE in T&T) Mapped to World Economic Forum EE Components.....	126
Figure 13:	Illustration of Connections in Coding Entrepreneur and Digital Platform Relations (RQ1: Interaction and RQ3 Affordances and Constraints).....	195

Research Thesis: Declaration of Authorship

Print name:	Keisha Candice Taylor
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Title of thesis:	Digital Platforms and Entrepreneurship in Trinidad and Tobago: An Examination of their Relationships Using Technology Affordances and Constraints
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I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
 2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
 3. Where I have consulted the published work of others, this is always clearly attributed;
 4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
 5. I have acknowledged all main sources of help;
 6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
- None of this work has been published before submission

Signature:		Date:	
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Chapter 1 Introduction

1.1 Research Summary

The World Wide Web has given rise to digital platforms, digital technology that now supports entrepreneurship (Autio et al. 2017; Sussan and Acs 2017; Nambisan et al. 2018). Digital platforms, also called platforms in this thesis, are virtual places, facilitating connections that support the exchange of information, products and services between two or more types of participant groups (Gillespie 2010; Van Dijck 2013; Helmond 2015; Evans and Schmalensee 2016). These groups can include advertisers, producers, suppliers, software developers, or consumers. Digital platforms are supported by digital infrastructure or *'shared, unbounded, heterogeneous, open, and evolving sociotechnical systems comprising an installed base of diverse information technology capabilities and their user, operations, and design communities'* (Tilson et al. 2010, p. 748). However, much of the entrepreneurship or management information systems literature either discusses the use of digital platforms by entrepreneurs from a technical standpoint (Beckman et al. 2012; Giones and Brem 2017) or fail to study the influence of digital platforms on entrepreneurship with much depth (Ács et al. 2014). Entrepreneurship research has therefore, been criticised for assuming that using digital platforms democratises entrepreneurship (Dy et al. 2018). As such, there is an insufficient discourse on the relationship between digital platforms, entrepreneurship, and the wider social environment, though it is believed that such relationships can influence entrepreneurial activities and processes (Nambisan 2017; Nambisan et al. 2018; Nambisan et al. 2019).

Though digital platforms can make entrepreneurship different (Autio et al. 2017), we do not yet fully know in what way (Nambisan et al. 2019). This lack of understanding is in part due to the tendency to focus on high-growth entrepreneurship (Welter et al. 2016). However, understanding digital platform influence is essential for governments to help them to develop entrepreneurship policies that can improve the economy, for academics to better understand mechanisms of entrepreneurship and for entrepreneurs as well, who want to understand how best to use digital platforms to support their entrepreneurial efforts.

Interactions between digital platforms, entrepreneurs, and their environment, occur within a complex, dynamic, social system (Gerardine and Poole 1994), which influences entrepreneur behaviour. Offline cultural, social norms and structures interact with formal rules enforced by digital platforms (Gerardine and Poole 1994). Informal rules also develop through interaction within communities and networks of digital platform users (Gerardine and Poole 1994; Markus

and Silver 2008). Therefore, a platform's formal and informal rules, as well as offline social norms, culture and structures interact to influence entrepreneur behaviour and outcomes. However, few researchers explore the ways this interaction may affect the ability of an entrepreneur to use a digital platform as a resource (Nambisan et al. 2018). Further, digital platforms constantly, quickly and unpredictably change, adding to the importance but also the complexity of studying digital platform influence on entrepreneurship.

Digital platforms also blur personal/professional, geographic, organisational, industry, and other boundaries (Tilson et al. 2010; Yoo et al. 2010). Porous boundaries can result in unforeseen consequences for entrepreneurs, which can be negative, positive, or both (Majchrzak and Markus 2014b; Nambisan 2017). These consequences can go unnoticed if interactions between digital platforms, entrepreneurs, and their environment are not analysed. For instance, the use of gig-economy platforms, such as Uber and TaskRabbit enable individuals to be hired '*under 'flexible' arrangements, as 'independent contractors' or 'consultants,' working only to complete a particular task or for a defined time*' (Friedman 2014, p. 171). For example, Uber (a ride-sharing platform) and TaskRabbit (a platform enabling individuals to offer services, for example cleaning services) are said to empower individuals by giving them a chance to earn money as micro-entrepreneurs. However, these platforms are also disadvantageous for micro-entrepreneurs living in low-income neighbourhoods because of their socioeconomic status and platform rules (Thebault-Spieker et al. 2017). Without a focus on the relationship between digital platforms, entrepreneurship and the social environment, such influences of digital platforms on entrepreneurship can be difficult to understand in a thorough way (Autio et al. 2017).

Entrepreneurship research also largely focuses on Western countries and countries with high-growth entrepreneurship (Ács et al. 2014; Koveos 2014). Such research usually side-lines self-employment, informal or low-growth entrepreneurship, which tends to be prevalent in non-Western and developing countries (Ács et al. 2014). The argument is that this type of entrepreneurship has a neutral or detrimental effect on the economy in terms of job creation and or economic growth (Amorós et al. 2013), so efforts should instead be made to understand high-growth entrepreneurship (Ács et al. 2014). However, general lessons about the impact of digital platforms on entrepreneurs can be garnered by applying a much broader understanding of what entrepreneurship is.

This thesis contributes to the entrepreneurship literature by researching entrepreneurship in Trinidad and Tobago, a high-income country (World Bank 2016a) that is also characterised as a developing country (United Nations 2018). This Caribbean twin-island state is dependent on the energy sector (oil and gas), which in 2017 accounted for 35.3% of GDP (The Government of the

Republic of Trinidad and Tobago 2018) and eighty percent of exports (Oxford Business Group 2017). Entrepreneurship has been considered by the Ministry of Trade and Industry's Strategic Plan (2016-2020) (Ministry of Trade and Industry 2016) and the Government's Budget Fiscal Presentation (Ministry of Trade and Industry 2019) as a viable way of supporting economic diversification efforts. The country has a comparatively high level of internet access (International Telecommunications Union 2017a), and digital platforms are used for entrepreneurship (Miller et al. 2016; Mohammid 2017; Mohammid and Horst 2017). This research seeks to contribute to the entrepreneurship literature by exploring the influence of digital platforms on entrepreneurship in Trinidad and Tobago.

1.2 Entrepreneurship

Research shows that entrepreneurship is defined and develops differently across regions and countries (Bosma 2013; Acs et al. 2017). Entrepreneurship is usually distinguished based on whether it takes place in developed countries that are more likely to have higher levels of high-growth entrepreneurship or developing countries characterised by higher levels of informal or micro-entrepreneurship instead (Bosma 2013; Ács et al. 2014; Bergmann et al. 2014; World Economic Forum 2014; Henao-García et al. 2017). However, entrepreneurship research is also framed within the hugely influential German school of economic thought (Schumpeter 1934; Schumpeter 1961) that focuses on innovation, the Austrian school (Kirzner 1997) that highlights opportunity identification and the Chicago School that builds upon this but prioritises human ability (Schultz 1975, 1980). Nevertheless, in spite of these different influences, there is a measure of consensus in the literature (Ács et al. 2014) that entrepreneurs should be examined based on their financial growth (Baumol 1996; Wennekers and Thurik 1999) and novelty, because this can, in turn, create economic and social value and contribute to the development of economies (Ács et al. 2014; Acs et al. 2017).

Contemporary literature is increasingly focused on the digital, digital technology or technology entrepreneur, that is, someone whose business depends on the creation and development of new digital technology products or services (Beckman et al. 2012; Giones and Brem 2017). Research also examines e-entrepreneurs, *'individuals who seek and validate entrepreneurial opportunities on the Internet and convert them into marketable goods and services which are promoted and/or sold exclusively online'* (Matlay and Martin 2009, p. 103). Other research assumes all types of entrepreneurs must use digital platforms to be successful (Autio et al. 2017; Sussan and Acs 2017) because digital platforms facilitate the speedy exchange of information and connect them to a bigger global marketplace. Definitional issues surrounding *entrepreneur* become more complicated when digital platforms are considered. For example, when digital platforms are used

entrepreneurs become more reliant on other users for support and so the locus of entrepreneurial activity is more distributed (Nambisan et al. 2018).

Additionally, self-employment, or *'owning and managing a business, or otherwise working on one's own account'* (van Stel 2005, p. 106) is associated with risk-taking and described as a type of entrepreneurship too (Guerra and Patuelli 2016), an association which harks to Cantillon (1731-1734). However, there is a limited analysis of how using digital platforms, influence entrepreneurs in this context (Friedman 2014). Further, digital platforms disrupt traditional industries and support innovation (Lobel 2016; Gamito 2017), but it is still unclear how the use of digital platforms influences innovation prospects (Nambisan et al. 2018).

This thesis adapts the definition of an entrepreneur created by the Global Entrepreneurship Monitor (GEM), the most long-standing, cross-national, research project on entrepreneurship globally (Bergmann et al. 2014), with reports on over one hundred countries. An entrepreneur refers to an individual that makes *'any attempt at ... business or ... venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business'* (Reynolds et al. 1999, p. 3). While GEM focuses on new business or new venture creation (businesses under 3 1/2 years) (Global Entrepreneurship Monitor 2018), this research expands the type of entrepreneurship under study to include entrepreneurs whose businesses have existed for more than 3 1/2 years old. A broader definition is used to be able to understand better how digital platforms are influencing entrepreneurship of both new and longer-standing businesses. Additionally, this definition is not digitally centred but is sufficiently broad so varied ways of using digital platforms for entrepreneurship in a broader context can be explored.

1.3 Entrepreneurial Ecosystem (EE)

Entrepreneurial ecosystems (EEs) focus on defining, exploring, and assessing the resources entrepreneurs must access, for effective entrepreneurship within their environment. An entrepreneurial ecosystem (EE) is defined as *'a dynamic community of inter-dependent actors (entrepreneurs, suppliers, buyer, government, etc.) and system-level institutional, informational and socioeconomic contexts'* (Audretsch and Belitski 2017, p. 1033) that influences and enables entrepreneurship. National context (Porter 2003) and regional support systems (Cooke et al. 2000) have been essential to the study of entrepreneurship. However, this consideration of the wider context in entrepreneurship research tends to focus on the flow of information and knowledge within a specific sector (Trippel 2013; Martin et al. 2018). It is also usually centred on firms or organisations instead of entrepreneurs (Autio and Thomas 2014) or the availability of resources instead of an entrepreneur's ability to access them (Spigel and Harrison 2018). Some

entrepreneurship research focuses on entrepreneurs that create new digital services, within a digital platform's ecosystem, (for example, Apple's iPhone ecosystem) (Zahra and Nambisan 2011; Nambisan and Baron 2013). The concept of an EE considers that entrepreneurs do not work in a vacuum, but that their environment influences their decisions and their ability to start a business, sustain it, and grow it.

Additionally, EE research insufficiently acknowledges or explains how entrepreneurs access some resources beyond their country (Alvedalen and Boschma 2017), resources that may be accessed using digital platforms. Though researchers applying an EE concept sometimes recognise that resources are accessed using information technology (IT) (Audretsch and Belitski 2017), how digital platforms are used and the influence they have when used is usually left unexplored. The use of digital platforms by entrepreneurs in the context of EEs is acknowledged by just a few studies (Autio et al. 2017; Sussan and Acs 2017). An explanation of the relationship between digital platforms and entrepreneurship using an EE context can provide that '*dynamic perspective*' (Alvedalen and Boschma 2017, p. 897) that is not always well reflected in EE research (Autio et al. 2017) by helping to understand and analyse relationships, in a way that supports a better understanding of entrepreneurship.

1.4 Technology Affordances and Constraints and Constraints Theory (TACT)

An entrepreneur's use of a digital platform is dependent on their goals, what the digital platform allows and what the entrepreneur believes is possible in the context of their environment. Therefore, it is the relationship between digital platforms, entrepreneurs, and their environment that is most important when studying entrepreneurship (Majchrzak and Markus 2014b). The theory and method of Technology Affordances and Constraints (TACT), which emerges from the ecological psychology literature, is adopted.

'technology affordance refers to an action potential, that is, to what an individual or organization with a particular purpose can do with a technology or information system; technology constraint refers to ways in which an individual or organization can be held back from accomplishing a particular goal when using a technology or system' (Majchrzak and Markus 2014b, p. 833).

TACT's underlying view is that we must examine dynamic interactions between individuals, organisations/groups and the technologies they use to be able to comprehend not only how they are used, but to identify the relationships, interdependencies and unintended consequences that arise from the interaction. Though this concept is rarely applied in the entrepreneurship

literature, it provides a useful way to understand how the use of digital platforms may influence entrepreneurship (Autio et al. 2017; Nambisan 2017). TACT enables research on how technology can simultaneously support and constrain individual behaviour in the context of an entrepreneurial ecosystem (EE). While some studies have used TACT to study the relationship between entrepreneurship and digital platforms in the management information systems literature (Xuefei and Joshi 2016; Smith et al. 2017; Dong and Wang 2018; Sutherland and Jarrahi 2018a), fewer, for example, Autio et al. (2017) apply TACT to entrepreneurship in the context of EEs. The theory and method of TACT will be applied to this study because it helps to overcome limitations in understanding the relationship between digital platforms and entrepreneurship in existing entrepreneurship research and supports an interdisciplinary approach. It does so not by looking at entrepreneurship with either a social focus or a technological focus but instead by viewing entrepreneurship as emerging from dynamic interactions and relationships within one social system, within which digital platforms play a role.

1.5 Research Aim and Objectives

1.5.1 Research Aim

This research aims to understand and explain the relationship between digital platforms and entrepreneurship in Trinidad and Tobago.

1.5.2 Objectives

1. To utilise TACT to understand and explain the relationships between digital platforms and entrepreneurship in Trinidad and Tobago.
2. To provide recommendations to entrepreneurs and policy recommendations to the Trinidad and Tobago government based on the assessment of the aforementioned relationship.

1.5.3 Research Questions

1. How have digital platforms influenced entrepreneurship in Trinidad and Tobago?
 - 1(a) How are digital platforms used in interactions between entrepreneurs, customers, and stakeholders?
 - 1(b) Have digital platforms played a role in changing the entrepreneurial ecosystem in Trinidad and Tobago?
 - 1(c) What affordances and constraints exist for entrepreneurs in Trinidad and Tobago in the context of digital platform use?

1.6 Methodology

This thesis uses a multi-method qualitative approach. This approach includes the following: (a) the use of a pilot study encompassing 6 in-depth semi-structured interviews with entrepreneurs; (b) fifty-nine (59) semi-structured interviews with entrepreneurs that use digital platforms, representatives from the EE, including government, finance, academia, the technical community and business support providers; (c) 2 focus groups, 1 consisting of 4 individuals that are both entrepreneurs and stakeholders in Tobago and the other consisting of 8 entrepreneurs based in Southern Trinidad, and (d) secondary data from reports and the digital platforms used by entrepreneurs. These methods help to explain the relationships between digital platforms and entrepreneurship in Trinidad and Tobago.

1.7 Research Contributions

This thesis explains relationships that exist between entrepreneurs, their environment, and digital platforms in Trinidad and Tobago hereafter referred to as T&T. It does so by using the theoretical lens of TACT and a TACT informed method. It also builds on studies of entrepreneurship in platform innovation ecosystems (Zahra and Nambisan 2011; Nambisan and Baron 2013, 2019) and the few studies examining the use of digital platforms by entrepreneurs within an entrepreneurial ecosystem context (Autio et al. 2017; Sussan and Acs 2017). This research also follows increasing but still limited research in management information systems that use TACT to explain entrepreneur relationships with digital platforms and their wider environment (Cabiddu et al. 2014; Ingram et al. 2014; Leong et al. 2016; Xuefei and Joshi 2016; Carah and Angus 2018; Dong and Wang 2018; Sutherland and Jarrahi 2018a).

The findings suggest that relationships between digital platforms and entrepreneurship are very complex. The way digital platforms are designed and operated, both support and limit entrepreneurship, while exogenous environmental factors shape their use and effectiveness. Digital platforms afford local and international visibility, accessibility and immediacy, flexibility, collaboration, and support learning, but their use is also characterised by risk, uncertainty, fragility. Entrepreneurs also lack control of the platforms, which may encourage deceptive practices and have limited control of platform user behaviour, which may influence their entrepreneurship. Entrepreneurs' behaviour is also influenced by the distractive nature of digital platforms which require significant time resources.

Further, increased local and international visibility require entrepreneurs to find new ways to compete in an international online environment that encourages copying and recombinations of ideas. The creative industry is considered one of the fastest-growing industries globally (United

Chapter 1

Nations Conference on Trade and Development 2019), and participants considered this critical for the growth of entrepreneurship in this multicultural society. This research provides insight into how digital platforms are influencing the creative sector (Tsang 2015) and therefore provides lessons for developed countries too. For example, the creative sector is increasingly contributing to the economy of countries in the European Union (Boix-Domènech and Rausell-Köster 2018). Additionally, although micro or informal entrepreneurship, tends to be viewed as a developing world phenomenon, this type of entrepreneurship is now growing in developed countries (Bögenhold 2019), and is supported by digital platforms (Martin 2016). T&T is historically and currently characterised as having low-growth and informal or micro-entrepreneurship (Bailey et al. 2015), and so this study provides useful insight into how digital platforms influence this type of entrepreneurship. It offers helpful lessons for those studying the influence of digital platforms on both formal and informal entrepreneurship in other high-income countries and countries categorised as developed as well.

Additionally, cultural, social, and infrastructural constraints in the EE may work together to influence the use and effectiveness of a digital platform. Such combinatory influence is evident in this study, with the limited use of payment platforms for local transactions in T&T. An understanding of social and cultural influences on the way digital platforms are used can aid understanding of potential affordances and constraints of future digital technology in T&T, which is helpful, given the continuously changing digital landscape. The research provides new understanding by evidencing just how complex digital platform and entrepreneur relations are through illustrating how affordances and constraints overlap, co-exist, and are intricately intertwined. This thesis develops the use of TACT as a model to understand digital technology influences on entrepreneurship and potentially other areas of the economy and society.

The EE was also found to be made up of important ethnic, family, friends and other networks that exist offline and cannot be easily accessed using digital platforms and as a result the study provides insight into how EEs form in multicultural environments. Actors in the EE may also mitigate against entrepreneurial growth, thereby limiting an entrepreneur's potential to exploit the use of digital platforms. Additionally, while the use of digital platforms helped entrepreneurs, they also undermined government efforts to support entrepreneurship. The EE concept, therefore, provides new insight into informal and fragmented EEs in a low-growth entrepreneurship economy. Interestingly, however, while specific cultural, social, and infrastructural issues persisted entrepreneurs were able to use digital platforms to overcome some of them. For example, digital platforms were used to gain support from other entrepreneurs, networks, and customers, particularly at the global level, thereby circumventing longstanding constraints by helping them to shape their entrepreneurial environment. The use of

TACT also provided insight into how TACT as a theory and method can help to examine relationships within an EE and illustrates how an EE may be connected internationally.

1.8 Thesis Structure

The thesis is broken down as follows. Following this introductory chapter, chapter 2 is broken into 4 sections. The first section focuses on what is meant by entrepreneurship and considers several ways the literature defines an entrepreneur. It critically examines these approaches to explain the conceptual limitations of entrepreneurship when digital technology is used. The second section reviews the entrepreneurial ecosystem (EE) literature and explains why this approach is utilised. It identifies gaps in understanding EEs and ultimately explains the EE model chosen for this thesis. In the third section, varied interpretations of digital platforms are discussed, defining characteristics of digital platforms are outlined and digital platforms are conceptualised in the context of broader digital infrastructure and platform ecosystems to be able to explain their influence better.

Chapter 3 evaluates the use of Technology Affordances and Constraints (TACT) as an appropriate theory and method for understanding relationships between digital platforms and entrepreneurship. It explicates the affordance concept by discussing how various types of affordances have been used to develop the theory. Next, 7 principles of TACT are proposed to help guide the identification of affordances and constraints for the research. A critical analysis of relevant affordances and constraints in the literature is provided and the use of TACT by some researchers to understand entrepreneurship and digital platforms relations are discussed. The result is a new synthesis of the most relevant affordances and constraints in the literature that can be applied to study entrepreneur relations and guide the methodology and analysis of results. Chapter 4 discusses the social, economic, and digital environment in T&T. It reviews research on entrepreneurship in the country, discusses literature specific to the use of digital platforms by entrepreneurs locally and critically reviews the Global Entrepreneurship Monitor reports on entrepreneurship for T&T (2010-2014).

Chapter 5 reviews the research methodology. Firstly, it outlines the methodological assumptions and the literature that helped to formulate the research aim, objectives, and research questions. It then justifies the use of Technology Affordance and Constraints Theory (TACT) within a critical realist framework. Strategies for ensuring validity are explained, a justification of the multi-qualitative research method applied is discussed, and the sampling procedure is described. The data collection methods, and the data analysis procedure are then explained. Chapter 6 presents the findings from the data related to research question 1 (RQ1), to explain how digital platforms are used by entrepreneurs to interact. Chapter 7 discusses the findings related to research question 2 (RQ2) and explains what influence digital platforms have had on the EE in T&T. Chapter

Chapter 1

8 addresses research question 3 (RQ3) by explaining the affordances and constraints of digital platforms and entrepreneur relationships. Chapter 9 outlines the theoretical implications of the research and offers recommendations for entrepreneurs and policy recommendations for the government. The thesis concludes with chapter 10, which outlines limitations and provides suggestions for future research.

Chapter 2 Literature Review: Entrepreneurship, EEs, and Digital Platforms

2.1 Chapter Overview

This research aims to understand and explain the relationship between digital platforms and entrepreneurship in Trinidad and Tobago (T&T). This first sections of this chapter will, therefore, review different definitions of entrepreneurship to support a well-informed understanding of the concept of entrepreneur. Such an understanding is vital to be able to better understand the relationship between digital platforms and entrepreneurship and justifiably select one that fits the project aims and context. A discussion on digital entrepreneurship, and e-entrepreneurs or netentrepreneurs follows to help explain why the definition of entrepreneurship used for this research is not digital-centric and is best suited for comprehensively answering the research questions. The next section defines entrepreneurial ecosystems (EEs) and evaluates the concept to determine its suitability as a framework for studying digital entrepreneurship in T&T. A review of the literature on digitally informed EEs is then undertaken to justify further why digital platforms should be included in EE research. The sections that follow define what is meant by a digital platform for this thesis and explain their position within broader platform ecosystems.

2.2 The History of Entrepreneurship and Main influences

Entrepreneurship has emerged out of the shadows of economics and management research as a distinct field of study. For instance, over one thousand scholarly publications on entrepreneurship are produced annually, and the entrepreneurship division of the Academy of Management is now the division with the largest membership (over three thousand members) (Davidsson 2016). However, most entrepreneurship research is overwhelmingly focused on Western countries (Block et al. 2017; Doloreux and Porto Gomez 2017; Dy et al. 2018). Therefore, research on non-Western countries provides a necessary, useful and broader understanding of entrepreneurship.

The concept of an *entrepreneur* predates written text (Jonsson 2017) however the word entrepreneur, derives from the French word, '*entreprendre*' meaning "*to undertake, some task, charge, or mission*" (Jonsson 2017, p. 19). The concept is usually attributed to a French economist (Cantillon 1731-1734) who spoke of various types of self-employment characterised by risks and uncertain income or returns. The concept of an entrepreneur, however, developed with the industrial revolution and came to mean doing something on your own, which may be new, has some risk involved and is ultimately productive (Jonsson 2017). The idea of the risk-taking

entrepreneur was further developed by Mills (1848), another economist, and built upon by researchers studying personality traits or cognition of entrepreneurs (Brockhaus 1980; Kahneman and Tversky 2013).

Some researchers focused on different personality traits like the desire to achieve (McClelland 1961; Shaver and Scott 1991), a proactive nature (Becherer and Maurer 1999; Kickul and Gundry 2002), the belief in your ability to control your destiny (Brockhaus 1975; Shapero 1975; Venkatapathy 1984) or levels of sociability (Lux 2005; Obschonka et al. 2012). Other scholars believe entrepreneurs are defined by their ability to lead (Kao 1989; D'Intino et al. 2007) or make the best decisions (D'Intino et al. 2007; Dew et al. 2009; Cohen and Kietzmann 2014). Still, some researchers argue that a combination of these traits is important (Timmons 1978). On the other hand, focusing on personality traits can come at the expense of understanding the influence of the social environment on these personality traits (Shepherd 2015).

Entrepreneurship research also developed with research on innovation. In this case, entrepreneurs are defined as individuals that are able, through technical or organisational innovation, to take advantage of economic opportunity (Schumpeter 1965). What is essential is the focus on innovation or the introduction of novel ideas, new goods and services, different ways of doing business and or new markets (McClelland 1961; Drucker 1985). Today, Schumpeter's view on entrepreneurship is heavily referenced and extensively applied in management research (Block et al. 2017; Ferreira et al. 2017a; Ferreira et al. 2017b). Schumpeter's perspective on entrepreneurship has also been built upon by contemporary research on technology-based entrepreneurship (Autio et al. 2014). This perspective is used to assess entrepreneurship that is characterised by the creation of new digital services and the use of digital technology to support continuous innovation (Liao et al. 2009).

There is also an underlying belief that entrepreneurs contribute to the growth of the economy (Vesper 1980; Cooper and Dunkelberg 1986). However, most entrepreneurs do not contribute much to the economy, as salaries are small, they offer few jobs, and generate little revenue (Isenberg 2016). Nevertheless, across the board, business expansion and profit maximisation (Wennekers and Thurik 1999; Block et al. 2017) is usually prioritised when entrepreneurship is assessed. Further, it is usually argued that we should pay more attention to how digital technology supports high-growth entrepreneurship (Sussan and Acs 2017).

Other scholars focus on what happens at the early stages of entrepreneurship. For some, this is the identification of an opportunity (opportunity-driven entrepreneurship). For others, it is the formal creation of a business (Gartner 1990; Ács et al. 2014; Isenberg 2016). Both opportunity identification and business creation are said to be more prevalent in developed countries (Acs et

al. 2017). Conversely, entrepreneurship is driven by need (necessity-based entrepreneurship) in many developing countries (Amorós et al. 2013; Autio et al. 2014). In these countries, businesses are more likely to be either unregistered or informal, and because of this may not grow or struggle to survive (Margolis 2014). However, such distinctions can mask differences in entrepreneurial motivations. For example, research in Ghana found that individuals prefer self-employment (Falco and Haywood 2016) instead of paid employment. This research directly contradicts most of the entrepreneurship literature that assumes entrepreneurship in developing countries is born out of necessity because work is hard to come by, and individuals struggle to survive. Furthermore, such distinctions may be misleading as an entrepreneur may at first be driven by need and over time, become driven by opportunity or vice versa (Williams and Williams 2014). Such distinctions may become even more blurred when digital platforms are used for entrepreneurship.

Research on home-based entrepreneurs (Loscocco and Smith-Hunter 2004; Thompson et al. 2009; Roberts and Robinson 2010) finds that more entrepreneurs operate from their home because digital technology allows them to easily work from home. However, this phenomenon remains under-explored (Di Domenico et al. 2014). An assessment of the influence digital platforms has on entrepreneurship can help us understand the extent to which digital platforms drives entrepreneurship. This assessment is especially crucial since self-employment has increased and or stabilised in many Western countries (Bögenhold 2019), and the number of self-employed in many developing countries has also grown (Falco and Haywood 2016).

Some entrepreneurs may be hybrid-entrepreneurs, individuals who become entrepreneurs while still in full-time employment with another company (Folta et al. 2010). Working for others can provide information and networks useful for their business (Raffiee and Jie 2014). Further, in time, some part-time entrepreneurs do become full-time entrepreneurs when they think it is safest to do so (Raffiee and Jie 2014). On the other hand, some entrepreneurs may never become full-time entrepreneurs (Thorgren et al. 2016) or may not want to grow into a large company (Vesper 1980; Carland et al. 1984). Hybrid-entrepreneurs are usually ignored by policymakers (Bögenhold 2019). However, digital platforms support these types of entrepreneurs. Digital platform use allows them to consistently and fluidly switch between paid labour and self-employment, especially at the micro-level (Schulz et al. 2016; Bögenhold 2019).

Therefore, literature that considers the use of digital technology for entrepreneurship is reviewed to provide broader insight into its influence, instead of relying on traditional assumptions of innovation (Schumpeter 1934), opportunity identification (Kirzner 1997) and profit maximisation (Drucker 1985) evident in traditional entrepreneurship research.

This study takes the view that entrepreneurship research can benefit from a definition of entrepreneurship that allows for a more thorough explanation of the influence digital platform use has on entrepreneurial activity. A broad definition is necessary because digital platforms are new, pervasive, and continually changing technologies, and their influence on entrepreneurship is under-researched in the context of these varied definitions. Digital platforms support not only the rare high-growth entrepreneur but the *'everyday'* entrepreneur that may have many different motivations and values (Welter et al. 2016, p. 313). Everyday entrepreneurs are not only far more common but support wealth creation and societal well-being (Welter et al. 2016). Further, even without consideration of digital technology some theorists advocate research that recognises the importance of multiple definitions of an entrepreneur to be able to more fully understand entrepreneurship (Cunningham and Lischeron 1991; Clark and Harrison 2019).

This thesis, therefore, takes the view that when studying the relationship between digital platforms and entrepreneurship, a broader definition of entrepreneurship is required. This research, therefore, broadens the definition of entrepreneurship posed by the Global Entrepreneurship Monitor (GEM). GEM is the largest longitudinal, cross-national, continuous, collaborative research project on entrepreneurship in the world and potentially in the social sciences more broadly (Bergmann et al. 2014). GEM research covers all geographic regions and has helped to expand knowledge beyond western countries. The influence of GEM reports is evidenced by the use of GEM data, citation by academic researchers and reports from governments, international institutions, and the media (Amorós et al. 2013).

GEM's definition considers entrepreneurs as both new business creators and self-employed but is limited because of its focus on new businesses (Amorós et al. 2013). This thesis considers entrepreneurs or the self-employed whose businesses have been in operation for longer than 3 1/2 years as well to understand digital influences. An entrepreneur refers to an individual that makes *'any attempt at ... business or ... venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business'* (Reynolds et al. 1999, p. 3).

This definition aids understanding of the influence of digital platforms on entrepreneurship in a country with low levels of entrepreneurial growth. Furthermore, while research on entrepreneurship using digital platforms, usually takes a digitally focused approach as evidenced by the terms *digital entrepreneur*, *e-entrepreneur* and *netentrepreneur*, the definition of entrepreneurship used for this thesis is not digital-centric. The definition is instead sufficiently broad to allow for general insights into entrepreneurship, in a way that much entrepreneurship

literature does not allow (Welter et al. 2016). This definition supports a better understanding of the influence of digital platforms on entrepreneurship.

2.3 Digital Entrepreneurs, E-entrepreneur, Netentrepreneurs

2.3.1 Digital Entrepreneur

Today as more entrepreneurs create digital services, the concept of *digital entrepreneur* has understandably become important (Nambisan 2017). However, a systematic review of research on digital entrepreneurship revealed that research on digital entrepreneurship is limited (Kraus et al. 2019). The term digital, digital technology or technology entrepreneur usually refers to those who create and sell digital technology products and services by building upon existing digital technology infrastructure (Beckman et al. 2012; Giones and Brem 2017) or *'the creation of a venture to produce and generate revenue from digital goods across electronic networks'* (Guthrie 2014, p. 116). Some recent well-known examples of digital entrepreneurship include Netflix for video and Uber for transport (Giones and Brem 2017; Srinivasan and Venkatraman 2018).

However, digital entrepreneurs are also defined as individuals who *'reconciliat(e) ... traditional entrepreneurship with the new way of creating and doing business in the digital era'* (Le Dinh et al. 2018, p. 1) or *'any entrepreneurial activity that transfers an asset, service or major part of the business into digital ...'* (Kraus et al. 2019, p. 354). Digital entrepreneurs are therefore often characterised based on the extent to which they either create or use digital technology (Kraus et al. 2019). Digital entrepreneurship research usually does not examine how digital entrepreneurs operate within a wider socioeconomic environment and how their behaviour may be influenced by social factors (Dy et al. 2018). Combining, or complementing entrepreneurship theories and concepts with digital-technology theories and concepts can help us understand digital entrepreneurship, but the entrepreneurship literature rarely makes these connections (Nambisan 2017).

Entrepreneurs also use digital platforms to carry out entrepreneurial activities as well. Some researchers use the term digital entrepreneur to refer both to those entrepreneurs that create digital platforms as well as those that use them to carry out entrepreneurial activities (Hull et al. 2007; Dy et al. 2018; Nambisan et al. 2018). For example, digital entrepreneurship has also been defined as *'the pursuit of opportunities based on the use of digital media and other information and communication technologies'* (Davidson and Vaast 2010, p. 2). Such entrepreneurs are called e-entrepreneurs or sometimes netentrepreneurs. The term digital entrepreneur is still usually used to refer specifically to those entrepreneurs that create digital technology. These varied types of digitally focused entrepreneurs will now be reviewed.

2.3.2 E-Entrepreneur or Netentrepreneur

E-entrepreneurs or netentrepreneurs are *'individuals who seek and validate entrepreneurial opportunities on the Internet and convert them into marketable goods and services which are promoted and/or sold exclusively online'* (Matlay and Martin 2009, p. 103). These types of entrepreneurs are researched in the context of the online, virtual world, where entrepreneurial activities and processes are distinct and reviewed separately from the physical world (Kollmann 2014; Turban et al. 2015; Islam and Alghobiri 2018). Some suggest the word micro-entrepreneur (someone who generates a small amount of money from their business (definitions are dependent on country categorisations)) (Bhattacharya and Londhe 2014) and netentrepreneur is used interchangeably in China (Avgerou and Li 2013). Such a stance, however, insufficiently supports an understanding of entrepreneurship. Digital platforms are used to buy and sell, but other important offline factors may influence online entrepreneurial endeavours.

For example, a review of how entrepreneurs use the e-commerce Taobao platform found that entrepreneurial activity is closely integrated with community-based relationships and interactions which take place face-to-face. Digital platforms and entrepreneurs were dynamically interacting, and both shaping and influencing local culture (Avgerou and Li 2013). These findings highlight the need for more research on digital and non-digital interaction in the context of entrepreneurship, which is lacking in much of the literature. The local environment is influential in determining entrepreneurship activities as well as how digital platforms are used for entrepreneurship. It is therefore important to focus on integrated and dynamic entrepreneurial processes that inform these types of interactions and relationships.

What is shared amongst the digital entrepreneur, e-entrepreneur/netentrepreneur definitions, and research is a digital technology-specific focus. It is believed that entrepreneurs can use digital technology to better compete with larger companies on an equal footing. It is also argued that using digital technology allows entrepreneurs to more easily pursue a business idea and operate their business anywhere in the world (Matlay 2004; Brooks et al. 2014). This is also described as *'digital entrepreneurial emancipation'* (Dy et al. 2018, p. 586). However, the truth may be more nuanced. For example, it is usually argued that cost is always reduced because of faster transactions. However, entrepreneurs incur other costs for website development and maintenance, technical skills, digital platform access and software and hardware (Jayawarna et al. 2014; Dy et al. 2018). Additionally, even with the use of digital technology, offline social structures continue to influence entrepreneurial activity (Noble and Tynes 2016; Ignatow and Robinson 2017; Dy et al. 2018). For example, gender, family, class, and cultural circumstance can influence the decision to pursue entrepreneurship and entrepreneurial growth as well (Dy et al. 2018).

2.3.3 The Influence of Digital Platforms on Entrepreneurship

Digital platforms are supporting the development of micro-entrepreneurship. For example, research has found that the entry of platform services, Uber X (taxi service) and Postmates (delivery/couriers) into a particular locale decreased the number of campaigns (albeit low-quality campaigns) launched on the crowdfunding platform Kickstarter in the same place. The research suggests that individuals that may have been likely to start a low-quality campaign for a business idea on KickStarter were instead driven to become Uber drivers to generate income more immediately (Burtch et al. 2018). These platforms were believed to be used by the unemployed or under-employed (Burtch et al. 2018). Alternatively, some research finds that while entrepreneurs see benefits from using certain platforms, in varying circumstances, use may be limited because of platform rules (Edelman and Geradin 2016). Other research found that even if these types of micro-entrepreneurship initiatives were tedious, the digital platforms were viewed in a positive light because of the flexibility they allow (Xuefei and Joshi 2016). These findings suggest that digital platforms can influence the nature of entrepreneurial behaviour.

In other cases, digital platforms supported better customer engagement (Cabiddu et al. 2014), strengthened social ties with consumers (Lee et al. 2014; Dong and Wang 2018), increased entrepreneurs' social capital (Smith et al. 2017) and helped to build trust (Lee et al. 2014). A digital platform was also responsible for developing an EE in a Chinese village (Leong et al. 2016). Large businesses are also engaging with individuals who have large social media followings to help their brand thereby creating new opportunities for entrepreneurs as social media influencers (Carah and Angus 2018). This research will be explored in more depth in the chapter on TACT, Chapter 3.

2.3.4 Towards a More Thorough Understanding of Digital Entrepreneurship

The review of different types of entrepreneurs conducted helps to illustrate that attaching *e, net*, or *digital* to the word *entrepreneur* can mask a more helpful understanding of what an entrepreneur is. For example, the degree to which digital platforms may encourage or support entrepreneurship remains under-explored in the literature. It is usually automatically assumed that by using digital platforms, entrepreneurship can be positively supported, and the influence of environmental and social factors are not considered (Dy et al. 2018).

The entrepreneurship literature focuses on market efficiency and market-based innovations, but this does not consider how digital platforms may offer opportunities outside of traditional markets (Nambisan et al. 2017). Conversely, an increase in the use of various types of technology may increase heterogeneity within a market or boost the possibility of market-based innovations

(Nambisan et al. 2017). Further, there is a limited understanding of how digital platforms may influence the identification of opportunity (Shepherd 2015; Nambisan 2017). However, research shows that digital platforms may shape not only what type of entrepreneurial opportunities are available, but the entrepreneurial outcome as well (Nambisan 2017). Some literature suggests that the use of certain types of digital platforms encourage necessity-based entrepreneurship or the pursuit of entrepreneurship based on need or survival (Ravenelle 2017; Burtch et al. 2018). The use and knowledge of information technology were found to be positively correlated with entrepreneurial intention and eventual setting up (creating), maintaining and growing entrepreneurship (Zenebe et al. 2018). These are indicators that, for some, define an entrepreneur, as discussed earlier. Understanding the role digital platforms play in influencing those decisions and supporting business growth can help to better understand entrepreneurship processes (Nambisan et al. 2019).

The use of digital platforms is characterised by change, uncertainty and unpredictability (Nambisan 2017), yet few researchers (Nambisan and Baron 2013, 2019) examine how this has contributed to entrepreneurial risk, conflict and stress. Entrepreneurs may evidence certain types of traits when using digital platforms, like sociability (Smith et al. 2017) and networking (Avgerou and Li 2013; Obschonka et al. 2017). For example, entrepreneurship online usually involves co-ordination between varied actors such as customers and other entrepreneurs and or businesses (Nambisan 2017). Further research is required to find out whether the use of digital platforms has influenced entrepreneur personality traits and if those traits are manifested differently online as opposed to offline or in an integrated way.

There has also been a growth in *born-global* startups or firms; a phenomenon identified in the 1990s (Cavusgil and Knight 2015; Knight 2015; Dzikowski 2018) right after the web became public in 1989. Born-global means they are '*companies that expand into foreign markets and exhibit international business prowess and superior performance, from or near their founding*' (Knight and Cavusgil 2004, p. 124). This born-global concept also relates to *international entrepreneurship* or '*the discovery, enactment, evaluation and exploitation of opportunities—across national borders—to create future goods and services*' (Oviatt and McDougall 2005, p. 540). Born-global and international entrepreneurship research focus on high-growth entrepreneurship. Though this research recognises that the use of digital platforms is important, there is still an inadequate understanding of how they have been used to support this type of entrepreneurship. Further, digital platforms are a resource used to find other resources, and they facilitate entrepreneurial activities and process (Autio et al. 2017). It is therefore useful to understand how interaction using these platforms support and or inhibit entrepreneurship and potentially change the nature of entrepreneurship.

However, most research on an entrepreneur's use of digital technology is not connected to non-digital interaction or the entrepreneurial environment. The existing literature on digital entrepreneurship or e-entrepreneurship focuses on business models and marketing without an in-depth understanding of how digital platforms influence these new *e*, *net* and *digital* categories of entrepreneurship (Islam and Alghobiri 2018). Digital platforms are, therefore, important enough to examine the relationship to entrepreneurship more fully. A better understanding of the use of digital platforms for entrepreneurship requires an acknowledgement that their use is situated within local, social and, cultural contexts.

2.4 Entrepreneurial Ecosystems (EE)

Research on entrepreneurial ecosystems (EEs) has increased in the past few years (Stam and Bosma 2015; Roundy et al. 2017; Scaringella and Radziwon 2018). An entrepreneurial ecosystem (EE) is defined as *'a dynamic community of inter-dependent actors (entrepreneurs, supplies, buyer, government, etc.) and system-level institutional, informational and socioeconomic contexts'* (Audretsch and Belitski 2017, p. 1033). The notion of EE emerged in the 2000s to become the most widely used term connecting entrepreneurship and the environment in the academic literature since 2016 (Malecki 2018). While the EE concept provides a new and useful lens for examining entrepreneurship, several conceptual problems are identified by those who helped to develop it (Stam 2015; Isenberg 2016; Spigel and Harrison 2018). The EE literature barely recognises complexities of relationships within the ecosystem (Stam 2015; Alvedalen and Boschma 2017). For instance, it is usually expected that EEs can be created and controlled. However, many EEs form sporadically, unintentionally, are self-organising, and self-controlled (Isenberg 2016). These types of EEs are especially prevalent in countries with low levels of high-growth entrepreneurship, countries for which there is little research on EEs (Isenberg 2016). Additionally, even in countries with significant levels of high-growth entrepreneurship, such as the energy-dependent region of Calgary in Canada, a weak EE may exist (Spigel 2017). In this case, a weak EE existed because the interaction between EE components was not supportive due to competition and conflict within it (Spigel 2017; Spigel and Harrison 2018). Further, cultural and social EE components were particularly crucial and contributed to unsupportive interaction (Spigel 2017). Furthermore, while the entrepreneur is the focal point for studying EEs, EEs are not necessarily controlled by the entrepreneur or any other actor (Isenberg 2016). Therefore, focusing only on the entrepreneur perspective may limit understanding of how EEs operate (Isenberg 2016). Instead, researching entrepreneurs and entrepreneur stakeholders' dynamic relationships within an EE can help understand entrepreneurship better (Spigel and Harrison 2018; Stam and Spigel 2018).

Chapter 2

Research tends to focus nationally, though processes and relationships may exist in an EE at a more granular level, like cities or neighbourhoods (Isenberg 2016; Spigel and Harrison 2018). Social norms and cultures may vary within a country, and such variations may also influence entrepreneurial activities in different places within one country (Stam 2015; Malecki 2018). On the other hand, while EEs are distinctly national, they are also internationally connected because they may draw on resources that exist outside of them (Roundy et al. 2018). For example, this could be because the EE is immature or because they are located in a small or developing country (Roundy et al. 2018). In such a case, an EE may be dependent on resources that are not available locally and can come to depend on external actors and resources for their development and sustenance (Audretsch and Belitski 2017; Malecki 2018). However, the way such resources are accessed outside of an EE is not usually recognised or explained in the literature (Audretsch and Belitski 2017).

Additionally, an examination not only of what a successful EE may require but what stimulates or inhibits their development is important, especially if they may develop unintentionally. Such insights, however, are not apparent in the study of EEs. The EE literature instead offers extensive lists of attributes of what a successful EE should possess without explaining their cause and effect (Mason and Brown 2014; Auerswald 2015; Mack and Mayer 2016; Stam and Spigel 2016; Alvedalen and Boschma 2017; Spigel 2017; Spigel and Harrison 2018). Therefore, EEs are usually perceived as something made up of actors and factors to be described instead of as an ecosystem, made up of complex processes and relationships (Malecki 2018; Spigel and Harrison 2018).

2.4.1 An EE Model

Entrepreneurial ecosystem (EE) research looks at the roles various actors and resources play in supporting entrepreneurship. There are many EE models (Isenberg 2011; Mason and Brown 2014; Stam and Spigel 2016), however the one utilised for this thesis is that of the World Economic Forum (2013) (See Table 1). This EE model is considered most appropriate because it is informed by existing academic EE research. It also incorporates findings from forty-three countries in several regions, thereby acknowledging that EEs differ from country to country (World Economic Forum 2013). This EE includes eight pillars: 1) accessible markets, 2) human capital/workforce, 3) funding and finance, 4) support systems, 5) regulatory framework and infrastructure, 6) education and training, 7) major universities as catalysts, 8) cultural support (See Table 1).

Table 1: Eight Pillars and Components of the World Economic Forum's EE Model

Source: (World Economic Forum 2013)

Pillar	Component
Accessible Markets	<ul style="list-style-type: none"> • Domestic Market – Large Companies as Customers • Domestic Market – Small/Medium Companies as Customers • Domestic Market – Governments as Customers • Foreign Market – Large Companies as Customers • Foreign Market – Small/Medium Companies as Customers • Foreign Market – Governments as Customers
Human Capital/Workforce	<ul style="list-style-type: none"> • Management Talent • Technical Talent • Entrepreneurial Company Experience • Outsourcing Availability • Access to Immigrant Workforce
Funding and Finance	<ul style="list-style-type: none"> • Friends and Family • Angel Investors • Private Equity • Venture Capital • Access to Debt
Support System	<ul style="list-style-type: none"> • Mentors/Advisors • Professional Services • Incubators/Accelerators • Network of Entrepreneurial Peers
Regulatory Framework and Infrastructure	<ul style="list-style-type: none"> • Ease of Starting a Business • Tax Incentives

Pillar	Component
	<ul style="list-style-type: none"> • Business-Friendly Legislation/Policies • Access to Basic Infrastructure (for example water, electricity) • Access to Telecommunications/Broadband • Access to Transport
Education and Training	<ul style="list-style-type: none"> • Available Workforce with Pre-University Education • Available Workforce with University Education • Entrepreneur-Specific Training
Major Universities as Catalysts	<ul style="list-style-type: none"> • Major Universities Promoting a Culture of Respect for Entrepreneurship • Major Universities Playing a Key Role in Idea-Formation for New Companies • Major Universities Playing a Key Role in Providing Graduates for New Companies
Cultural Support	<ul style="list-style-type: none"> • Tolerance of Risk and Failure • Preference for Self-Employment • Success Stories/Role Models • Research Culture • Positive Image of Entrepreneurship • Celebration of Innovation

These World Economic Forum EE pillars (See Table 1) were informed by prior EE research and an online survey of over one thousand individuals with significant experience in early-stage companies in the US-Silicon Valley, USA (Other cities), Europe, Asia, Middle East and Africa and Australia/New Zealand, North America, and Mexico/South/Central America. Executive case studies from forty-three founders and senior executives of early-stage businesses in twenty-three countries also informed the model. Accessible markets, human capital/workforce, and finance and funding were the pillars considered to be most important for scaling in each geographic

grouping. Major universities as catalysts, education and training and regulatory framework/infrastructure had the lowest score. However, there were some variations amongst countries. For example, entrepreneurs in Mexico (thirty-nine percent) and Switzerland (twenty-eight percent) wanted better government regulation. Entrepreneurs in the USA and North America had the most access to all pillars, with Silicon Valley having the most (eighty-three percent). The non-American region with the most access was Europe (fifty-eight percent) while South/Central America with Mexico had the least at forty-one percent. The World Economic Forum's EE focuses on registered companies in the early stages of operation.

2.4.2 The Digital in EE

The relationship between digital platforms and an EE is vital since digital platforms are used to carry out all manner of activities and entrepreneurs depend on them (Autio et al. 2017; Sussan and Acs 2017). To this end, EEs have been described as a '*digital economy phenomenon*' (Autio et al. 2017, p. 74). The existence of EEs may precede the use of digital technology, but digital technology is now used by entrepreneurs to find and exploit resources within them in any place. The influence of digital platforms on an EE may also lead to EE's becoming defined not only by an entrepreneur but by digital users as well (Nambisan et al. 2017). There is, however, minimal investigation of the use of digital platforms by entrepreneurs in an EE context and such claims should not be taken for granted but should instead be further examined.

Research for the World Economic Forum (2013) 8 pillar model (See Table 1) found that entrepreneurs may think about scalability in a borderless way. However, governments tend to focus on initiatives within their country without consideration for how activities beyond national boundaries can positively support entrepreneurship. Digital platforms can be used to access resources beyond national borders, and so entrepreneurs do not have to be limited by their location. EE research does not significantly address this though it has been recognised that businesses rely on the internet to access resource globally (Autio et al. 2017).

The World Economic Forum's research and consequent EE model (See Table 1) (World Economic Forum 2013) identifies human capital, finance and market access as necessary for an EE to grow. However, it does examine how access to these pillars relate to access to other pillars (Stam 2015) such as education and training, government and regulatory framework or cultural support. Telecommunications/broadband is highlighted as a component in the regulatory and infrastructure pillar. Additionally, no further thought is given to how once telecommunications/broadband support is adequate, other types of digital infrastructure, such as digital platforms, can be instrumental in helping early-stage entrepreneurs to source resources

from within each of these pillars (Autio et al. 2017). For instance, digital platforms may be used to identify useful networks and strengthen an entrepreneur's social ties (Smith et al. 2017; Li et al. 2018) to develop the support system pillar.

Digital platforms may also be used to source education and training (Rippa and Secundo 2018) or funding and finance (Gerber et al. 2014; Nambisan et al. 2017) and could therefore provide a supportive social media network for entrepreneurs to meet and connect with advisors online. The use of digital platforms thus supports the internationalisation of entrepreneurship (Bell and Loane 2010), which is linked to the accessible markets pillar. It can, therefore, be reasoned that examining how and why entrepreneurs use digital platforms may help us better understand EE processes and relationships (Autio et al. 2017) and ultimate effectiveness (Spigel 2017).

Digital platform users, like consumers, may influence EEs (Autio et al. 2017; Sussan and Acs 2017). For example, many e-entrepreneurs collaborate with other entrepreneurs online when they launch their business. Entrepreneurs also collaborate with customers, suppliers, and competitors online to help promote their business and internationalise their companies (Matlay and Martin 2009). Additionally, as mentioned earlier, EE's could also come to depend on actors and resources that exist outside of an EE (Stam 2015; Malecki 2018). Further, access to these actors and resources could potentially depend on the use of digital technology (Autio et al. 2017). Furthermore, users can turn into competitors if engagement on these platforms encourages them to start a business of their own (Sussan and Acs 2017). The EE literature sorely lacks an insightful understanding of how entrepreneurs use digital platforms within EEs (Autio et al. 2017; Sussan and Acs 2017). The next section explains what is meant by digital platforms, to promote an understanding of digital platform and entrepreneur relationships in the context of an EE.

2.5 Digital Platforms

Digital platforms are central to this research which examines how digital platforms influence entrepreneurship in T&T. The research also examines the resources and rules that digital platforms offer entrepreneurs as they use them for interaction within T&T's EE. Such an examination is essential for understanding what is meant by digital platforms because definitions vary. The definition of digital platform used for this thesis will, therefore, be explained and justified.

2.5.1 Varied Perspectives on Digital Platforms

As mentioned in the introduction, digital platforms are virtual places, facilitating connections that support the exchange of information, products and services between 2 or more types of

participant groups (Gillespie 2010; Van Dijck 2013; Helmond 2015; Evans and Schmalensee 2016). However, in the literature, there are varied understandings of the term. For example, some describe digital platforms as multisided platforms which link and mediate the interaction between 2 distinct groups (Bauer 2014), such as buyers and sellers (Boudreau and Hagiu 2009). In this case, the value for 1 group increases as the number of participants from the other group increases (Evans 2003; Eisenmann et al. 2006). Such research tends to focus on financial dynamics like pricing (Rochet and Tirole 2002; Caillaud and Jullien 2003; Rochet and Tirole 2003; Eisenmann et al. 2006; Rysman 2009), platform competition (Eisenmann et al. 2006; Boudreau and Hagiu 2009; Markovich and Moenius 2009) and network effects (Katz and Srapiro 1985; Laffont et al. 1998; Zhu and Iansiti 2012).

Alternatively, digital platforms are characterised as online meeting places where information is shared, and collaboration happens (Gillespie 2010; Van Dijck 2013). Platforms are also seen as regulators (Parker et al. 2014; Tiwana 2014) that employ rules, rewards, or resources based on user participation (Parker et al. 2017). A technical view prioritises a definition of platforms (Gawer and Cusumano 2002; Yoo et al. 2010) as a layered architecture, both figuratively and computationally (Gillespie 2010). However, *'the word 'platform' is an inherently ambiguous term ... because it links the computational and the architectural to the social, the political and the cultural'* (Van Dijck 2013, p. 144). The term platform in the context of information communications technology (ICT) has proliferated in academic literature (Thomas et al. 2015). Variations of terms that use the word platform are used interchangeably and have come to mean different things to different researchers (Thomas et al. 2015).

Research on the use of digital platforms by entrepreneurs focuses on different types of online business models, that support e-commerce or *'... the sharing of business information, maintaining business relationships, and conducting business transactions by means of telecommunications networks'* (Zwass 1996, p. 3). Outlining these characteristics helps to provide more clarity (De Groen et al. 2017; de Reuver et al. 2018) on what a digital platform is for this research.

2.6 Four (4) Relevant Defining Characteristics of Digital Platforms

Consideration of digitisation is important for understanding the influence of digital platforms on society (de Reuver et al. 2018), and in this case, entrepreneurship. Four (4) characteristics of digital platforms will now be outlined and reviewed. These characteristics are: 1) Digital platforms as intermediaries; 2) Network externalities or network effects; 3) User interaction and user data; and 4) Generative socio-technical systems; all of which can support a more informed understanding of digital platform and entrepreneur relationships.

2.6.1 Digital Platforms as Intermediaries

Digital platforms act as intermediaries; that is, they facilitate direct interaction between two or more groups within or outside markets in a way that supports co-production and co-evolution. As intermediaries, they reduce the cost of searching for information, customers, products and services, and help an individual to more easily find what they need or connect with those they want to reach. For example, Amazon may help entrepreneurs to sell their products by making suggestions to potential buyers based on an assessment of their data. In so doing, they can decrease the cost of transaction among the various sides, for instance, by matching entrepreneurs with customers and customers with entrepreneurs, thereby providing value to all sides (Hagiu and Wright 2015).

Digital platforms are usually perceived as an online service supplied by a platform owner in the management information systems literature because digital platforms do not own all the goods and services offered on the platform (Gawer and Cusumano 2002; Rochet and Tirole 2003; Rochet and Tirole 2006; Belleflamme and Toulemonde 2009; Nambisan and Sawhney 2011). Today, some businesses operate online having no store presence and traditional industries now use digital platforms or are affected by their presence as more people use them.

Additionally, a mostly hidden element of this co-production and intermediation, '*technological unconsciousness*' (Beer 2009, 990) explains how individuals using digital platforms are often unaware of the influence protocols, algorithms, invisible interfaces, and related databases have on their behaviour and interests (Bucher 2012; Gillespie 2014; Orlikowski and Scott 2015). This phenomenon is worth considering because as explained earlier, some define entrepreneurs by their ability to take well-calculated risks and make the best decisions for the business.

2.6.2 Network Externalities or Network Effects

Secondly, platforms are characterised by network externalities or network effects (Evans 2003; Eisenmann et al. 2006; Boudreau and Hagiu 2009; Gawer and Cusumano 2014; Alstyne et al. 2016). This concept, which dominates the management information systems literature refers to the way the use of technology increases as the number of users increases (Katz and Srapiro 1985; Shapiro et al. 1998). Such externalities may be positive or negative. Typically, network externalities are also known as network effects (Katz and Srapiro 1985). Network effects occur when the value of consuming a product or service for 1 user increases or decreases depending on the number of other users who consume that product or service.

Local network effects refer to the extent to which friends, family, and other networks use the same platform and how this impacts the usability of that platform for an individual (Katz and Srapiro 1985). Moreover, just as there can be rapid scaling from positive network effects, the same can be true with negative network effects. For example, as more parents and grandparents joined Facebook, more young people left for another platform (Vaterlaus et al. 2016). The same can be said for Uber because at any given time if the number of people taking rides increases, this can lead to higher prices or longer waiting times per ride (Lu et al. 2018). If network effects affect the usefulness of a platform, it is helpful to understand their influences on entrepreneurs

2.6.3 User Interaction and User Data

Thirdly, digital platforms rely on user interaction and related data (Loebbecke and Picot 2015). Nevertheless, there is limited research in the entrepreneurship literature about how data on user interaction/behaviour (for example, from posts, likes, and reviews) influence entrepreneurial behaviour, processes, and outcome. This also includes related metadata, data that gives further data or information about that data, for example through cookies, and other transaction data, like time of login (Elmer 2004; Couldry and Turow 2014).

Data on user interaction from social media platforms such as likes, comments and posts are encoded and translated into suitable formats enabling further analysis of data. This translation supports their aggregation into larger datasets which supports the offering of suggestions to individuals and user groups to allow for personalisation used for advertising and other services (Alaimo and Kallinikos 2017). For example, by liking a Facebook photo, 2 data points are connected, then computed, subsequently influencing how the platforms engage with the user. In an analysis of a social media shopping platform, it was found that connecting varying data points could, for example, produce a new field called '*intention to buy*' (Alaimo and Kallinikos 2017, p. 181).

Additionally, the data supplied by digital platforms to third parties, for example, the number of unique views of a video may not be real because bots or automated programs are interacting like humans within these digital platforms. These can be spam bots that post malicious or harmful content, or they could be human assisted, like broadcast bots, that provide links to news and other content. These bots could contribute to an inaccurate assessment of platform data (Oentaryo et al. 2016). However, data on users and their activities are important for all platforms (Schwarz 2017; Mayer-Schönberger and Ramge 2018).

2.6.4 Generative Socio-Technical Systems

Fourthly, digital platforms are socio-technical systems, meaning they are developed and sustained through interdependent interaction between digital technology and humans (Kling 2007; O'Hara et al. 2012). Digital platforms are often left incomplete, to evolve following introduction to the public (Hanseth and Lyytinen 2010; Yoo 2013; Nambisan et al. 2017; Nambisan et al. 2019) and allow for varying levels of flexibility by those that use them. However, interaction and activity on the platform must also be controlled to maintain competitiveness (Gawer and Cusumano 2008; Zittrain 2008; Tilson et al. 2010; Yoo et al. 2010). Generativity or the possibility for platforms to grow, create, and support connected systems as part of the internet and its infrastructure is supported (Yoo et al. 2012). Generativity can also '*produce unprompted change driven by large, varied, and uncoordinated audiences*' (Zittrain 2006, p. 1980) and lead to constant, unpredictable, changes in digital platforms (Gawer and Cusumano 2008; Tiwana 2015; Nambisan et al. 2018). Consideration of digital platform influence as generative socio-technical systems can offer better insight into relationships between digital platforms and entrepreneurship in the context of the EE.

2.7 Platform Ecosystem

Digital platforms depend on platform ecosystems or an '*ecosystem of complementors that produce innovations that increase the success of the platform*' (Eckhardt et al. 2018, p. 370). For example, Facebook manages more than 1 type of platform ecosystem, with varying levels of restrictions and control that are still interrelated and supportive of its internal ecosystem (Schwarz 2017). Facebook, Instagram, and WhatsApp are all run by Facebook. Facebook also offers open authorisation (OAuth) identity service for logging into other platforms. In this case, an online shopping platform can also access the data of a Facebook user. Therefore, these platform ecosystems intertwine, and so research on digital platforms is challenged by the complexity of these platform ecosystems and the unavailability of information on their internal working (Henfridsson and Bygstad 2013; Eaton et al. 2015). The influence of these platform ecosystem connections on entrepreneurship can, however, be insightful.

Platforms can also become industry leaders (Cusumano and Gawer 2002; Schwarz 2017). For example, in some countries, Facebook is the main or the only way individuals communicate online (Galpaya 2017). The ability to gain big data (extremely large and complex datasets) from disparate sources gives platform owners new and useful insight and competitive advantage. Platform owners are therefore able to leverage useful information from their platforms that other entrepreneurs are not privy too. For instance, the European Commission fined Google €2.42 billion for taking advantage of their dominance of online search to promote their comparison shopping site (White 2017).

Some of the most popular digital platforms have crossed into other industries such as hardware (Amazon Kindle and Amazon Echo) or brick and mortar business (Amazon's offline bookstore and their recent purchase of Whole Foods, a grocer). Digital platforms may also seek to bring other service industries online (for example, Amazon's collaboration with JPMorgan Chase and Berkshire Hathaway for healthcare) (Tracer 2018). Therefore, digital platforms now compete in many industries.

2.8 Chapter Summary

This chapter explained some of the definitions of entrepreneurs, the role of an EE, and what is meant by the term digital platform. These explanations aid understanding of relationships between them. The chapter discusses how an explanation of the varied ways that entrepreneurship is defined can help to understand how digital platforms use have influenced different types of entrepreneurs. It recognises that while digital platforms may be resources, they can also be used to access resources, and so addresses current limitations inherent in the use of the EE concept. The next chapter explains the theory and method of Technology Affordances and Constraints that will be used to explore digital platform and entrepreneur interactions and relationships in an EE.

Chapter 3 Literature Review: TACT

3.1 Chapter Introduction

In the preceding chapter, I argued that we need to look closely at relationships between entrepreneurs and digital platforms in the context of an entrepreneurial ecosystem (EE). This chapter explains why Technology Affordance and Constraints Theory (TACT) and a TACT informed method provides a useful way of understanding such relationships. To provide further insight into the usefulness of the theory, it begins with a brief history of the affordances concept. An explication of affordances and a critical review of technology affordances follows to promote a full understanding of TACT as a theory. Seven (7) guiding principles of TACT are outlined to help identify affordances and constraints for this research. TACT research specific to e-commerce and entrepreneurship is then critically reviewed. This review then supports the identification of the most relevant affordances and constraints in the literature, which are presented in a new and useful way to inform the research method.

3.2 The Rationale for Using TACT

Digital platforms have become essential to the economy, yet the relationship between digital platforms and entrepreneurship has not been sufficiently explained (Autio et al. 2017). This research does not focus on entrepreneurship independently of digital platform use or focusing on digitally based entrepreneurship, as the literature tends to do (Hull et al. 2007; Zahra and Nambisan 2011). Instead, it examines the relationship that has developed between digital platforms and entrepreneurship. Such an examination is most appropriate because the research seeks to explain how entrepreneur interactions, instead of either the digital platform, entrepreneur or their environment influences entrepreneurship. An understanding of interactions and relationships is especially important because digital platforms not only provide services but mediate for others to deliver products and services at all stages of the entrepreneurial process in an interactive and interdependent way.

Technology Affordances and Constraints theory is a relational concept and provides a useful way of thinking about the relationship between digital platforms and entrepreneurs, necessary in an increasingly digitised world (Autio et al. 2017; Nambisan 2017; Volkoff and Strong 2017; Nambisan et al. 2019). The theory's usefulness becomes more apparent as boundaries between the physical and digital world blur, leading to unintended usage and unintended effects. For example, though the designers of mobile phones did not anticipate that the phones they created would revolutionise banking for people who had no access to traditional means of finance (the

unbanked) (Hughes and Lonie 2007). Neither did they expect that an increase in the use of mobile phones could reduce the levels of perceived corruption in some African countries because using the web decentralised the provision and access to information and facilitated communication, increasing the potential for detecting criminal activity (Baillard 2009). TACT research supports more informed solutions by encouraging policies that recognise the interdependence of digital technology, its users, and the social environment.

3.3 A Brief History of Affordances

TACT emerged from ecological psychology studies (Gibson 1986). The resulting ecological model views technology, individuals, and their social environment as part of 1 system. It was within this framework that research on the relationship between organisms and their environment (including human-made structures) was conducted to understand how each influenced the other. TACT considers that technology, like other human-made structures, changes the 'habitat' of humans, and as this new habitat changes, it may influence our behaviour (Gibson 1986). Once an affordance is identified, an individual can potentially adapt to their changed habitat and overcome any obstacles in their environment (Gibson 1986).

Further, it is the interaction between the subject (for example, individual) and object (for example, technology) that is most important for understanding either one (Gibson 1986, p. 129). The relations between organism and object is perceived based on what the organism needs and considers their end goal. For example, while a tree affords climbing, it may also afford sustenance from the food it provides to a human being, or afford a home for an animal, it could also offer affordances from the wood it provides to humans for multiple purposes like building a table or lighting a fireplace. However, this in no way means that each of these affordances will be actualised or perceived.

However, early TACT researchers (Gibson 1986; Norman 1988) prioritised the natural world in a way that black-boxed technology (Fenwick and Edwards 2010; Wright and Parchoma 2011) or made studying the way the technology operates difficult. Human-made affordances and natural world affordances were believed to be the same, limiting recognition of the impact of socio-cultural settings. However, although affordances are defined in the context of goals, the intent is not always easily known (Gaver 1991; Parchoma 2014, p. 361). Gibson (1986) later admitted this shortcoming and Norman (2008) tried to address this oversight of the importance of goal-oriented actors through acknowledging the influence of culture. However, this merely scratched the surface in recognising the importance of social and cultural complexities (Scarantino 2003). Affordances are also framed using a sociotechnical perspective so that technological objects are also social objects arising within specific social and institutional contexts (Zammuto et al. 2007).

Nevertheless, the idea that *'the world is full of potential, not of things'* (Hammond 2010, p. 206) continues to underlie TACT today.

3.4 An Explication of Affordances

One affordance that underlies TACT is the *functional* affordance (offering the possibilities for action for a specific type of user with a specific goal that enables and or constrain action). A functional affordance is also relational or *'related to a special user or user group'* (Mesgari and Faraj 2012, p. 3). A functional affordance is linked to a *conditional* affordance, meaning that the affordance is dependent on an individual's capacities (Hutchby 2001; Chemero 2003; Scarantino 2003).

The importance of the social world was also emphasised with the concept of *social* affordances to reiterate the importance of the environment (Boyle and Cook 2004; Schmidt 2007; Bloomfield et al. 2010; Majchrzak and Markus 2014a; Parchoma 2014; Stendal et al. 2016). Social affordances refer to *'possibilities for social interaction or sociability provided by the environment'* (Rietveld et al. 2017, p. 305) and are *'independent of a specific functionality'* (Stendal et al. 2016, p. 5272). The use of non-technological affordances is also accounted for using an organisational perspective, by differentiating between *individualised*, *shared*, and *collective* affordances (Leonardi et al. 2013). When only 1 person can potentially bring about an affordance, by using technology, it is referred to as an individualised affordance (Leonardi et al. 2013). A shared affordance on the other hand is one that all group members are privy to as members of a group who use the same features (Leonardi et al. 2013), while a collective affordance (Conole and Dyke 2004; Zammuto et al. 2007; Leonardi et al. 2013; Majchrzak et al. 2013; Stendal et al. 2016) requires many people doing different *'noninterdependent tasks'* (Leonardi et al. 2013, p. 752) to realise the same goal for everyone. For example, a group moderator may moderate comments while a group member may actively like posts that other members' share (Leonardi et al. 2013).

Some researchers revisited Gibson's description of small environment units that are embedded in overlapping ways within larger units (such as leaves embedded in branches which are embedded in trees) (Gaver 1991). This description points to affordances not being binary, that is, either existing or absent, but instead encompassing degrees or sequences, potentially existing one inside of the other (McGrenere and Ho 2000). Affordances are also said to come about through imbrication, a metaphor used to examine the events or processes that change behaviour or actions and subsequently change technology (Leonardi 2011). Events or actions are followed by changes to technology, leading to further behavioural changes. This imbrication is repeated through phases potentially leading to more constraining technology, fewer affordances or no affordances at all. This process was further unpacked using another metaphor, called strands

(Volkoff and Strong 2013). In this case, affordances and constraints are viewed as existing simultaneously, and even paradoxically in relation to the technology, the individual and their environment, so that each impact on the other.

However, some affordances are evident but not explored much in the literature. For example. *Hidden* affordances may exist but are not visible or known to the user (Nagy and Neff 2015). Users may also perceive affordances that platform designers did not anticipate (Markus and Silver 2008; Nagy and Neff 2015; Thapa and Hatakka 2017). These and other types of descriptive affordances are outlined in Appendix A.

3.5 Identified Technology Affordances and Constraints

A technology affordance arises from the interactions or relationships between an object (in this case, a digital platform or feature) and an actor (entrepreneur) in the context of the social environment (EE). Constraints, the obstacles that can be simultaneously constructed (Majchrzak and Markus 2014b) are just as significant. For the purposes of this thesis

'technology affordance refers to an action potential, that is, to what an individual or organization with a particular purpose can do with a technology or information system; technology constraint refers to ways in which an individual or organization can be held back from accomplishing a particular goal when using a technology or system'
(Majchrzak and Markus 2014b, p. 833)

Furthermore, affordances and constraints can be distinct (Leonardi 2011) but can also exist for the same technology or its features at the same time, particularly as they interact (Volkoff and Strong 2013). The definition of TACT applied in this thesis arises from a review of management information systems and organisational science literature. It accounts for digital platforms' dynamic nature and their relationship with the social environment.

Digital platforms response to user interaction is limitedly investigated in the literature (Markus and Silver 2008; Nagy and Neff 2015; Thapa and Hatakka 2017; Witteborn 2018) yet these are often both economically and politically motivated (Nagy and Neff 2015; Duffy et al. 2017). Platform owners change the way they describe themselves and their offerings based on attempts to influence policy, limit liability and increase income by negotiating the interests of their stakeholders, including users, advertisers, and clients (Gillespie 2010; Neff et al. 2012; Nagy and Neff 2015). Changed descriptions could lead to changes in long-standing understandings of what something means (Belk 2014) and may go up against entrenched social norms.

Digitisation of information supports a *de-coupling* affordance (Autio et al. 2017) referencing the potential for endless, seamless, and flexible recombinations of digital elements. '*Digital materiality*', or software and related code can change quickly and is incorporated within digital artefacts, a type of '*physical materiality*' (for example, a mobile phone) (Yoo et al. 2012, p. 1398) but then these also operate within social systems which may be reproduced when using technology (Gerardine and Poole 1994). The influence of this dynamic is important, but scarcely recognised in the literature (Nambisan et al. 2017).

Digital technology also provides rules and resources and can be differentiated by how limiting (restrictive) it is versus the flexibility its features allow (comprehensiveness) (Gerardine and Poole 1994). Platform as an information technology (IT) '*offers features (rules and resources or capabilities) and embodies a spirit (a general intent with regard to values and goals)*' (Strong et al. 2014, p. 56). *Symbolic expressions* refer to the variety of ways that a technological object can potentially communicate to that specific user (Markus and Silver 2008). This symbolic expression can be culturally based and may send messages that the designer of that technology did not intend. In this case, it can be a resource, but not one the designer intended to offer. Social groups also continue to reproduce social norms by using digital technology (Gerardine and Poole 1994).

Definitions and typologies of affordances have multiplied, and long lists of affordances are formulated for specific types of technologies and specific contexts (Majchrzak and Markus 2014a), so there is no consistent approach to studying affordances. Limited conceptual analysis of affordances can lead to inconsistent analysis and findings (Majchrzak and Markus 2014a; Parchoma 2014; Evans et al. 2017). However, as explained earlier it is a theory that has continually developed since it first emerged (Norman 1999; Zammuto et al. 2007; Leonardi and Barley 2008; Markus and Silver 2008; Faraj and Azad 2012; Volkoff and Strong 2013; Majchrzak and Markus 2014a) within information systems research. There is also growing application to entrepreneurship (Yoo et al. 2012; Ingram et al. 2014; Majchrzak and Markus 2014b; Felin et al. 2016; Autio et al. 2017; Nambisan et al. 2017; Smith et al. 2017) though much research applies to organisational contexts (Youngjin et al. 2006; Zammuto et al. 2007; Tilson et al. 2010; Treem and Leonardi 2012; Yoo et al. 2012; Majchrzak et al. 2013; Seidel et al. 2013; Volkoff and Strong 2013; Strong et al. 2014). However, this review helps to define what is meant by TACT and supports the following guidelines for the identification of affordances and constraints. These guidelines also build upon those proffered Volkoff and Strong (2017).

3.6 Seven (7) Principles of TACT - Application to Research Method

The literature describes 7 principles that build upon those outlined by Volkoff and Strong (2017), to aid identification of affordances and constraints from the data collected. These are as follows:

3.6.1 Principle 1: Focus on the Relationship

TACT is a *relational concept*, so features and outcomes cannot be identified as affordances (Majchrzak et al. 2013; Evans et al. 2017; Nambisan 2017; Volkoff and Strong 2017). Instead, the way that human, digital and material agencies work interactively to influence and change each another and the resultant relationships that arise (Zammuto et al. 2007; Volkoff and Strong 2013) is analysed, and so the social is as important as the technological. A relational affordance infers that individuals will interact differently based on their perception and the nature of their relationships (Koroleva and Kane 2017). For example, instead of just identifying the ability to form groups on a platform as an affordance (actions), the control settings (features) or using those groups for marketing as affordances (outcome), the relationship would be emphasised and an affordance can therefore potentially be described as *collaboration*.

3.6.2 Principle 2: Recognition of Duality and Interconnectivity of Affordances

Affordances can have varying levels of constraints (Zammuto et al. 2007). When 1 action is enabled, another action may be simultaneously constrained because both are incompatible. Additionally, affordances and constraints are not always separable (Lindberg et al. 2014; Strong et al. 2014; Volkoff and Strong 2017); therefore the degree to which the digital platform affords or constrains an entrepreneur is examined. For example, a payment platform may provide an *accessibility* affordance by allowing payment transactions with customers and suppliers overseas. However, this may not be actualised because of constraints that exist with banking or transportation.

3.6.3 Principle 3: Use of Verbs

Questions about actions and the immediate and concrete outcomes of actions and their experiences support reflective identification of affordances and constraints. Gibson tended to use a (verb-phrase) to describe affordances (Scarantino 2003). Affordances are therefore described through the use of verbs or gerunds (verbs that also function as nouns) (Majchrzak and Markus 2014a; Volkoff and Strong 2017). These words can be applied in both digital and non-digital contexts (Majchrzak and Markus 2014b; Bucher and Helmond 2018). For example, '*the push to talk*' via landline phones is the same as '*the push to talk*' through mobile instant messaging and is related to '*the push to talk*' without the need of an object (Woodruff and Aoki 2004, p. 409). Such a description is particularly useful when trying to articulate and name affordances. The same can be done for constraints, though this need not always be applied as constraints are usually described in the context of affordances, without such limitations in the literature.

3.6.4 Principle 4: Goal-orientation

The research will explore not just the overarching goal of the entrepreneur (for example to increase revenue), but will also explore tasks that relate to this goal in the context of the entrepreneur's environment (for example, finding supplies, receiving payment etc.) that may also place demands on them (Volkoff and Strong 2017). Identification of an entrepreneur's goals is important as this supports the identification of affordances and constraints concerning outcomes, events, and related structures.

3.6.5 Principle 5: Recognition of Unintended Consequences

This principle recognises that affordances and constraints may arise even when they are not perceived or planned for (Zammuto et al. 2007; Volkoff and Strong 2013). For example, an entrepreneur may plan to use a platform for a specific purpose, for instance, advertising and may end up using it for another purpose, to store information. Therefore, while it recognises goal-oriented interaction, it also acknowledges the unintended consequences that may arise from digital platforms (Majchrzak and Markus 2014b; Bucher and Helmond 2018).

3.6.6 Principle 6: Potential/Perceived Affordances

To avoid confusing debates that distinguish between perceived and real affordances, the level of awareness of an affordance or constraint (Volkoff and Strong 2017) is recognised. This awareness is based on the idea that affordances exist even if they are not actualised and even if the user did not perceive them (Volkoff and Strong 2017) for they are also *potential interactions* (Majchrzak and Markus 2014b). Similarly, while an entrepreneur may not actualise an affordance effectively at first, this may occur over time. Therefore, the potential for action exists even though the skills are not available. TACT helps to explain the role platforms may play in developing these skills (Volkoff and Strong 2017).

3.6.7 Principle 7: Technology as Providing Rules and Resources

Structures are fundamentally considered to be supported through rules that support or and constrain, but they are also resources that afford (Gerardine and Poole 1994; Poole and DeSanctis 2004; Poole 2009; Poole 2013; Strong et al. 2014). TACT recognises that technology develops and is influenced by pre-existing structures which may be technological or social. These structures influence not only the design of the technology but its future use and can entrench existing structures and social norms or be used to create new ones (Poole 2013). Structures grant both rules (for example, limits on what can be posted on a platform) and resources (for example, the

need to register online instead of in-person) therefore changing an element of social life (such as needing to go online to access a public service) (Poole 2013). Rules are consciously followed (Poole 2013), for instance, by following government regulation, or the explicit requests of a digital platform. Rules are also followed unconsciously, for example, an entrepreneur is guided by unknown algorithms, the unwritten social rules of a family or a cultural group offline or the informal rules that exist online (Poole 2013).

3.7 Identified Affordances and Constraints of Digital Platforms

Digital platforms are used to carry out entrepreneurial activities, and the data generated from using these digital platforms support innovation (Yoo et al. 2012; Yoo 2013; Majchrzak et al. 2016). However, researchers rarely consider how digitisation is changing the form and nature of entrepreneurship (Autio et al. 2017; Nambisan et al. 2018). I will now critically review the TACT literature to identify affordances and constraints that relate to digital platforms. A summary of these affordances is provided in Appendix B. This highlights the similarities and commonalities that exist amongst affordances and constraints across different types of digital platforms.

3.7.1 Easy Access

Digital platforms allow for the potential to connect with others at anytime and anywhere (Wellman et al. 2003), otherwise known as a *spatial* affordance. This spatial affordance relates to an *accessibility* affordance, or the potential to easily access information and resources (Ellison et al. 2014; Fox and McEwan 2017). Spatiality facilitates an *immediacy* affordance referencing the potential to easily access and exchange information extremely quickly (Conole and Dyke 2004; Halpern and Gibbs 2013). Immediacy has led to twenty-four-hour work patterns as users now require immediate responses, and the need to work constantly can be constraining (Conole and Dyke 2004). Information is also accessible from many different types of people/organisations all around the world, and so using digital platforms may enable a *diversity* affordance (Conole and Dyke 2004). On the other hand, accessing such large amounts of data could reduce the quality of the information provided and limit critical reflection and investigation of the information, provided as individuals may become lost when trying to understand all of this information (Conole and Dyke 2004). Individuals must become versed not only in searching but in selecting the most reliable and useful information (Conole and Dyke 2004).

3.7.2 Storing/Archiving/Retrieving

Digital platforms offer what is described as a *persistence* affordance (Treem and Leonardi 2012) or the potential for recordability or for information to be stored (Boyd 2010; Tokunaga 2011; Ellison

et al. 2015) or archived (Treem and Leonardi 2012; Ellison et al. 2014; Fox and Moreland 2015). However, individuals do not necessarily perceive information, in the same way, the second time they access it (Boyd 2010). Furthermore, memory loss can occur when the information is held by different platforms and is difficult to find (Kane 2011; Majchrzak et al. 2013), therefore limiting this *searchability* affordance (Boyd 2010). Additionally, a *recombinability* affordance represents the potential to build on another person's contributions (Faraj et al. 2011) and a *replicability* affordance supports copying or remixing information and data (Boyd 2010) thereby supporting an *experimentation* affordance or the potential to try new ideas (Faraj et al. 2011). However, it can be difficult to tell the origins or authenticity of data, (Boyd 2010) and the potential for unauthorised copying may increase (Conole and Dyke 2004).

3.7.3 Increased Visibility

A *visibility affordance* affords the potential to use digital platforms for finding information as well as for making yourself visible or identifiable online (Treem and Leonardi 2012; Halpern and Gibbs 2013; Leonardi et al. 2013; Vitak and Kim 2014; Fox and Moreland 2015; Fox and Warber 2015; Albu and Etter 2016; Evans et al. 2017). Visibility also permits viewing the content of others, often when alerted by platform notifications, which represents a *triggered attending* affordance. (Majchrzak et al. 2013). There is also an *extending reach* affordance or the potential for large scale and global reach, especially with the support of positive network externalities (Sutherland and Jarrahi 2018a). However, posting a picture of yourself, for example, can in some contexts lead to discrimination as the reproduction of biases and inequalities that already existed offline are replicated, and if undesirable information goes viral, this could be problematic (Boyd 2010).

3.7.4 Identifiability and Levels of Control

On the other hand, levels of affordances and constraints become especially clear in discussions of *privacy*, an affordance referring to the potential for users to hide themselves and their content online, intentionally or unintentionally (Fox and Moreland 2015). Levels of control are also evident with *identifiability* the potential to be identified, suggesting the extent to which individuals feel their real names or identities are out there despite the suggested privacy of their communication (Halpern and Gibbs 2013). The level of control of information, image, and conversations are varied (Kuo et al. 2013; Fox and McEwan 2017). In response, individuals may employ tactics to gain control by controlling when and how they respond (Vitak and Kim 2014) or not mixing professional contacts in personal networks (Ellison et al. 2015).

3.7.5 Context Collapse, Invisible Audiences, and Risk

It can also be difficult to know who benefits from information and interaction in a network (Halpern and Gibbs 2013). Distinguishing the varied individuals in an audience can be difficult because the existence of '*invisible audiences*' means that not everyone that views the content or contributes content is known, potentially increasing the risk of interaction (Boyd 2010, p. 45). This constraint is known as *context collapse* and can lead to unwanted complications when presenting yourself online and trying to manage various aspects of your identity (Boyd 2010; Marwick and Boyd 2014; Ellison and Vitak 2015).

Some platforms may not allow for varied *self-presentation* or the potential to provide information about yourself to varied online audiences in the way you want to. The way you present yourself may be the same for all interactions. For instance, Facebook has '*flattened*' different types and groups of individuals into one, increasing risk and uncertainty when interacting (Vitak and Kim 2014, p. 471). Further, individuals may accept friend requests from individuals who are friends with their friend to avoid the potential incurrence of a high social cost from rejecting the request (Boyd 2010). Risk, as well as fragility and uncertainty, are also evident with the potential for unexpected disruption at any time and without recourse (Conole and Dyke 2004).

3.7.6 Communication and Collaboration

Many affordances of social media relate to being able to associate or network with others. For example, a *communication* affordance represents the potential to find new ways to communicate digitally while a *collaboration* affordance offers the action potential to work or interact with others to create content or realise a particular outcome (Conole and Dyke 2004). *Metavoicing*, represents the potential for an individual to react to what others say and do online, thereby adding meta-knowledge (Majchrzak et al. 2013). However, when there are too many ways to communicate and not enough time available to engage with the various communities effectively, it could be challenging to reach a goal. Therefore, the weak or strong social ties supported by an *association* affordance indicating the potential for connections either between two individuals or an individual and a piece of information (for example, a comment on a posting) (Treem and Leonardi 2012) can also be counterproductive. The potential to form and manage online groups and communities or *group management* (Karahanna et al. 2018) can lead to the potential to form relationships with others which vary in the strength of social ties, a *relationship formation* affordance (Ellison et al. 2015).

3.7.7 Positioning of Self in Relation to Others

Social support from platforms, particularly those promoting high levels of interaction, can also foster technology acceptance (Junglas et al. 2013). They can give an individual the sense that they can access others virtually (activity support), provide meaning to digital features that help them interact online (representation support), give a sense of what others mean when communicating online (insight support) or offer a sense of who and where they are online (context support) (Junglas et al. 2013). In other words, the platforms provide many social cues, through a *bandwidth* affordance (Fox and McEwan 2017) though reports of reality can differ online and offline (Conole and Dyke 2004). Individuals may feel a sense of nearness with others in the digital platform space where experiences are shared because of a *social presence* affordance (Treem and Leonardi 2012).

3.7.8 Psychological Implications and Social Influences

There is very little TACT research into the emotional influences of digital platforms despite its ecological psychological underpinnings (Gibson 1986). Some research limitedly connects psychology to the perception of affordances by focusing on psychological need (Karahanna et al. 2018). *Egocentric* affordances refer to individual action that does not necessarily need input from anyone else to be actualised (Karahanna et al. 2018). *Allocentric* affordances refer to action possibilities that are social and need others to be enacted.

However, constant interaction with digital platforms for multiple purposes can elicit both emotional and irrational human responses (Nagy and Neff 2015) as psychology influences user interaction (Karahanna et al. 2018). However, the affordance literature does not usually consider how platforms influence perception (Blease 2015). Further, an increasing number of platform investors and former senior executives have raised concerns about the employment of psychological tactics by platforms to influence user behaviour (Locklear 2017; Rosenstein and Sheehan 2018), a phenomenon that has not yet been thoroughly investigated in the literature.

3.8 Limitations of Affordances and Constraints

The literature review on affordances and constraints reveals that a lot of the affordances and constraints of varying types of digital platforms are similar and their actualisation is closely related to the social environment and individual perception. Furthermore, while much of this research refers to social media platforms, this may hamper analysis because of preconceived notions about the role of social media. For example, while Facebook is described as a social media platform in the literature (Majchrzak et al. 2013), it was first a photo comparison site (Boyd and Ellison 2007)

and is also described as news site (Bakshy et al. 2015), an e-commerce site (Miller et al. 2016), provides services similar to gig-economy platforms (Liu 2018). Facebook has also announced that it plans to delve into cryptocurrency (Horwitz and Olson 2019).

A wide range of affordances has been identified in the literature, many of which are similar and called by different names. Despite this complexity, the examination of already identified affordances and constraints of digital technology provides a basis for developing a more concise way of identifying affordances and constraints for this research that builds upon the existing literature. It does so by bridging different views to show commonalities and differences that exist amongst affordances and constraints for a new understanding in the context of entrepreneurship. The next section reviews the literature on affordances and constraints that relate specifically to e-commerce, entrepreneurship, or management.

3.9 TACT: Research on Entrepreneurship/E-commerce

Several affordances and constraints are identified in the literature that use TACT to understand e-commerce or entrepreneurship in the context of digital platform use. These are critically assessed in relation to the guiding principles outlined and consider previous discussions about digital platforms and entrepreneurship in the literature review. Affordances identified here are also referenced in Appendix B.

3.9.1 Crowdfunding Platform

Existing literature using TACT to explore relationships between digital platforms and entrepreneurship include research on crowdfunding platforms in Sweden. Crowdfunding platforms allow many and varied individuals to provide small amounts of funding to a business. However, despite Sweden being ranked the second most entrepreneurial country in the world the use of crowdfunding platforms in Sweden was deficient because of perceptions of what an investor should be (have large amounts of capital, be able to provide additional skills, expertise and networks, and partnership) (Ingram et al. 2014). Entrepreneurs also thought they would be perceived as boastful, and this was socially unacceptable (Ingram et al. 2014). Therefore, the socio-cultural environment played a significant role in the decision to use these platforms. Platform rules were also constraining as Kickstarter, for example, did not allow foreign companies to invest while local crowdfunding platforms hindered access to more established investors.

3.9.2 Crowdsourcing Platform

Mechanical Turk, a crowdsourcing platform that enlists the services of many individuals for a very low fee, was perceived as providing the potential for *workplace flexibility* by allowing individuals to work from anywhere. It allowed for automation and was also affordable, despite meagre wages, lack of social interaction, and the drudgery of tasks (Xuefei and Joshi 2016, p. 656). The platform was, however, used to overcome these disadvantages. For example, the ability to curate work made these tasks more bearable (Xuefei and Joshi 2016). Flexible working hours also provided time for family, overshadowing shortcomings (Xuefei and Joshi 2016). Further, research is needed to understand how these types of platforms have changed entrepreneurship.

3.9.3 Online Social Commerce – The Chinese Context

Affordances that facilitate online social commerce (OSC), on the Chinese WeChat Platform have also been identified (Dong and Wang 2018). Online social commerce refers to social interactions on social media platforms for commercial activities. OSC is interesting because it emphasises how research on social media platforms must consider various connected elements of a platform and its infrastructure when studying digital platform/entrepreneur relations. For example, WeChat, a social commerce platform, was first a messaging platform and is now a social media platform and a mobile payment app, allowing for seamless connection and use within one network. In addition, to *metavoicing* and *triggered attending*, described earlier (Majchrzak et al. 2013) *guidance shopping* affordances, represents the potential for buyers to personalise services and a *social connecting* affordance represents the potential for buyers and sellers easily connect.

Trust in sellers, and the platform, intention to buy again and satisfaction with previous purchases are measured to help them identify these affordances. The conclusion was that these are not simply e-commerce transactions, as varying levels of buyer and seller social ties helped overcome limitations of physical separation and supported sales. This finding reiterates the importance of the social elements for business, showing that success is dependent not only on commercial savvy but also online sociality as well. Further, this platform has developed differently to Western platforms. It integrates social media with payment and messaging for 1 experience that is more closely monitored by the government (Dong and Wang 2018). This research emphasises the importance of understanding the cultural and social context of digital platform use for entrepreneurship.

3.9.4 Entrepreneurship through E-commerce in Rural Areas – Chinese Context

The potential for digital platforms to support entrepreneurial opportunity and the development of e-commerce in rural communities is investigated in case study research on the successful use of Alibaba's Taobao (e-commerce) in 2 remote Chinese villages (Leong et al. 2016). These platforms helped different actors to access a diversity of resources and markets. The platform supported local e-commerce, helping to overcome constraints to self-sufficiency without the need for external investment and support from government or NGOs (Leong et al. 2016).

The usefulness of applying TACT is evident as unintended consequences are also identified. Some were positive such as the creation of a supportive EE where none existed before. The successful use of this platform, now the centre of this EE, prompted support for entrepreneurial activities by a youth association and consequently gave rise to government support for initiatives. Alibaba's Taobao facilitation of the provision of diverse offerings supported the diversification of the local economy, through a *variability* affordance, which reduced reliance on a few industries. However, some negative outcomes included environmental degradation and weakened social relationships (Leong et al. 2016).

3.9.5 Gig-Economy Affordances and Constraints

As highlighted earlier, gig-economy platforms enable individuals to be hired '*under 'flexible' arrangements, as 'independent contractors' or 'consultants,' working only to complete a particular task or for a defined time*' (Friedman 2014, p. 171). Individuals may be both consumers and providers of services on a platform. Gig economy platforms are provided for transportation, (for example, transport (Uber), freelance work (Fiverr) or accommodation (Airbnb)). Affordances and constraints of gig-economy platforms include *generating flexibility*, or potentially allowing the user to participate however and whenever they want to (for example, with open and easy sign-up, and switching platform roles) (Sutherland and Jarrahi 2018a). However, rating systems could be constraining because new users can be barred for non-transparent reasons (Sutherland and Jarrahi 2018a).

Further, continuous participation on a platform may be required for good ratings, yet entrepreneurs may not want to dedicate significant time resources for participation. A *match-making* affordance represents the potential to match users across the network based on their attributes, but algorithms can also assign matches that are not in the best interest of the user that individuals may then find ways to circumvent (Sutherland and Jarrahi 2018a). For example, if an Uber driver is assigned a pickup far away for a short distance ride, this may not be in the driver's best interest because this ride provides little income (Edelman and Geradin 2016).

3.9.6 Social Affordances and Trust

Additionally, a *trust building* affordance or the potential to build trust through continuous interaction and communication on the platforms is evident (Sutherland and Jarrahi 2018a). Digital technologies vary in the extent to which they are perceived as human, and impact perceptions of trustworthiness (Lankton et al. 2015). For example, '*human-like trust*' the perception of the technology having human-like qualities is identified (for example, through showing profile photos or writing reviews) (Lankton et al. 2015, p. 880). On the other hand, '*system-like trust*' refers to trust in the system working as the user wants it to (Lankton et al. 2015, p. 880). Trust may support an '*affordance of sociability*', by offering the potential for individuals to interact (Lankton et al. 2015, p. 880). Smith et al. (2017) also identifies several affordances that support the ability for businesses to develop social capital online in ways that differ from face-to-face interaction.

3.9.7 Collaboration with Businesses Through Social Media Platforms

Furthermore, digital platforms are continually evolving and adapting based not only on designer intent and algorithms but user data (Nagy and Neff 2015). For example, it was necessary to analyse not only the content on platforms concerning a music festival but where possible to investigate how businesses or brands fund and engineer social media platforms (Carah and Angus 2018). Facebook and Instagram were being buoyed by brands that support a *participatory* affordance, allowing participants to share photos, videos, and comments which helped businesses promote their brand (Carah and Angus 2018). This participation can influence the online conversation of a business and its products and help improve perceptions of that business (Kietzmann et al. 2011).

3.10 Synthesis of Affordances and Constraints

Having reviewed the literature on technology affordances and constraints as it relates to information systems research (See Appendix B for a complete list of affordances and Appendix C for a complete list of constraints) a list of the most prominent and applicable affordances (See Table 2) and constraints (See Table 3) are highlighted. This table provides a synthesis of the most relevant affordances and constraints emerging from the literature review. Some of the affordances are described as features or outcomes rather than descriptions of relationships and action potentials based on the seven principles of TACT that were outlined. This synthesis creates a more concise way of identifying relationships between digital platforms, entrepreneurs, and their environment to better identify affordances and constraints without replication.

Chapter 3

Some affordances are called by different names but described similarly (See Table 2). For example, the self-presentation affordance, described as *'the possibilities for actions serving to create and demonstrate the personal image and identity'* (Mesgari and Faraj 2012, p. 7) is called identifiability by (Halpern and Gibbs 2013). Facets of this definition can be incorporated in other reported affordances like presence signalling (Karahanna et al. 2018), which refers to the potential to indicate your presence or availability online or the ability to know when others are present or triggered attending which refers to the potential to respond to someone/something after being alerted to their presence (Majchrzak et al. 2013). These affordances can be subsumed under a visibility affordance or the potential for you and your information to be seen or to see others and their information. Another example is social feedback, which refers to adding to existing knowledge by responding to the content posted by others (Fox and Moreland 2015), but this affordance is also described as metavoicing (Majchrzak et al. 2013).

Some affordances like communication are wide-ranging and evident for all platforms as they are information communications technologies (ICTs). Under communication, other wide-ranging affordances like spatial and immediacy are subsumed. Some affordances are called the same name but described somewhat differently, sometimes based on the context of the platform under review. For example, a control affordance is called the *'possibilities for actions serving to observe the changes, others' behaviours, and their contributions'* in the context of Wikipedia (Mesgari and Faraj 2012, p. 6). However, a control affordance is instead described as the potential to control information or information control and conversations or conversation control for other types of communicative media (Fox and McEwan 2017).

A similar process is undertaken for constraints. As mentioned in the principles of affordances section (Section 3.6), constraints do not need to be described as action verbs in the same way as affordances. Therefore, the synthesis of constraints has been summarised based on an assessment of how the constraint is described in the literature. The affordances and constraints identified in the literature have been organised and synthesised, and those considered most important to digital platform/entrepreneur relations have been highlighted (See Table 2 and 3). It also highlights how various affordances in the literature are related to the broader group of digital platforms instead of 1 type of platform, or group of platforms, like social media platforms. It recognises digital platforms as a type of technology that is characterised by certain commonalities.

Table 2: A Synthesis of Technology Affordances

	Affordances	Description	Research
1	Communication	The potential for users to directly communicate with each other.	<p>Communication (Karahanna et al. 2018)</p> <p>Connected (Wellman et al. 2003)</p> <p>Activity support (Junglas et al. 2013)</p> <p>Metavoicing (Majchrzak et al. 2013)</p> <p>Metavoicing (Karahanna et al. 2018)</p> <p>Metavoicing (Dong and Wang 2018)</p> <p>Multimediality (Schrock 2015)</p> <p>Social feedback (Fox and Moreland 2015)</p> <p>Reflection (Conole and Dyke 2004)</p> <p>Connectivity (Fox and Moreland 2015)</p> <p>Representation support (Junglas et al. 2013)</p> <p>Insight support (Junglas et al. 2013)</p> <p>(Woodruff and Aoki 2004)</p>
	<ul style="list-style-type: none"> Spatial 	The potential for communication and action anywhere and at any time.	<p>Spatial (Xuefei and Joshi 2016)</p> <p>Spatial (Autio et al. 2017)</p> <p>Wireless Portability (Wellman et al. 2003)</p> <p>Portability (Boyd 2010)</p> <p>Portability (Schrock 2015)</p> <p>Bandwidth (Fox and McEwan 2017)</p>

	Affordances	Description	Research
			Bandwidth (Wellman et al. 2003) Virtualisation Xuefei and Joshi (2016)
	<ul style="list-style-type: none"> Immediacy 	The potential ways digital technologies allow information to be exchanged at unprecedented speed.	Speed of Change (Conole and Dyke 2004) Automation (Xuefei and Joshi (2016) Synchronicity (Fox and McEwan 2017) Triggered attending (Majchrzak et al. 2013) Triggered attending (Dong and Wang 2018)
2	Accessibility	The potential to easily access information and resources.	Accessibility (Conole and Dyke 2004) Networked information access (Halpern and Gibbs 2013) Accessibility (Fox and McEwan 2017) Accessibility (Fox and Moreland 2015) Sourcing (Karahanna et al. 2018) Replicability (Boyd 2010) Searchability (Boyd 2010)
	<ul style="list-style-type: none"> Diversity 	The potential to access varied types of information from many different types of people, places, and groups all around the world.	Diversity (Conole and Dyke 2004) Browsing others' content (Karahanna et al. 2018) Browsing others' content (Halpern and Gibbs 2013) Diversity (Treem and Leonardi 2012) Variability (Leong et al. 2016)

	Affordances	Description	Research
			Multimodal and non-linear (Conole and Dyke 2004)
	<ul style="list-style-type: none"> Supplementing memory 	The potential for information, including that related to transactions to continually be accessible to users.	Persistence (Treem and Leonardi 2012) Persistence (Boyd 2010) Recordability (Tokunaga 2011) Recordability (Ellison et al. 2015) Persistence (Fox and Moreland 2015) Persistence (Fox and McEwan 2017)
3	Visibility	The potential to use digital platforms for finding information as well as for making yourself visible or identifiable online.	Visibility (Treem and Leonardi 2012) Visibility (Albu and Etter 2016) Visibility (Fox and Moreland 2015) Visibility (Fox and Warber 2015) Visibility (Vitak and Kim 2014) Visibility (Dong and Wang 2018) Retrievability (Smith et al. 2017) Viewability (Smith et al. 2017)
	<ul style="list-style-type: none"> Self-presentation 	The potential to reveal and present information about one's self that one wants to present.	Self-presentation (Mesgari and Faraj 2012) Availability (Schrock 2015) Self-presentation (Karahanna et al. 2018) Representation support (Junglas et al. 2013)

	Affordances	Description	Research
			<p>Presence signaling (Karahanna et al. 2018)</p> <p>Signaling (Smith et al. 2017)</p> <p>Identifiability (Halpern and Gibbs 2013)</p> <p>Presence Signaling (Karahanna et al. 2018)</p> <p>Locatability (Schrock 2015)</p> <p>Personalization (Wellman et al. 2003)</p> <p>Editability (Treem and Leonardi 2012)</p> <p>Editability (Vitak and Kim 2014)</p> <p>Editability (Fox and McEwan 2017)</p> <p>Context support (Junglas et al. 2013)</p>
	<ul style="list-style-type: none"> Extending reach 	The potential for large scale and global reach and visibility.	<p>Extending reach (Sutherland and Jarrahi 2018a)</p> <p>Scalability (Boyd 2010)</p> <p>Bandwidth (Wellman et al. 2003)</p> <p>Broadcasting (Mesgari and Faraj 2012)</p>
4	Collaboration	The potential to work or interact with others to create content or realise a particular outcome.	<p>Collaboration (Mesgari and Faraj 2012)</p> <p>Collaboration (Karahanna et al. 2018)</p> <p>Contribution (Mesgari and Faraj 2012)</p> <p>Reviewability (Faraj et al. 2011)</p> <p>Insight support (Junglas et al. 2013)</p>

	Affordances	Description	Research
			<p>Network-informed associating (Majchrzak et al. 2013)</p> <p>Activity support (Junglas et al. 2013)</p> <p>Network association (Fox and McEwan 2017)</p> <p>Organisational networks (Ellison et al. 2015)</p>
	<ul style="list-style-type: none"> Sharing 	The potential for sharing and distributing content unrelated to one's self to others.	<p>Contribution (Mesgari and Faraj 2012)</p> <p>Shareability (Smith et al. 2017)</p>
	<ul style="list-style-type: none"> Management 	The potential to manage interactions within a group/community/network.	<p>Management (Mesgari and Faraj 2012)</p> <p>Group management (Karahanna et al. 2018)</p>
5	Relationship formation	The potential to form relationships with others which vary in the strength of social ties.	<p>Relationship formation (Karahanna et al. 2018)</p> <p>Association (Treem and Leonardi 2012)</p> <p>Social interactivity (Smith et al. 2017)</p> <p>Trust building (Sutherland and Jarrahi 2018a)</p>
	<ul style="list-style-type: none"> Social presence 	The potential to participate in productive online knowledge conversation which helps to sustain an online community.	<p>Social connecting (Dong and Wang 2018)</p> <p>Generative role-taking (Majchrzak et al. 2013)</p> <p>Association (Treem and Leonardi 2012)</p>

	Affordances	Description	Research
			<p>Social presence (Fox and McEwan 2017)</p> <p>Identity information (Ellison et al. 2015)</p> <p>Relationship formation (Ellison et al. 2015)</p> <p>Social presence (Lee et al. 2014)</p> <p>Affordances for sociality (Lee et al. 2014)</p>
6	Flexibility	The potential to flexibly participate in the way you want to and when you want to.	<p>Generating Flexibility (Sutherland and Jarrahi 2018a)</p> <p>Flexibility Xuefei and Joshi (2016)</p> <p>Openness (Leong et al. 2016)</p> <p>Recombinability (Faraj et al. 2011)</p> <p>Experimentation (Faraj et al. 2011)</p> <p>Transversability (Smith et al. 2017)</p>
	<ul style="list-style-type: none"> Control 	The potential to control and personalise your conversations and information.	<p>Control (Mesgari and Faraj 2012)</p> <p>Personalisation (Fox and McEwan 2017)</p> <p>Conversation Control (Fox and McEwan 2017)</p> <p>Information Control (Fox and McEwan 2017)</p> <p>Information control (Kuo et al. 2013)</p> <p>Expressive information control (Kuo et al. 2013)</p>

	Affordances	Description	Research
			Privacy information control (Kuo et al. 2013)

Table 3: A Synthesis of Constraints of Digital Platforms

	Constraints	Description	Researchers
1	Monopolisation	The potential for monopolisation of specific platforms because of the exploitation of network effects and little interoperability between technologies.	(Conole and Dyke 2004) (Fox and Moreland 2015)
	<ul style="list-style-type: none"> Being tethered 	The potential to feel pressured to use a specified technology.	(Fox and Moreland 2015)
	<ul style="list-style-type: none"> Information overload 	The potential for less critical reflection on the information presented and less sense of self.	(Conole and Dyke 2004)
2	Surveillance	The potential for having your rights infringed as a result of continually being tracked, often without your knowledge.	(Conole and Dyke 2004)
	<ul style="list-style-type: none"> Lack of Privacy 	The potential inability to hide yourself and your activities from others.	Privacy (Boyd 2010) Lack of privacy (Fox and Moreland 2015) Lack of control (Fox and Moreland 2015) (Vitak and Kim 2014) (Conole and Dyke 2004) (Kuo et al. 2013)

	Constraints	Description	Researchers
3	Risk, fragility, uncertainty	The potential for unexpected and disruption at any time which can have a tremendous impact on the ability to successfully meet your goals.	(Conole and Dyke 2004)
	<ul style="list-style-type: none"> Lack of control 	The potential inability to control or manage information and activity on the platform about yourself or others.	Gerardine and Poole (1994) (Sutherland and Jarrahi 2018a) Lack of information control (Fox and Moreland 2015) Lack of conversation control (Fox and Moreland 2015) Managing inappropriate or annoying content (Fox and Moreland 2015) Speed of change (Conole and Dyke 2004) (Kuo et al. 2013)
	<ul style="list-style-type: none"> Inability to identify authenticity 	The potential inability to select the best information/resources and access to the authenticity of the information.	(Conole and Dyke 2004)
	<ul style="list-style-type: none"> Copying 	The potential increase in duplication of content with no knowledge of its origin.	(Conole and Dyke 2004)
4	Context collapse	Potential complications arising from the inability to present the appropriate context associated with oneself for a particular interaction.	(Fox and McEwan 2017)

	Constraints	Description	Researchers
			(Boyd 2010; Marwick and Boyd 2014; Ellison and Vitak 2015)
	<ul style="list-style-type: none"> Incorrect matching 	The potential for providing information, content, and interaction that does not match what you asked for or want.	(Sutherland and Jarrahi 2018b)
	<ul style="list-style-type: none"> Relationship tension 	The potential for interactions to create or exacerbate online or offline conflicts.	(Fox and Moreland 2015)
	<ul style="list-style-type: none"> Social comparison and jealousy 	The potential for individuals to engage in social comparison, for example, by comparing their lives to others, potentially resulting in feelings of jealousy or dissatisfaction.	(Fox and Moreland 2015)
	<ul style="list-style-type: none"> Replicating inequalities and societal constraints 	The potential for inequalities that already existed in the offline world to be replicated.	(Boyd 2010) (Conole and Dyke 2004)
	<ul style="list-style-type: none"> Invisible audiences 	The potential inability to know who you are interacting with and respond appropriately.	(Boyd 2010)
	<ul style="list-style-type: none"> Blurred public and private boundaries constraints 	The potential lack of control and difficulty faced in distinguishing between public and private spaces that can lead to activities and practices that you wish to remain private becoming public.	(Boyd 2010)
	<ul style="list-style-type: none"> Fragmentation 	The potential for increased fragmentation of networks that are unable to support the attention	(Wellman et al. 2003)

	Constraints	Description	Researchers
		needed to gain benefits from participation in a group or community.	

3.11 Chapter Summary

This chapter explained the applicability and usefulness of TACT to this research. It first reviews the origins and history of technology affordances and constraints theory, to provide context for its use. Next, it reviews the perspectives on technology affordances and constraints in the management information systems literature describing the way many researchers use the term affordance to describe what an affordance is. This TACT review helped to develop 7 principles for TACT that guides the identification of affordances and constraints. Research that uses TACT to explain the relationship between digital platforms and entrepreneurship, commerce and management is then reviewed to illustrate how using TACT enables a more in-depth understanding of the way the social environment may influence how entrepreneurs engage with digital platforms.

A review of the TACT literature allowed for the identification of key affordances and constraints in the literature, many of which not only co-exist but overlap. These affordances and constraints were then synthesised, so that the most relevant affordances and constraints could be identified. This synthesis provides a new and concise way to analyse entrepreneur and digital platform interactions and relationships and in so doing, identify technology affordances and constraints and understand their relationships. The next section focuses on entrepreneurship in Trinidad and Tobago and facilitates an understanding of the economic, cultural, social, and technological context in which the entrepreneurship under study takes place.

Chapter 4 Entrepreneurship in Trinidad and Tobago (T&T)

4.1 Chapter Introduction

This chapter explains the environment within which the entrepreneurship under study takes place. It begins by providing an overview of the economic, cultural, social and digital technology environment in Trinidad and Tobago and follows with a review of existing literature on entrepreneurship in the country. The literature reviewed includes Global Entrepreneurship Monitor reports (2010-2014), which focusing on how entrepreneurs and their stakeholders in T&T perceive entrepreneurship. This chapter provides a useful contextualisation of entrepreneurship for this research.

4.2 Social, Economic, and Digital Technology Environment

4.2.1 Socioeconomic environment

T&T is categorised as a developing high-income country (World Bank 2016a). The export of oil and gas has made it one of the wealthiest countries in the Caribbean and Latin America (Oxford Business Group 2017). In 2018 T&T had a GDP of 23.284 US \$ and a GDP per capita of 16930.881 US \$ (International Monetary Fund 2018). As mentioned earlier, the energy sector accounted for approximately thirty-five percent of GDP in 2017 and is forecasted to grow to approximately thirty-six percent in 2018 (The Government of the Republic of Trinidad and Tobago 2018). The exchange rate for 1 US \$ is 6.73809 TT \$ (1 August 2019) (Exchangerates.org 2019).

Oil and gas accounted for approximately eighty percent of exports in 2017 (Oxford Business Group 2017). However, it is also categorised as a developing country by the United Nations (United Nations 2018). On the other hand, the United Nations Development Programme (UNDP) Human Development Index (HDI) (a measure of human development using indicators such as life expectancy, health, knowledge, and standard of living) gives Trinidad and Tobago an above-average human development score of 0.784. T&T, therefore, ranks sixty-nine out of one hundred and eighty-eight countries and territories and the second highest in the Caribbean in 2017 (United Nations Development Programme 2018).

Primary, secondary, and university education is free and supports a ninety-nine percent literacy rate (2010 estimates) (United Nations Educational Scientific and Cultural Organization 2017). Health care services are also freely provided, and there is a life expectancy (2016 estimate) for

male/female) of sixty-eight to seventy-six years of age) (World Health Organization 2019). T&T, however, faces high levels of corruption, increasing levels of serious crime. For example, there were five hundred and thirty-eight murders in 2019 (the second highest ever recorded (TT Crime 2019). Low levels of regulatory enforcement also exists (Adams and Sanchez 2018). T&T is also listed seventy-seven out of one-hundred and eighty countries in Transparency International's Corruption Perception Index, which measures public sector perception of corruption, with a score of forty-one out of one-hundred, with one-hundred being the most transparent (Transparency International 2016).

T&T is a twin-island Caribbean nation with a population of 1.4 million (Tobago has approximately sixty-one thousand) (International Monetary Fund 2018). It is a multicultural society, with a majority Indian and African descent population, a significant mixed-race group as well as others of Lebanese/Syrian, Chinese, and European (French, Portuguese, Italian, Spanish, and British) descent (Sarah England, 2009). There is also new immigration from India, Nigeria, the Philippines, China, Latin America, as well as other Caribbean nations (International Migration Organisation 2016). T&T is considered the most ethnically diverse country in the Caribbean (Karides 2010). It is multi-religious having Hindus, Muslims and others of multiple Christian faiths.

Political parties are highly divided along African and Indian ethnic lines (Munasinghe 2001; England 2010). However, a '*dougl'a*' or mixed identity is celebrated because a multicultural history has also lead to the perception of the country as one that is creolised. This perception also exists because various cultural influences have helped to form the culture and also forms a large part of how citizens identify themselves (England 2010, p. 198). Through the Caribbean Community (CARICOM), which supports economic, foreign policy, human and social development and security integration and cooperation (Caribbean Community 2019), T&T has relations with the rest of the Caribbean, North America and Europe (Sandberg et al. 2006).

4.2.2 Information Communications Technology (ICT) Infrastructure

T&T has comparatively high levels of internet usage (International Telecommunications Union 2017a), though services may be prohibitively expensive in some rural areas (Ramlal and Watson 2014). The country ranks sixty-eight out of one-hundred and seventy-six countries globally (fourth in the Caribbean) by the International Telecommunication Union's (ITU's) ICT Development Index (International Telecommunications Union 2017a), which assesses and compares, internationally agreed standards used to measure the digital divide and the development of ICT across countries (International Telecommunications Union 2017b). For example, the internet bandwidth per user (Bits) in T&T is higher (approximately one hundred and eighty-two thousand and eight hundred

and eight) than the average in the Americas, (ninety-one thousand) and the approximate percentage of individuals using the internet (seventy-three percent) is also above the average for the Americas (sixty-four percent) (International Telecommunications Union 2017a). Mobile internet penetration grew from about fifteen to fifty-two percent between 2011 and 2016 (Oxford Business Group 2017). T&T has high-quality, fixed-line internet providers, and two mobile operators that invested in necessary infrastructure and provide cost-effective services (Oxford Business Group 2017). The percentage of individuals using the internet is estimated at eighty percent, while approximately seventy-one percent of households have access to a computer (Kemp 2017).

Trinidad ranked sixty-seven out of one-hundred and nine countries (the highest in the Caribbean) for the World Economic Forum's Networked Readiness Index (NRI), which measures how well a country may be able to leverage the benefit of information communications technology (World Economic Forum 2016). Additionally, the country ranked twenty-seven out of one-hundred and thirty-nine for its infrastructure and digital content, an indicator used for the NRI that assesses how much the ICT infrastructure has improved, and the availability of digital content. For business and innovation, another NRI indicator, the quality of varying business frameworks is assessed. This indicator includes how easy it is to do business in the country and how accessible and in-demand new technology and innovative products are. For this dimension, T&T ranks seventy-seven out of one-hundred and thirty-nine (World Economic Forum 2016). Some supportive technological infrastructure/support include the Tamana InTech Park (costing approximately 1.1bn TT \$), which was developed to promote science and technology innovation (Oxford Business Group 2017).

4.3 Research on Entrepreneurship in T&T

4.3.1 Literature Search

To understand the local context within which digital platforms may be used it is important to assess what academic research has said about entrepreneurship in T&T. Therefore, a search for academic literature on entrepreneurship in Trinidad and Tobago was done using Scopus, the world's largest citation database for peer-reviewed literature (Elsevier 2019). A search for the keywords 'Trinidad and Tobago entrepreneur' revealed ten results (articles (6), conference papers (2), (book chapter (1) and review (1)). Other searches were done for 'microenterprise' and 'Trinidad and Tobago', as well as 'micro-enterprise' and 'Trinidad and Tobago' on Scopus and both searches, resulted in 1 journal article, which differed from each other. This search was not very useful.

Micro-businesses or microenterprises are not legally considered by Section 1 8A of the Corporation Tax Act Chapter 75:02, which describes a small business as possessing between two-hundred and fifty thousand and 1.5 million TT \$ in assets and between two-hundred and fifty thousand and 5 million TT \$ in annual sales (International Labour Organisation 2000).

Approximately twenty-five thousand registered businesses or ninety percent of all registered businesses in Trinidad and Tobago are micro or small. It should be noted that research has found that some small businesses enter the informal sector to avoid heavy regulation and taxation (Sookram and Watson 2008). The Trinidad and Tobago Ministry of Labour, Small and Micro Enterprise Development's Draft MSE (micro and small enterprises) Development Policy 2014-2016. Table 4 further explains what is meant by micro, small, medium, and large business in T&T.

Table 4: Definitions of Micro, Small, Medium and Large Businesses in T&T

Source: (Ministry of Labour and Small and Medium Enterprise Development 1995)

Size	Number of Employees	Assets (TT\$)	Annual sales (\$TT)
Micro	1-5	< \$250,000	< \$250,000
Small	6-25	\$250,000 - \$1,500,000	\$250,000 - \$5,000,000
Medium	26-50	\$1,500,000 – \$5,000,000	\$5,000,000 – \$10,000,000
Large	< 50	< \$5,000,000	< \$10,000,000

A search on UWIlinc, The University of the West Indies (UWI) Libraries Information Connexion (The University of the West Indies 2017) for 'entrepreneur' and 'Trinidad and Tobago' revealed nine-hundred and eight results with two-hundred and thirty-six peer review journals. On closer inspection, the vast majority of these were dated having been published in the 1980s or 1990s and did not consider entrepreneurship, or how digital technology was used for entrepreneurship and many were related to other countries or the Caribbean more broadly and or did not look at entrepreneurship exclusively. Therefore, this search did not prove very useful for finding information on entrepreneurship on the use of digital platforms for entrepreneurship.

A search for 'microenterprise', 'micro-enterprise' and 'Trinidad and Tobago', as with the Scopus search was also done for UWIlinc revealing seventy-three results for peer-reviewed journals, though a lot of the research related to policy and finance, were dissertations, or government

reports. What was noticeably absent in both the Scopus search and the search on UWllinc was literature on the use of the digital technology for entrepreneurship. Additional research done using Google search and Google Scholar was more helpful, in finding articles and book chapters on entrepreneurship, that were not found in the Scopus database, though only a few discussed entrepreneurs' use of digital platforms.

Research on entrepreneurship in T&T focused on issues like self-employment by low-income groups (Verrest 2013; Prentice 2017), the relationship of entrepreneurship to health (Rietveld et al. 2016), women entrepreneurs (Ramkissoon-Babwa 2015; Prentice 2017), Entrepreneurial Attitude Orientation (EAO) in relation to education (Esnard 2010), the link between ethnicity and entrepreneurship (Nicholson and Lashley 2016), as well as how this related to government finance (Hosseini 2015). Other research was sector-specific related to the creative (Burke 2014) or agriculture (Esnard 2012b) sector. Some research focused on opportunity versus necessity entrepreneurship (Murdock et al. 2011; Bailey et al. 2012; Bailey et al. 2013; Bailey et al. 2014; Bailey et al. 2015; Mohan et al. 2018) Other research examined the impact that crime has had on innovation (Saridakis et al. 2015). Studies also focused on women micro-entrepreneurs (Ramkissoon-Babwa 2015; Prentice 2017) or looked at gender differences in entrepreneurship (Esnard 2010; Esnard-Flavius and Aziz 2011).

4.3.2 The Creative Sector

T&T's creative sector is thought to have much potential if the related infrastructure is adequately developed. An estimated fifty-six million US \$ per annum was generated by T&T's cultural sector (Burke 2014). In T&T entrepreneurial clusters have developed for Carnival mas camps and steelbands, without initial government support, and in spite of government constraints because of the drive and creativity of entrepreneurs based there and community support (Burke 2014). For example, a steelband cluster supported by good community relations boosted entrepreneurial activity was formed from the bottom up leading to the government wanting to get involved and support initiatives (Burke 2014).

Furthermore, Trinidad's Carnival culture has spread beyond its shores to places such as Barbados (Crop Over festival in August), the US (Miami Carnival and Labour Day Carnival in New York), Canada (Caribana in Toronto), Europe (Nottinghill Carnival in London also the largest street festival in Europe) and Rotterdam Carnival in the Netherlands) (Ferdinand and Williams 2013). There have been over fifty Trinidad styled Carnivals in North America and Western Europe, supporting annual entrepreneurial activities around the world for performers, artisans, and entrepreneurs (Burke 2014). T&T based '*carnival entrepreneurs*' now make a living by exporting

their carnival related products and services to this growing network of carnivals, allowing for the exchange of skills and finance within this network while showcasing the Trinidad Carnival lifestyle in the global marketplace (Burke 2014, p. 78). There is also a suggestion that internet accessible products and services should be developed to support the creative sector (Francis 2015), though this research does not provide much insight into how this can be achieved.

4.3.3 Relationship of Ethnicity/Family Ties to Entrepreneurship

Other research suggests that entrepreneurship in Trinidad and Tobago needs to be understood in the context of historical periods and ethnicity (Ryan and Barclay 1992; Nicholson and Lashley 2016). Though 1.2% of T&T's population is of white European, Middle Eastern, and Chinese ancestry they have the highest rate of self-employment in the country and are said to benefit from their ethnic or familial connections locally and overseas (John and Storr 2018). However, it should be noted that while individuals of African ethnicity are said to have the lowest rate of self-employment (John and Storr 2013) some research has indicated that they were more entrepreneurial pre-independence (Ryan and Barclay 1992) and others argue they can better exploit entrepreneurial opportunity with the support of the right networks (John and Storr 2018). Research finds that individuals of Indian ethnicity, along with those of mixed-race ethnicity, have the second-highest rate of self-employment (John and Storr 2013).

It should also be noted that racially oriented politics, especially between African and Indian ethnicities, is said to influence government financial support for different ethnic groups engaged in entrepreneurial activities (John and Storr 2013; Hossein 2015) described as *bacchanal* microfinance (Crichlow 1998; Storey 2004; Hossein 2015). For example, loans from government institutions were said to go to the supporters of whichever party was in power, also called '*political microfinance*' (Hossein 2015, p. 394). Other researchers examine racial and gender discrimination in lending by banks to entrepreneurs. They found no differences in loan application or loan denial rates, but denial rates were higher for those of African descent when compared with other racial groups (Storey 2004). Banks in T&T provide eleven percent of SME start-up funding according to the Central Statistical Office (CSO), but most financial support (seventy percent) comes from personal and family savings (Oxford Business Group 2016).

4.3.4 Government Support and Micro-entrepreneurship

Some argue that the T&T governments' business development programmes which usually focus on investment finance and business and technical training, consider entrepreneurship as a way of improving the economy and getting individuals out of poverty. However, the aims of these

programmes do not usually resonate with low-income micro-entrepreneurs, who are usually risk averse. Programme support was used to shore up informal businesses operating alongside other informal paid and unpaid activities, and so business growth is not a focus (Verrest 2013). Access to government microcredit by the rural poor in northeastern Trinidad was found to positively and marginally affect microenterprises and social welfare. However, fragmented social relations within the network, such as conflict, distrust, and the loose structure of the program limited the impact of their access to microcredit on social welfare (Esnard-Flavius and Aziz 2011). Additionally, limits to government support are reviewed in the literature on the creative sector (Burke 2014).

In one study, a decrease in local manufacturing led T&T garment workers to become micro-entrepreneurs (Prentice 2017) who work from their homes. However, the change also resulted in impoverished working conditions and fewer worker rights, even with policy and financial support from the government, aimed at empowering the self-employed (Prentice 2017). The research found that classifying them as entrepreneurs that could grow contrasted with the aims of some entrepreneurs, many of whom preferred to be employed and wanted to avoid the '*constant hustle*' (Prentice 2017, p. 217).

4.3.5 Entrepreneurial Attitude Orientation (EAO)

Some research on entrepreneurial attitudes of students revealed that entrepreneurial intention and attitudes were not only influenced by the programmes but the situation or social context in which the students found themselves. This research found no significant difference in attitudes amongst men and women, though men were still far more likely to start an agriculturally based business (Esnard-Flavius and Aziz 2011). Other research revealed that gender was only marginally linked to entrepreneurial self-efficacy and entrepreneurial attitude orientation (EAO) for Caribbean higher education students in T&T (Esnard 2010).

Quantitative research also found that students' perception of their entrepreneurial self-efficacy, cultural values, prior family business exposure, entrepreneurial education, and demographic factors had weak to moderate effect on EAO (Esnard 2012a). However, qualitative research found that most students believed both informal education and exposure to entrepreneurship endeavour from families and at workplaces influenced their EAO (Esnard 2012a). Female entrepreneurs in Trinidad and Tobago were also found to be motivated by their need to fulfil personal goals, to be independent, unaccountable to a boss, and contribute to society (Ramkissoon-Babwa 2015). The Global Entrepreneur Monitor also provides research on entrepreneurship in T&T and using an EE model. This research is examined in the next section.

4.3.6 Global Entrepreneurship Monitor T&T

Global Entrepreneurship Monitor (GEM) reports exist annually for Trinidad and Tobago (2010-2014). The GEM report administers an Adult Population Survey (APS), with a national sample of citizens eighteen years and over, both in and outside of the workforce. Additionally, a National Expert Survey (NES) is used to examine the way entrepreneurs interact with their environment, particularly concerning their attitudes, attributes and activities. GEM covers not only entrepreneurs, but other stakeholders considered entrepreneur experts, such as individuals in finance, government, and academia. The percentage of entrepreneurs interviewed is usually twenty-five percent of all those interviewed (Global Entrepreneurship Monitor 2018).

A 5-phase framework for entrepreneurship is utilised by the Global Entrepreneurship Monitor (GEM) (Bailey et al. 2015) to understand the entrepreneurial process. The first phase is the identification of a business opportunity and the gaining of confidence to take it forward. The second phase is nascent entrepreneurship and includes preparatory activities needed to set up the business. These individuals have started a business in the past 3 months. The third phase, the new business stage, begins when the business is established and exists for up to 3 1/2 years. In this phase, they are actively managing the business. GEM studies also examine the level of Total-Early Stage Entrepreneurial Activity (TEA) measuring the number of individuals within both the nascent entrepreneur phase and the new business stage (Bailey et al. 2015). If the business is still in existence, it then moves on to the fourth phase as an established business. The business may then cease to exist or is sold and then passes to the fifth phase, which is discontinuation of business when the business folds. In this phase, the entrepreneur may also create another business.

T&T GEM reports have generally found that most entrepreneurship is replicative entrepreneurship or entrepreneurship '*neither offering new, innovative products and services nor using innovative processes*' (Bailey et al. 2015, p. 33). Nearly all Total-Early Stage Entrepreneurial Activity (TEA) in their study was identified as replicative. Dependency on the energy sector is believed to limit the development of entrepreneurship in the country, though entrepreneurship is believed to be important for decreasing dependence on the energy sector (Bailey et al. 2015). However, entrepreneurship was still primarily opportunity-driven and had comparatively good standing when compared with countries internationally on the factors that have been found to influence entrepreneurship positively. For example, there were very low levels of fear of failure in comparison to other countries, though this was also believed to be more a reflection of differences in perception of what an entrepreneurial opportunity was amongst countries.

Individuals also had high levels of positive perceptions about their ability to run a business (seventy-five to seventy-six percent between 2012-2014) and entrepreneurship was a most desirable choice (seventy-eight to eighty percent between 2012-2014) though this corresponded with low levels of employment at that time (Bailey et al. 2015). Approximately seventy-five percent of the NES respondents believed that the national culture supports entrepreneurial effort even while it is less likely to be characterised by risk-taking and innovation (Bailey et al. 2015).

GEM research shows the number of TEA businesses in T&T dropped from approximately twenty percent in 2013 to fifteen percent in 2014 of all businesses because of a decrease in nascent entrepreneurial and new business ownership though it remained above the world average (Bailey et al, 2014). Research suggests this was due to a decline in the growth of the energy sector's contribution to GDP from 1.3 in 2013 to -2.4 in 2014 (Khadan 2017). There is more early-stage entrepreneurship among males (about fifteen percent) than females (about twelve percent) (Bailey et al. 2015). Entrepreneurship was also found to be more prevalent amongst those aged thirty-five to forty-four compared to previous years when this was instead twenty-five to thirty-four (Bailey et al, 2014). Entrepreneurship was also pursued by the educated population, as approximately forty-two percent had completed secondary school education, thirty-four percent had completed tertiary level education, 8.5% completed vocational training and 6.2% post-secondary (non-tertiary). Furthermore, there was thought to be insufficient support for entrepreneurship within the education system, though vocational, professional, and continuing education schools provided some support (Bailey et al. 2015).

Most entrepreneurs only sell goods and services within T&T (approximately sixty-one percent of TEA entrepreneurs and sixty percent of established entrepreneurs). Less than 2% of T&T's early-stage businesses, as well as established businesses, reported having an international customer base of over seventy-five percent (Bailey, 2014). This lack of international sales is attributed in part to the inability to source funding, the difficulty faced securing permits, licencing, and taxation (Bailey et al. 2015). On the other hand, while many government programmes offered support for early-stage entrepreneurship, most entrepreneurs thought they inadequately supported entrepreneurship (Bailey et al. 2015). For most NES respondents, however (seventy-five percent) physical infrastructure (for example, utilities, transport, and communications networks) were ranked as being efficient and affordable (Bailey, 2014).

Further, seventy-five percent of respondents found the resources needed for entrepreneurial activities (suppliers, good banking, professional and legal services, sub-contractors, and consultants etc.) to be supportive, though technology support was ranked low by NES respondents (Bailey, 2014). On the other hand, many believed that entries into markets was

Chapter 4

difficult not only because of the small size of the T&T market but because of established oligopolies that could retaliate and put high barriers to entry. In this case, better antitrust legislation was desired (Bailey et al. 2015).

However, some information is omitted in the 2014 report. For example, though not referenced in the 2014 report, friends, family, and personal financing were identified as the source of most funds for entrepreneurial activity rather than entrepreneurial networks in other reports (Murdock et al. 2011). In 2012, finance from banks and other financial institutions was thirty-one percent (Bailey et al. 2013). Also omitted from 2012, 2013 and 2014 reports was the influence of crime, which has remained high since the 2010 report (Adams and Sanchez 2018). In 2010 this was found to be the number one factor affecting entrepreneurship in T&T followed by poor work ethic and government bureaucracy (Murdock et al. 2011).

Individualism that prioritises competition instead of co-operation was considered a hindrance, and there was said to be a tendency for individuals to evade taxation as well (Murdock et al. 2011). Consistently, entrepreneurs were thought to be driven not by necessity but by opportunity. Only 2.9% of businesses surveyed were discontinued in 2010 (Murdock et al. 2011), which is low when compared to other countries in Latin America and the Caribbean (Bailey et al. 2013), though there has been very slight increases in 2011 (3.9%) (Bailey et al. 2012), 2012 (4.5%) (Bailey et al. 2013) and 2013 (4%) (Bailey et al. 2014). Figures are not available in the 2014 report.

The main reason given for discontinuing business in 2010 (Murdock et al. 2011) and 2011 (Bailey et al. 2012) was problems getting finance while in 2012 the main reason was business unprofitability (Bailey et al. 2013) and in 2013 (Bailey et al. 2014). Though the number of businesses discontinued is not given for 2014, respondents cited personal reasons the primary driving factor. The country is considered to be emerging from a recession (though slowly recovering) (Oxford Business Group 2019). The highest growth in GDP since 2015 was recorded in 2018 possibly because of a drop in oil prices, better tax collection and growth in the manufacturing and insurance sector (Oxford Business Group 2019).

It is also important to note that the National Expert Survey (NES) used for GEM comprises interviews of mainly professional individuals that work to support entrepreneurship (fifty percent) and only twenty-five percent of respondents are entrepreneurs (Murdock et al. 2011). National data from the World Bank and the International Monetary Fund was also used to understand how entrepreneurship and economic growth was linked (Murdock et al. 2011). According to the World Bank's Doing Business 2019 report, which collects and publishes data on labour market regulation in countries globally, T&T is listed one-hundred and five out of one hundred and ninety countries for ease of doing business (World Bank 2016b) a decline from 2016 when it ranked eighty-eight

out of one-hundred and eighty-nine. While an increase in the corporate income tax rate was believed to reduce the business-friendly environment (Oxford Business Group 2019), this was also credited with helping the country come out of recession. This report considers small and medium enterprises and not microenterprises.

GEM data is also utilised to compile a Global Entrepreneurship Development Index (GEDI), a composite indicator of the health of the entrepreneurship ecosystem (EE) in a given country (Acs et al. 2018b). Unlike GEM, which measures the process of business creation, and new entrepreneurship, GEDI focuses on the quality of entrepreneurship through reviewing nascent and new business owners' abilities and intentions to grow. T&T is ranked eighty-seven out of one-hundred and thirty-seven countries and tenth in South/Central America and the Caribbean. The report suggests that T&T should have higher levels of entrepreneurship, based on their level of development and that entrepreneurship could be developed if entrepreneurial resources are used more efficiently (Acs et al. 2018a). GEDI provides another useful assessment of entrepreneurship, but like the GEM reports and the World Economic Forum EE model, it does not look at how digital platforms may inform or influence the development of each pillar in the country.

The research discussed gives some picture of what entrepreneurship looks like in Trinidad and Tobago. While T&T is high-income country, this has not supported significant entrepreneurial growth. While individuals are likely to identify and pursue an entrepreneurial opportunity, socio-economic factors seem to influence entrepreneurial development, particularly for certain ethnic and familial groups in society. Additionally, even where digital platforms are available (for example, payment platforms), their use may still be constrained by infrastructural limitations, and so having access to a platform does not necessarily signal they could be easily used. It appears that the inability to secure resources to further entrepreneurial activity limits the willingness and ability for some micro-entrepreneurs to scale their businesses following receipt of government support. Further, the literature shows that entrepreneurs believe insufficient support is provided for the creative sector, which is believed to hold significant potential for entrepreneurial growth.

4.3.7 Use of Digital Platforms for Entrepreneurship in T&T

Some ethnographic research has been conducted on digital platform use in Trinidad and Tobago. For example, research on changes in digital music consumption through platforms such as Spotify, iTunes and YouTube (Mohammad and Horst 2017) found that musicians using YouTube to promote their music believed that they still needed to physically move overseas, for example, to the United States of America to reach an international audience, network and make money from their music. Other research focused on digital literacy in the context of a specific community

(Mohammad 2017) of lower middle-class women and found many women used YouTube and other platforms to find information, learn new skills and source ideas to improve their offerings.

Ethnographic studies also examined the use of Facebook in Trinidad and Tobago (Miller 2011; Miller et al. 2016) providing useful insights into how local culture influences Facebook usage. The research found that Facebook helped some small businesses because of personal connections and low barriers for digital marketing (Miller et al. 2016). Further, a survey done for Trinidadian Facebook users found that fifteen percent of them said they made money using Facebook (Miller et al. 2016). However, this was a general question and was not targeted at entrepreneurs. They found that individuals trusted Facebook more than e-commerce platforms because they could see who was selling to them. Additionally, promotional activity on Facebook by local businesses such as bars, was important for promoting a positive image and reputation.

Trinidadians were also more likely to add as a friend, the friend of a Facebook friend, and tended to ask mutual friends about the individual that made the request. If they had mutual friendships, this meant they could most likely be friends (Miller et al. 2016). However, individuals still preferred face-to-face communication or gossip when deciding if to purchase something (Miller et al. 2016). In Trinidad, Facebook was used to make *'what is already visible about a person hyper-visible, further reinforcing their constructed identity'*, and so Facebook in T&T was described as *'The Book of Truth'* (Miller et al. 2016, p. 110). This research helps to reiterate points raised in earlier chapters about the need to research relationships between digital platforms, entrepreneurs, and their environment, to truly understand what influence digital platforms have had on entrepreneurship.

A team from Facebook visited T&T on more than one occasion to offer training to business owners on the use of Facebook and Instagram. A Facebook representative explained *'we realised that there was an ecosystem that makes use of Facebook and Instagram, and it's easier to build in an environment like that'* (Lyndersay 2019, p. N/A). Indeed, in 2015 and 2017, T&T was listed as the third most successful country at finding software failures for Facebook's Bug Bounty programme that helps improve the Facebook platform. They were in third place in 2015 behind India and Brazil (Facebook Bug Bounty 2016) and in 2017 behind India and the USA (Facebook Bug Bounty 2018). Additionally, T&T is one of three countries in the Caribbean and Latin America that Google selected to give local business support (Gov.tt 2018a).

Pre-internet, on-demand ridesharing was popular and is still common in T&T (Lyndersay 2017). Ridesharing includes the use of PH taxis (meaning unlicensed taxis) by individuals to offer rides with personal vehicles, or *pull bull*, though there is a requirement that taxis have a licence for hire (H licence plate) indicating they are taxis (Lyndersay 2017). In January 2017, Uber was introduced

to the cities of Port of Spain and San Fernando in Trinidad, prompting the government to order a review of its legality (Singh 2017). However, Uber abruptly halted operations in Trinidad in 2018 citing '*a lack of proper environment for innovation and technology to thrive in Trinidad and Tobago*' (CNC3 2018, p. N/A) though the local media reported this could have also been due to the murder of a driver 3 days earlier (CNC3 2018). Tourism is not the mainstay of the Trinidad economy, so T&T has one of the lowest rates of Airbnb usage in the Caribbean (Caribbean Hotel and Tourism Association 2016).

There is limited research on the use of e-marketing by businesses in T&T. Existing research found that more T&T businesses needed to offer goods and services online and that the web has influenced consumer choice (Sooknanan and Crichlow 2014). However, many people including entrepreneurs purchase goods in the United States of America through Amazon or eBay or online stores like Walmart using online payment methods including PayPal (Trinidad and Tobago Guardian 2016; Oxford Business Group 2017; Export.gov 2019). There have been 1 billion TT \$ in purchases annually prompting the government to introduce a 7% tax on all online purchases (Oxford Business Group 2017). This increase in overseas buying has been supported by the creation of multiple couriers, called Skybox companies (Oxford Business Group 2017), facilitating the delivery of goods where platforms and companies do not deliver to T&T (Godfrey 2017).use as their shipping address, allowing them to receive their packages there. The Skybox company then delivers the package to the customer at their chosen address in T&T.

Additionally, there is little competition among payment-processing companies, and the lack of a unified payment verification system makes setting up e-payment solutions costly, and transactions expensive (Oxford Business Group 2017) so costs can become prohibitive for entrepreneurs (Oxford Business Group 2017). However, there are some local companies (WiPay and Paywise) providing online payments, and the government is looking to develop e-commerce and other support for entrepreneurs (Gov.tt 2018b).

4.4 Chapter Summary

This chapter surveys the cultural, social, economic, and technology context of T&T within which entrepreneurship takes place. It situates T&T in the context of the Caribbean as well as globally especially since categorisations of developed and developing countries appear to influence how entrepreneurship is perceived as well as the likelihood of high-growth information. Given T&T is categorised as a high-income country by the World Bank and a developing country by the United Nations, this provides evidence to suggest that not just economic factors but social, historical and cultural factors, influence the development of entrepreneurship.

Chapter 4

The literature recognises the government as an essential stakeholder in the EE, and examination of the influence digital platforms have had on their ability to operate successfully in the EE may prove insightful. Further, given most businesses in T&T are micro, this research provides a useful case of how digital platforms have influenced this type of entrepreneurship, especially since digital platforms are said to contribute to growth in informal entrepreneurship, and in developed countries with high levels of entrepreneurial growth too. The creative sector is identified as important for entrepreneurship in T&T, and so this research supports understanding of how digital platforms may influence the creative sector elsewhere. Focusing on T&T can, therefore, provide much insight into the use of digital platforms for entrepreneurship. The methodology adopted will be discussed in the next chapter.

Chapter 5 Methodology

5.1 Chapter Introduction

This chapter outlines the methodology adopted for the research. It first briefly explains its epistemological underpinnings and then outlines the research aim, objectives, and research questions that arise from the literature review. It also explains the process for determining the selected multi-qualitative method to justify its suitability. It then outlines the process taken for ensuring validity and selecting the sample. Consequently, information on the research participants is provided, and the data analysis procedure is outlined.

5.2 Epistemological Underpinnings

As rationalised in the literature review, Technology Affordances and Constraints Theory informs the research method. This theory is informed by critical realism (Bhaskar 1978, 1979; Sayer 1992; Archer et al. 1998; Sayer 2000; Danermark 2002; Wynn and Williams 2012; Fox 2013; Bygstad et al. 2016; Fleetwood 2017; Fletcher 2017). It takes the ontological position that the *real world* consists of natural, material, and social structures that exist, even if we do not think they exist (Wynn and Williams 2012). Social structures are defined as '*rules and resources provided by technologies and institutions as the basis for human activity*' (DeSanctis and Poole 1994, p. 125). The *actual world*, however, consists of interactions between these structures, that cause events and outcomes, that may or may not be observed (Wynn and Williams 2012). These causal relationships are called generative mechanisms or '*the causal powers and liabilities of objects or relations*' (Sayer 2010, p. 104). They may come about with or without any interference from structures. Technology affordances are a subset of generative mechanisms for, in this case, technology helps to trigger an event or outcome (Bygstad et al. 2016). The *empirical world* consists of what can be observed, even though our observations may not be correct because it relies on our interpretation of what something is or what has happened, interpretations which may be proved false (Wynn and Williams 2012). It should also consider that within this ontology, structures pre-exist agency (an action). Additionally, while material objects can influence and persuade, they are not the sole determinants of an event or outcome (Volkoff and Strong 2017).

The principles of critical realism have already been discussed by information systems researchers (Smith 2006; Easton 2010; Mkansi and Acheampong 2012; Wynn and Williams 2012; Fox 2013; Henfridsson and Bygstad 2013; Mingers et al. 2013; Williams and Karahanna 2013; Bygstad et al. 2016; Fleetwood 2017; Fletcher 2017); management and entrepreneurship scholars (Ramoglou 2013; Ramoglou and Zyglidopoulos 2015; Ramoglou and Tsang 2016) and specifically TACT

researchers (Dobson 2002; Mingers 2004; Smith 2006; Volkoff et al. 2007; Lyytinen and Newman 2008; Markus and Silver 2008; Bygstad 2010; Smith 2010; Strong and Volkoff 2010; Volkoff and Strong 2013; Bygstad et al. 2016; Thapa and Hatakka 2017) and underlies this methodology. A critical realist ontology has guided TACT researchers, and also guides this research design and data analysis (See Appendix S).

This study explains the rapidly evolving and significant relations between digital platforms and entrepreneurship, as the use of digital platforms is often taken for granted as useful or ignored in research (Majchrzak and Markus 2014b). A multi-method qualitative research methodology is adopted because it is appropriate for explanatory research requiring answers to *why* and *how* questions and can help unearth actions, effects, and consequences (Eisenhardt et al. 2016). Though positivist methods still dominate entrepreneurship research, they can place artificial limits on entrepreneurship research (Gartner and Birley 2002; Suddaby et al. 2015) so an increasing number of qualitative researchers seek to improve understanding of entrepreneurship by revisiting ideas of what entrepreneurship should entail (McDonald et al. 2015) and management scholars generally accept the usefulness of this approach (Gehman et al. 2018).

Qualitative research has been important for developing theory, especially when theory is lacking, and the challenges are not only grand but complex (Eisenhardt et al. 2016). For example, 9 qualitative research papers were reviewed to show how qualitative research could be used to build theory and illustrate the importance of social and historical factors in influencing entrepreneurial opportunity (Suddaby et al. 2015). They also evidenced the way researchers can overcome constraining factors through reflectivity (Suddaby et al. 2015). The use of multiple methods is advocated by researchers using TACT within a critical realist epistemology, and so this study adopts more than one type of qualitative method to answer the research questions using the EE concept and TACT.

5.3 Literature Informed Methodology

Research on the way digital platforms may have influenced the defining characteristics of entrepreneurs, their processes, and activity in both developed and developing countries is limited. Understanding the influence of digital platforms on entrepreneurship in the context of a high income, developing country that is underrepresented in the literature, has high levels of internet access and is seeking to support entrepreneurship informs the choice of the country under study. This methodology is also informed by the literature review, which found that TACT can be effectively used to understand relationships between individuals, technology, and social systems. It is especially useful because it supports the identification of problems and potential solutions which can inform useful recommendations. The entrepreneurial ecosystem (EE) concept, also

provides a useful way to understand entrepreneurship because it recognises the importance of other actors (including technological actors) in influencing entrepreneurship. Both TACT and the EE concept helps to identify the extent to which digital platforms may influence entrepreneurs and their EE too and therefore help to meet the aim of this research, which is to understand and explain relationships between digital platforms and entrepreneurship.

5.4 Research Aim

The research aims to understand and explain the relationship between digital platforms and entrepreneurship in Trinidad and Tobago.

5.5 Objectives

1. To utilise TACT to understand and explain the relationships between digital platforms and entrepreneurship in Trinidad and Tobago.
2. To provide recommendations to entrepreneurs and policy recommendations to the Trinidad and Tobago government based on the assessment of the aforementioned relationship.

5.6 Research Questions

1. How have digital platforms influenced entrepreneurship in Trinidad and Tobago?
 - 1(a) How are digital platforms used in interactions between entrepreneurs, customers, and stakeholders?
 - 1(b) Have digital platforms played a role in changing the entrepreneurial ecosystem in Trinidad and Tobago?
 - 1(c) What affordances and constraints exist for entrepreneurs in Trinidad and Tobago in the context of digital platform use?

5.7 Research Design

5.7.1 A Multi-Qualitative Method

As mentioned earlier, TACT researchers advocate the use of multiple research methods to allow for comparison of findings, and improved theory building to support problem identification and find solutions (Majchrzak et al. 2016). The sampling strategy was guided by those suggested by EE researchers (World Economic Forum 2013; Spigel and Harrison 2018) the practicality of gaining access to the data and time and resource constraints. Following the decision to employ more than 1 type of qualitative research method, a variety of qualitative methods were reviewed and

considered. These included interviews, focus groups, the use of secondary data, ethnographies (including digital ethnographies) and participant or non-participant observation.

Interviews were most appealing because of the decision to use an EE approach. The research could benefit from gaining data from a variety of EE stakeholders while focusing primarily on entrepreneurs that use digital platforms. A top-down approach supported interviews with a variety of institutional stakeholders such as representatives from government, academia, and financial institutions to better understand the context within which entrepreneurs operated (Spigel and Harrison 2018). While a bottom-up approach could encompass most of the interviews and offer varied perspectives from different types of entrepreneurs that use several types of digital platforms to provide direct answers to the research questions (Spigel 2018). This approach was guided by the EE model of the World Economic Forum (2013) outlined in Section 2.41. Interviews could also allow the adaption of the research questions as the research progressed based on new insights. I was also encouraged by the potential to identify non-verbal cues (Leo Paul and Teresa 2005) and the ability to clarify information given during interviews or with follow up conversations (Darlington and Scott 2002; Roulston 2014). This method could support rapport for gaining access to further internal documentation or secondary data from some of the respondents, where this information was not always publicly available online.

However, initially, ethnographic methods seemed most suitable. In this case, I would describe and interpret my observations of, for instance, behaviours, beliefs and language in the natural environment of the entrepreneur, for an extended period (Coffey 2018). This approach could combine interviews, participant or non-participant observation (Coffey 2018) but would require more financial and time resources than was available for engaging with entrepreneurs in their natural environment, as I would have to visit their workplace which in some cases would be their home for a significant period of time.

A digital ethnography could overcome these limitations and be tailored to suit my research requirements. This approach would entail at the very least observing entrepreneur interactions on digital platforms and other digital material elements (for example, photos, videos) in everyday scenario (Sartoretto 2016). It could also include observing people use digital platforms and working with entrepreneurs to observe and understand how they interact. This approach would require using online participant or non-participant observation but doing so could limit understanding of the offline environment (Flick 2018a) and for this study digital platforms are researched as a part of the wider social system. It would also require observing individuals use these digital platforms. Though this could help reach participants that I may not have been able to

reach otherwise, there were ethical issues that could arise with participants being observed without their knowledge (Flick 2018a).

The use of online participant observation entailed some risk because some entrepreneurs may have been uncomfortable with participating, and this could result in fewer respondents (Flick 2018a). If my presence were known the behaviour of the participants could also be influenced. Further, a digital ethnography would limit the analysis of the social world that exists online (Flick, 2018), which is essential for the research. Additionally, a useful context for digital platform interaction would be based on the entrepreneur's needs at the time of meeting with them and could not be guaranteed (Flick 2018a). The research is also not limited to social media platforms that can arguably facilitate easier participation through joining of groups for example, but also included e-commerce platforms and gig economy platforms, for which participant observation is not straight-forward and may require more action on the part of the researcher. This method could include a need to purchase goods or take an Uber ride and would further complicate the study. Additionally, as already explained, digital platforms do not exist in isolation but are part of a wider digital infrastructure and placing artificial boundaries on the use of these platforms could be misleading and would need some clarification with participants (Flick, 2018).

It follows that the decision was made to use interviews instead of ethnographic or digital ethnographic methods, participant, or non-participant observation. Furthermore, this could instead be supported by secondary data from reports and platforms used by entrepreneurs to support the interview process. This approach would have the advantage of helping to verify information gathered through focus groups and interviews and provide some clarification when needed. Focus groups were also thought to be a useful complement to interviews. They could help shift the balance of power from interviewer to the entrepreneurs and by doing so, yield new insight and further knowledge (Barbour 2017; Flick 2018b).

Focus groups could also help me understand how entrepreneurs conceptualise their use of digital platforms as well as how they describe and explain this in a group setting. Additionally, the entrepreneurs' immediate responses to new developments, like digital platform changes, could provide useful collective insight in a way that is not possible with secondary data or interviews. Following a review of these potential methods, semi-structured in-depth interviews, 2 focus groups, (1 in southern T&T and the other in Tobago) and secondary data from the digital platforms used by entrepreneurs and institutions that support entrepreneurship was adopted for multi-method qualitative research to answer the research questions.

5.8 Ensuring Validity

In addition to varied research methods, TACT supports the use of varied data sources, theories, and methods (Appendix S) to increase its rigour. It recognises that both the researcher and interviewee opinion can bias findings (Flick 2014). Data were therefore collected using a pilot study, semi-structured interviews, two focus groups, and secondary data from relevant reports as well as web pages of the platforms used by the entrepreneur. This approach supported methods triangulation and a deeper understanding of the data. Triangulation of sources (Patton 2002; Flick 2007) was achieved through investigating different types of entrepreneurs, full-time entrepreneurs (self-employed) as well as part-time entrepreneurs (those in full-time employment).

Users of different types of platforms, like social media platforms, messaging platforms, e-commerce platforms, gig-economy platforms, and payment platforms were researched to help avoid blind spots by providing a broader perspective (Wigren 2007). Doing so also helped compensate for the weaknesses of each data collection method (Wynn and Williams 2012) and provide the most complete and empirically sound explanations. The inclusion of polar opposites (Eisenhardt and Graebner 2007) for example, those that are primarily purposed for provision of e-commerce services, versus those that are usually identified as social media in the literature, and those that promote access over ownership of goods and services was helpful. This approach facilitated a robust examination of the digital platforms and entrepreneurship relationships in a way that was as representative as possible.

The literature revealed different platform influences on the entrepreneur and found that platforms may not always be used as expected. To better understand this relationship, the research focused on individual users of different types of digital platforms. A focus on different types of entrepreneurs using different types of platforms allowed for stronger theorisation (Eisenhardt 1989) without constraining views on how a platform should be used. In addition, the World Economic Forum EE model guided the selection of varied entrepreneurial stakeholder participants and was also informed by qualitative research examining how EEs sustainably form (Theodoraki et al. 2018; Thompson et al. 2018).

5.9 Sampling

Theoretical sampling was used to select who would participate in the research. The EE model informed sampling, which primarily focused on entrepreneurs that use digital platforms and secondly, those that support entrepreneurs. This approach also allowed for comparison between different types of entrepreneurs using these platforms and generalisability across entrepreneurs

using different kinds of platforms, helping to support the formulation of theory (Eisenhardt et al. 2016). Further, as new insights emerged, the sample could be adjusted to be able to gather responses from entrepreneurs using varied platforms to aid generalisation (Eisenhardt et al. 2016). Sampling was also informed by the literature review and a small qualitative study encompassing 6 in-depth interviews conducted approximately 8 months before data collection.

Additionally, snowball sampling was adopted as participating entrepreneurs and organisations could also assist with identifying and recruiting appropriate participants for interviews and the focus groups. I found that my dual identity as someone who was both from T&T and an outsider, a UK academic, was useful for gaining participants. There was a sense that this allowed people to speak more freely, because I was not engaged in business in the country and I understood the social and cultural context. Additionally, networks that I had in the country from previously living, being educated and working there was useful in gaining access. This insider/outsider positioning was very beneficial during the research process. Insider positioning allowed for comfortable, localised correspondence, whilst outsider positioning helped to maintain the distance needed for objectivity. Insider and outsider positioning both help me to gain the trust of the participants (Dwyer and Buckle 2009).

First, entrepreneurs were identified from local and regional media featuring businesses formed part of the sample. These included local newspapers as well as entrepreneurship/business websites and magazines that featured local entrepreneurs. Entrepreneurs were also identified from their attendance at the 2018 annual Trade and Investment Convention in Trinidad, that I also attended. A comprehensive list of micro, small and medium businesses were not available, and so their stage of entrepreneurship as outlined by the GEM was assessed following interviews. These stages are outlined in the section 4.3.6 reviewing T&T GEM research GEM.

Inclusion of entrepreneurs that used different digital platforms was important because the literature review established that digital platforms can be used in unintended ways because of their open, heterogeneous and ever-changing nature (Yoo et al. 2012; Nambisan et al. 2019). The decision to use different types of platforms was also informed by the pilot study, which showed that social media platforms, messaging platforms, and e-commerce platforms were the most popular and used in various ways. Therefore, entrepreneurs were asked if they use digital platforms like social media platforms (for example, Facebook, Instagram), messaging platforms (WhatsApp) e-commerce platforms (for example, Amazon and Etsy). Gig-economy platforms (for example, Uber, Fiverr) were limitedly mentioned in the pilot study but were included. Further, existing research emphasised the need to improve online payment solutions and so payment platforms (for example, PayPal) were also assessed. Crowdfunding platforms were included, but

the pilot study found that entrepreneurs did not use crowdfunding platforms in the country (Appendix U for a list of digital platforms used by participants).

While the term digital platform was generally understood, while talking about a social media platform some participants would then discuss an e-commerce platform. While a specific type of digital platforms may be difficult to identify this can arise because of the interconnectedness of the web platforms and services, particularly as different platforms may be used to compensate for insufficiencies in any one platform. It also raises issues in terms of how they are defined and how definitions are operationalised in research, especially because digital platforms are continually changing.

Secondly, individuals representing actors in the World Economic Forum (2013) EE model such as educational institutes, government agencies, incubators, and financial agencies and individuals providing business support were interviewed. Some entrepreneurs were both entrepreneurs and stakeholders and, in this case, interviews reflected elements of both sets of questioning (See Appendix O (interview guide for entrepreneurs), Appendix P (interview guide for stakeholders) and Appendix Q for the focus group guide). Organisations were identified from the GEM reports, government websites, media articles, as well as Google searches and secondary data provided by interviewees. Sampling was also guided by research on EEs that recognised allowances should be given for the inclusion of actors and activities that may not be emphasised in an EE model (Thompson et al. 2018). This is because even when guided by lists of desired EE attributes, the presupposition of a defined structure and social order can mislead researchers as EEs can be dispersed, disorganised and weakly connected, especially since most businesses in the country are categorised as micro-businesses. See Appendix E to R for information on the Ethics in Research and Governance (ERGOs) application and related documents used for the study.

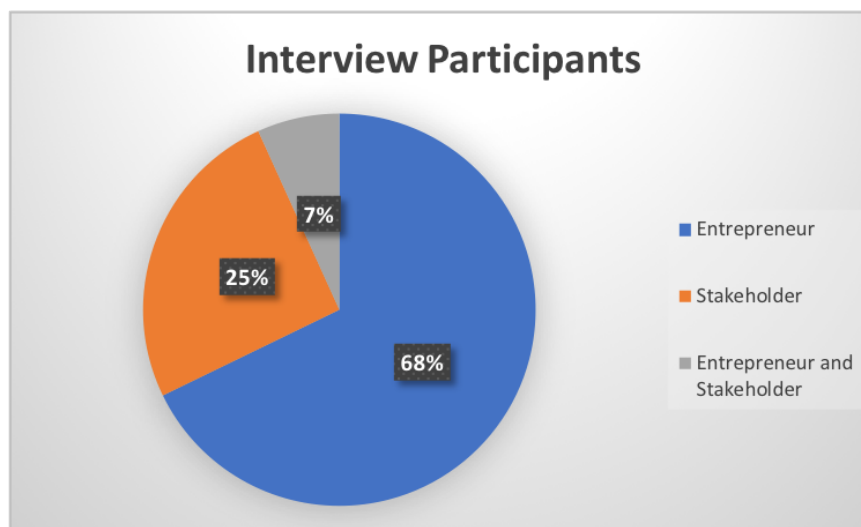
5.10 Participant Information

Having explained my methodology I now want to examine the types of entrepreneurs and stakeholders that participated in this study (See Figure 1). In 4 cases, interviewees are both entrepreneur and stakeholder. In the focus group held in Tobago (FG1), all participants are both entrepreneur and stakeholder, whereas in the focus group held in Southern Trinidad (FG2), all participants identified as entrepreneurs. As mentioned in the methodology chapter, various stakeholder representatives of the EE are interviewed.

Interestingly, the findings regarding EE components were generally similar across all participants in the study despite this diversity. Interviews are held with forty-four entrepreneurs (founders/owners) representing forty businesses (2 of the businesses had 2 of founders/owners

present). Of these forty-four entrepreneurs (which included 4 entrepreneurs from Tobago), 4 were also stakeholders (including one individual from Tobago). An additional fifteen stakeholders, representing fourteen government agencies, financial services, the technical community, education, incubators, or individuals providing mentorship or business support for entrepreneurs were also interviewed (including 1 entrepreneur from Tobago). Three (3) stakeholders working for the same organisation participated in a single interview.

Figure 1: Types of Interview Participants



5.11 Type of Entrepreneurs (Interviews)

Of the forty-four entrepreneurs interviewed, there was an equal representation by gender as twenty-two were female, and twenty-two were male (See Figure 2). About seventy-five percent of the entrepreneurs had a university education or were currently pursuing university education or had postgraduate degrees (See Figure 3). Interviewees included 1 entrepreneur who previously pursued a university education and then dropped out. A large percentage of the entrepreneurs in this study, therefore, pursued at least graduate-level education in T&T. While some entrepreneurs had business-specific degrees, other degrees were in very varied fields (it should be noted that data on the type of university degrees were not explicitly collected). Those entrepreneurs who had a secondary level of education (twenty percent) had been in business for many years and tended to be established businesses having chosen entrepreneurship as a career path early on in their lives. Almost half of the entrepreneurs were between the ages of twenty-six and thirty-five, and twenty-five percent of the entrepreneurs were between the ages of thirty-six and forty-five (See Figure 4). The participants in this research were mostly full-time entrepreneurs (sixty-six percent) (See Figure 5). Some of them recently transitioned from full-time employment or planned to do so in the future. Interviewees also included 3 participants in Focus group 1 (FG1)

and 1 Focus Group 2 (FG2) participant. These focus groups provided for useful additional context and further insight into the views of some of the same entrepreneurs outside of a group setting.

Figure 2: Entrepreneurs: Gender

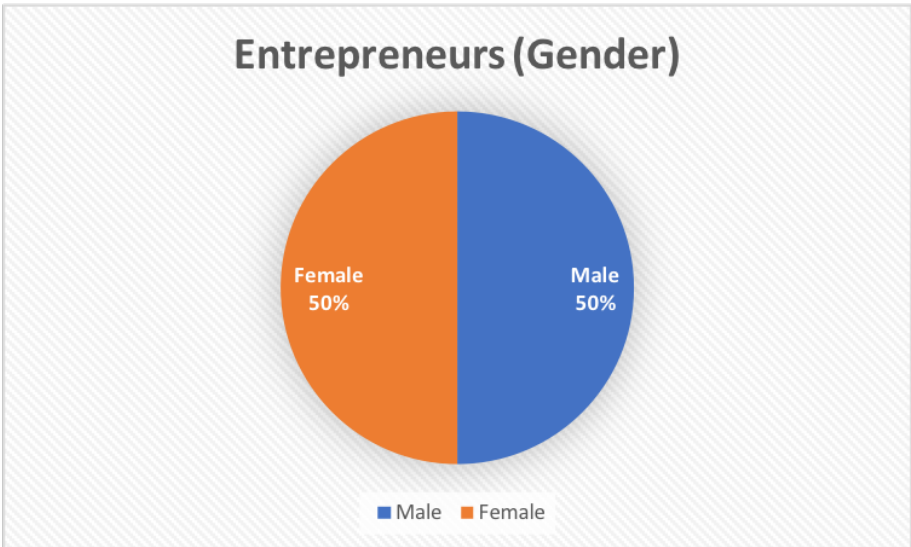


Figure 3: Entrepreneurs: Level of Formal Education

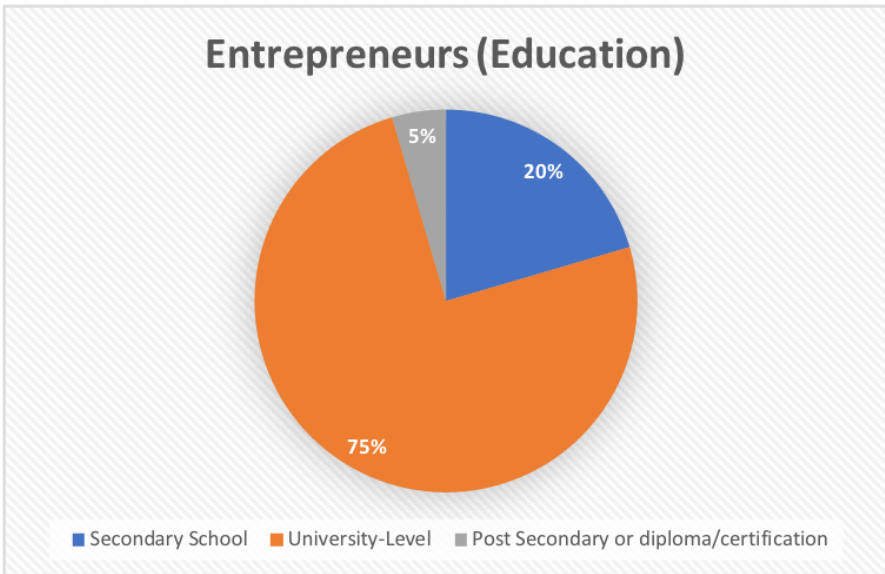
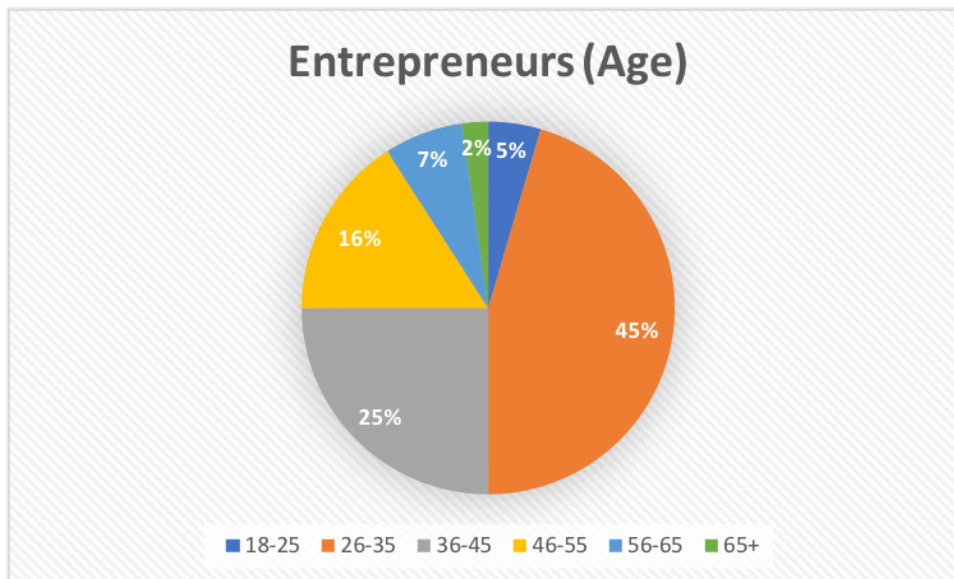
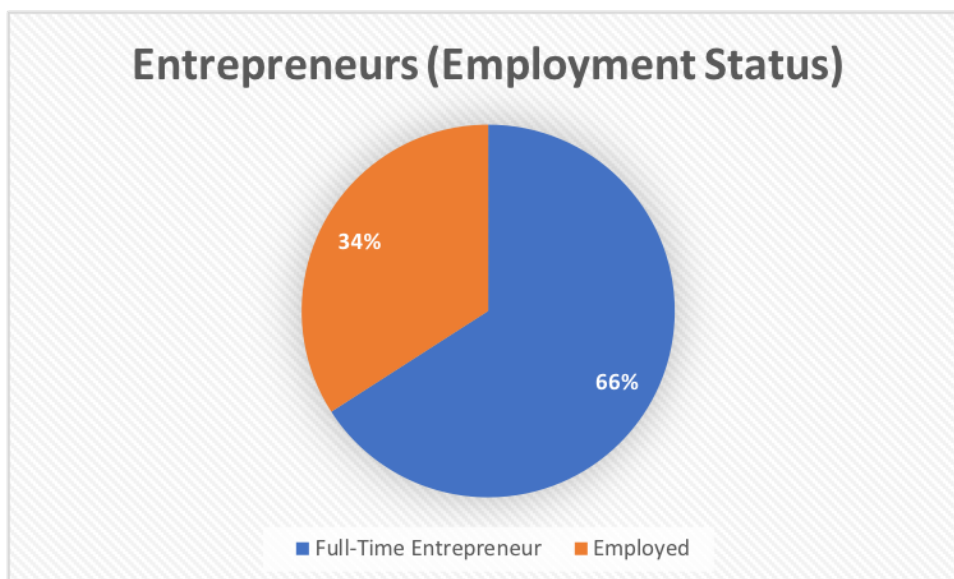


Figure 4: Entrepreneurs: Age**Figure 5: Entrepreneurs: Employment Status**

5.12 Type of Businesses Represented

Information collected on the entrepreneur's stage of business was guided by GEM's 5 phases of entrepreneurship identified earlier. These included: 1) Opportunity identification; 2) Nascent Entrepreneurship; 3) New business; 4) Established business; 5) Business discontinuation or starting another business. However, when entrepreneurs were asked if they were in the initial stages of setting up their business, or whether they were identifying opportunities responses were ambiguous and problematic. For example, an entrepreneur would indicate that they were an established business though they were only recently registered. Responses for annual sales are

also unreliable as they were mostly based on the entrepreneur's memory, could not be verified, and not every participant responded (See Figure 7 for data on the number of employees and Figure 8 for data on annual sales).

Therefore, the final categorisation was made based on years of operation, given all the entrepreneurs had moved beyond the opportunity identification stage. As a result, businesses operating for 3 years or less are distinguished from those operating, for 4 years or more (registration status is not factored). Therefore, fifty percent of the businesses were in operation for 4 or more years, while the other fifty percent were in operation for 3 years or less (see Figure 6).

Most of the businesses did not have employees (See Figure 8) though twelve businesses, (twenty-nine percent) indicated that they either used interns and or outsourced labour and used contractors, as and when needed. The types of businesses of the entrepreneurs interviewed were varied. Though a few entrepreneurs created and operated a platform as a business, other businesses provided goods related to fashion, food, entertainment, and other types of miscellaneous goods. Others provided services such as accommodation, events, construction, fitness training, educational services as well as business support services, which included advising and social media services.

Figure 6: Stage of Business

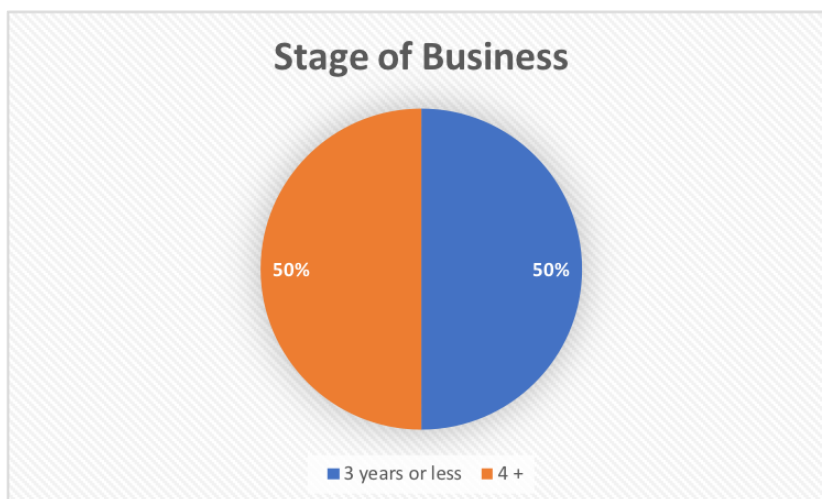
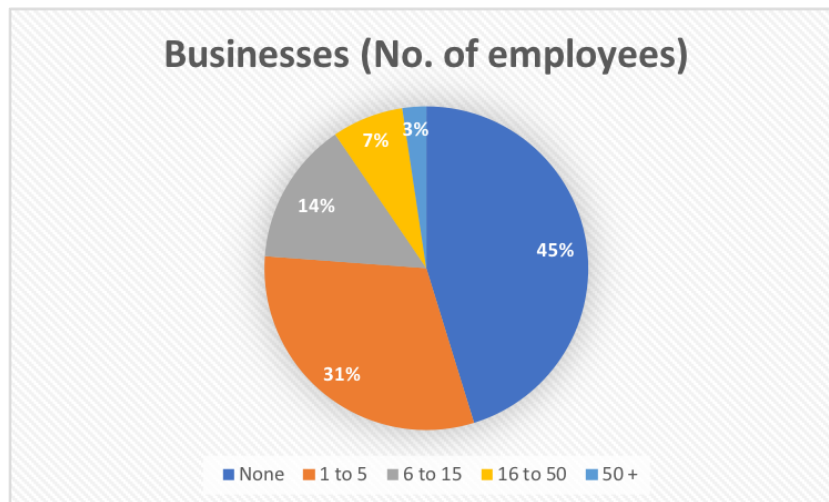
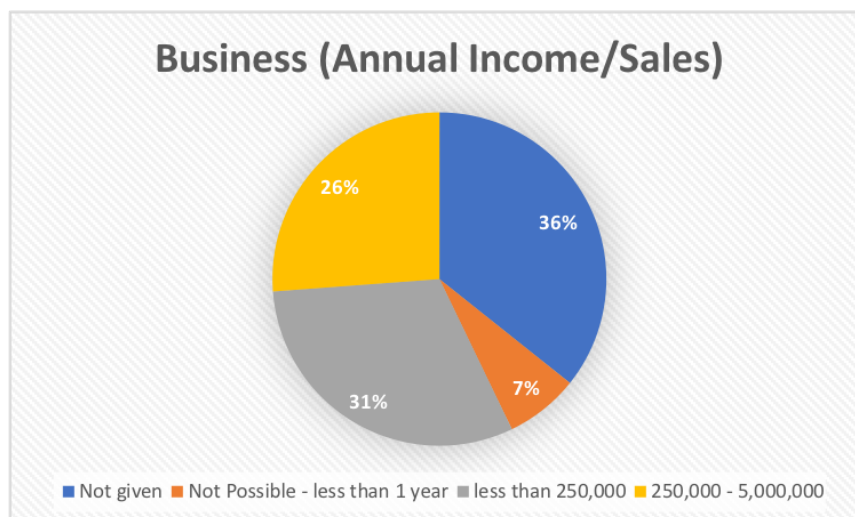


Figure 7: Businesses: Number (No.) of Employees**Figure 8: Business: Annual Income/Sales (\$TT)**

5.13 Type of Participants (Focus Groups)

The first focus group (FG1) was held in Tobago with the support of a government agency and comprised four participants with an equal number of women and men. Half of the entrepreneurs were full-time entrepreneurs, and the other half were in full-time employment. All of the entrepreneurs participating were also stakeholders, and most of the entrepreneurs knew each other in some way. Half of the entrepreneurs had no employees, 1 entrepreneur had between 1 to 5 employees, and the other between sixteen to fifty. All of the entrepreneurs had a tertiary level of education. Fifty percent of the participants reported that they had an annual income of less than two-hundred and fifty thousand TT \$, 1 participant declined to say, while another reported sales between two-hundred and fifty thousand — 5 million TT \$ Half of the businesses

were in operation for 4 years or more, while the other half had been in operation for 3 years or less.

The second focus group (FG2), a larger focus group (double the size of FG1) was held in the South of Trinidad with the support of one of the entrepreneurs. All the entrepreneurs, except for 1 participant, knew each other in some way. There were 8 participants and 7 businesses represented. Most of the participants were between twenty-six and thirty-five years of age, as was the case with the interview participants. As with the interview participants, most entrepreneurs had undergraduate or and graduate, though a few had not yet completed. Only 1 participant had a secondary level of education. Half of the participants were in full-time employment and half were full-time entrepreneurs. There were more male than female participants represented, though 2 of the entrepreneurs (1 male and 1 female were family members and owners of the same business). Only 1 business was in operation for more than 44 years. See Appendix T for charts representing this information.

5.14 Stakeholders

Nineteen stakeholders were interviewed. Four (4) of these stakeholders were also entrepreneurs and 3 of the stakeholders represented the same organisation. Stakeholders included representatives from government, financial institutions, educational institutes/incubators, the technical community, and those that provided business or mentorship support. One (1) of the stakeholders interviewed also participated in FG1. Most of the stakeholders were government representatives (See Figure 10).

Additionally, most of the participating stakeholders were male (See Figure 9). This finding was interesting because despite there being equal representation of men and women entrepreneurs for this study, stakeholders interviewed were predominantly male, and some entrepreneurs pointed to male dominance in entrepreneurship and related networks which could exclude women. Gender, however, was not a deciding factor for participation in the study and was not a focus of the research.

Most stakeholders were between the ages of thirty-six and forty-five. There were no stakeholders between the ages of eighteen and twenty-five (See Figure 11). When discussing the use of digital platforms by entrepreneurs, many of the stakeholders (with the exception of those who were also entrepreneurs or represented the technical community) spoke not from experience about how the entrepreneurs they support use these platforms but from their personal experience with entrepreneurs that used digital platforms. This discussion potentially indicates that there is little understanding of digital platform use for entrepreneurship by many stakeholders.

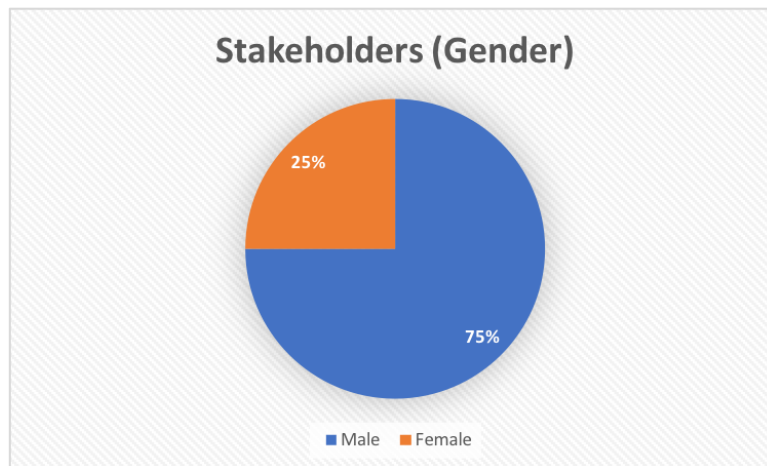
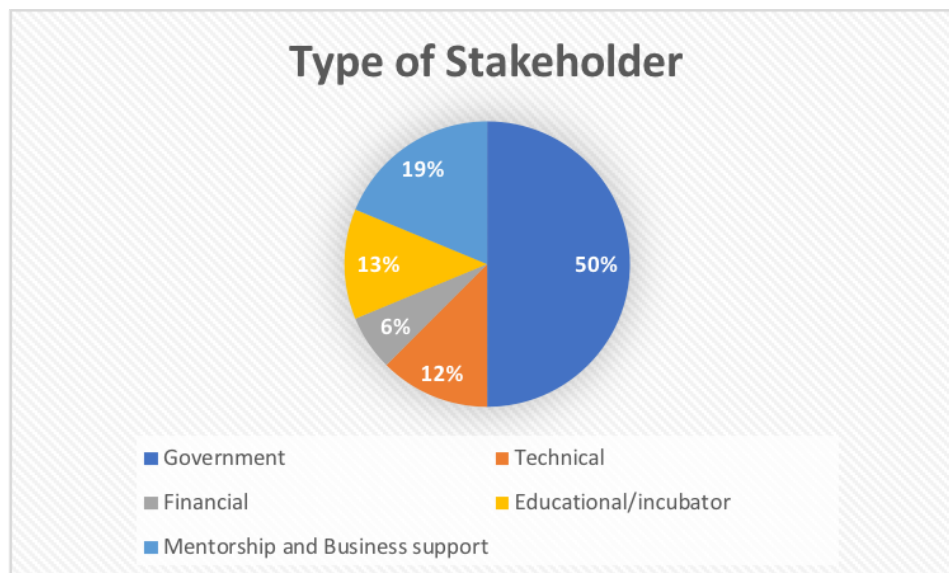
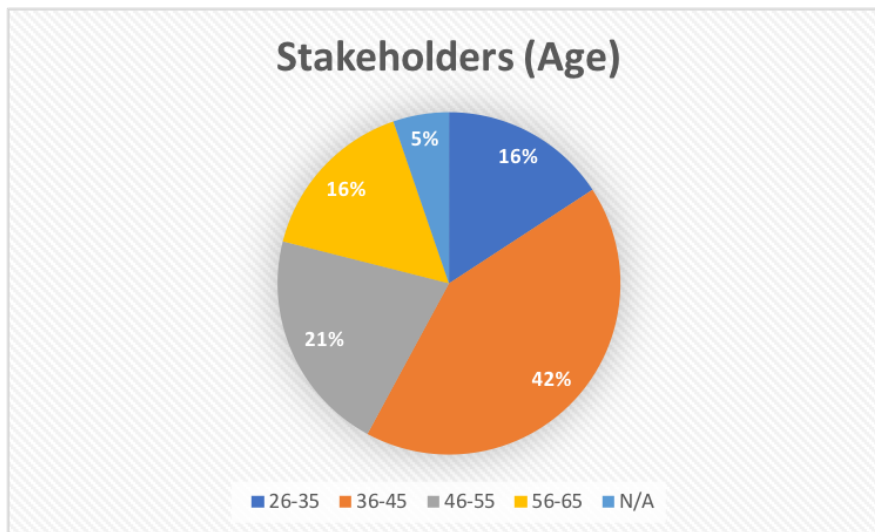
Figure 9: Stakeholders: Gender**Figure 10: Type of Stakeholder**

Figure 11: Stakeholders: Age

5.14.1 Interviews

When interviews could not be conducted face-to-face, computer-assisted personal interviewing was done through WhatsApp (1 through Skype), allowing for interview standardisation (Bryman 2011), though interviewing face-to-face provided useful context and convivial interaction. Face-to-face interviews took place at participant's places of work, at their homes, at universities, and coffee shops. Those taking place outside of the work environment provided a more comfortable and informal setting for the interview than for the workplace and appeared to put participants more at ease. Some participants had been met in person (for example, at the Trade Innovation Convention), before the online interviews, helping to develop rapport. Follow-up interviews were conducted where necessary. Four (4) interviewees were also participants in the focus group (1 from the Tobago focus group and 3 from the Southern Trinidad focus group) to provide some comparative insight into responses given for the focus group versus individually and provide some additional context.

Additionally, some interviews were followed up by phone calls and or messages for additional information. For some entrepreneurs and stakeholders, there was a wariness of providing information, particularly concerning information about government support and processes. Entrepreneurs, in some cases, reiterated that they wanted these types of responses to be anonymous, and in 1 case, refused to answer any questions related to views about government support for entrepreneurs. This wariness also appeared to influence the decision by a few stakeholders not to be recorded.

Where possible, I searched for further information online about the platforms that entrepreneurs used helping to show that I was prepared, as well as familiar with the type of activities they were

engaged in. Doing so helped to not only put them at ease but build better rapport (Neergaard and Leitch 2015). Interview questions were also adapted as interviews progressed based on responses so that they could continue to be guided by the research questions. The semi-structured format allowed for some commonality but also the boundaries needed to answer the research questions. This format also provided the flexibility and spontaneity required to arrive at the relevant response for that individual through conversation and necessary follow-up. I used probing questions such as *'you mentioned that . . . can you describe a specific example of that?'*, or *'what happened afterwards?'* (Neergaard and Leitch 2015, p. 7).

5.14.2 Focus Groups

The use of 2 focus groups (the first in the island of Tobago and the second in the Southern Trinidad) enabled entrepreneur group interaction and provided valuable, varied information, unique to group settings (Barbour 2014). Given research has found that data gathered from business owners participation in focus groups have encouraged entrepreneurs to empathise, explain, challenge, contradict and advise one another (Blackburn and Stokes 2000), and that focus groups have been successfully used in management information research and management research more broadly (Belanger 2012) this was deemed a useful approach. Having focus groups in 2 different parts of the country also allowed for an understanding of nuances based on location. I based focus group questions on those developed for the interview, which supported reliability and validity. Doing so also gave a shared context for the participants despite its informality. Interestingly, all participants in the first focus group (FG1), which was supposed to include entrepreneurs, had dual roles as stakeholders as they supported entrepreneurship as well and this may have been because it was convened by an institutional stakeholder. However, during interviews it was also revealed that several interviewees were also both stakeholder (formally and informally) and entrepreneur.

The focus group was held at a government office and with support from a governmental stakeholder. Three (3) of the participants knew each other, and the participants were willing to speak freely about their experiences. The second focus group (FG2) consisted of only entrepreneurs and was convened by 1 of the persons interviewed. All participants, except for 1 participant, was part of the entrepreneur's network (the exception was known to another participant). This focus group was organised with the support of 1 of the entrepreneurs, at their home and in their business space. Again, entrepreneurs seemed willing to talk about their experiences. For both focus groups, there was also time allocated for refreshments, which helped put people at ease.

Related information was provided to the focus group beforehand, and the discussion began with safe topics and ended with safe topics (Darlington and Scott 2002). Participants were told that participation in the focus group provided the opportunity to meet other entrepreneurs and exchange experiences. Light refreshments were provided so that the participants could feel more comfortable and chat amongst themselves if they wanted to. I also engaged in light chat to help build rapport during the session. The focus group sessions began with entrepreneur introductions. Each speaker could build upon what the other said with some guidance and probing when necessary. Care was taken to ensure that no single participant dominated the discussion, and all voiced their views though the time for speaking was limited for participants in comparison with the interviews (Darlington and Scott 2002). Participants were able to interact and build upon each other's comments and disagreements, thus providing deeper research insight. The discussion in the focus groups provided helpful explanations to supplement the data provided from interviews.

5.14.3 Secondary Data

Two (2) types of secondary data were collected. The first consisted of reports from entrepreneurial stakeholders. Secondly, this consisted of data from the platforms that entrepreneurs used, where interaction and content on the platforms they used most were reviewed.

5.14.4 Reports from Entrepreneur Stakeholders and Media

A search for secondary data (such as government, business, entrepreneurship, and media, and reports) was done using the Google search engine and their advanced search facility. Keywords for these searches include: 'Trinidad and Tobago' an 'entrepreneurship' OR 'small business' OR 'microenterprise' OR 'micro-enterprise' OR MSME OR 'micro, small or medium enterprise) AND internet OR ICT OR e-commerce OR social media OR sharing economy). The use of this data has the advantage of being publicly available and usually inexpensive and much quicker to access than the primary data being collected, however, because it is collected for a reason it may not always be reliable and free of bias. This search did not reveal many relevant and reliable data, and any useful data that was found is referenced in the thesis.

5.14.5 Platform Data

Where the interviewee granted permission, correspondence on the related pages in the platforms for the last 6 months was reviewed to search for additional information into how digital platforms are used for entrepreneurship and related correspondence. Text, images, and videos on the site

were reviewed. This information was used to help assess the accuracy of data collected from primary research (interviews and focus groups). Interestingly, some entrepreneurs were compelled to show the platforms they use and how they used it on both their mobile phones and computers.

These platforms presented data from user interaction, such as customer/potential customer interaction with each other, with the entrepreneur as well as the platform. Users were vocal about the platform, the business and products. These data were, therefore assessed to support a better understanding of the relationship between digital platforms and entrepreneurship in a way that supports the reduction of bias that may arise particularly with interviews. This data was collected and stored independently of this research by the digital platform. A due note was given to problems inherent with the use of secondary data, and so the relevance and validity of secondary data sources were reviewed (Wilson 2010) through asking the following questions:

- Can the source help to answer the research questions?
- When was the data last up-to-dated?
- Does the data relate specifically to entrepreneurs and their use of digital platforms?
- Can the data within this source be compared with interviews and focus group data?
- Is the original source of data available?
- Can the validity of the data be verified?

Table 5 explains the method used for each research question.

Table 5: Research Questions and Methods Applied

Research Question	Method
How have digital platforms influenced entrepreneurship in Trinidad and Tobago?	Secondary Data (Reports and Platform Data), Interviews, Focus Groups
How are digital platforms used in interactions between entrepreneurs, customers, and stakeholders?	Secondary Data (Platform Data), Interviews, Focus Groups
Have digital platforms played a role in changing the entrepreneurial ecosystem in Trinidad and Tobago?	Secondary Data (Platform Data), Interviews, Focus Groups

Research Question	Method
What affordances and constraints exist for entrepreneurs in Trinidad and Tobago in the context of digital platform use?	Secondary Data (Reports and Platform Data), Interviews, Focus Groups

At the final stages of data collection, some interviewees suggested seemingly unconnected individuals for participation in the research that I already interviewed. For example, some stakeholders and entrepreneurs suggested participants that I already interviewed. I reasoned that Facebook would probably be the most popular platform used, based on the pilot study (See Appendix D for a list of interview questions used for this pilot study) and the literature review, so an attempt was made to look for more varied usage so that there would be a better balance of the types of platforms assessed.

5.15 Data Analysis

Data saturation was reached when respondents repeated the same information, and it was determined that no further interviewees were required (Saunders et al. 2018). The interview questions were iteratively developed and recorded with permission for transcription. Four (4) interviewees (three government-related and one academic) did not allow recording, and in these cases, notes were taken for analysis. The transcripts were then de-contextualized and numbered for one coder analysis using NVivo 12 software. Analysis of the data began as the data collection progressed, and this led to some adaptation of research questions. Qualitative thematic content analysis helped to narrow and select the most appropriate information for answering the research question iteratively and systematically. A coding frame was developed based on the research questions, and the TACT approach used for analysis. The coding frame was, however, continually modified to best answer the research question in the most informed way. This framing was driven by the codes identified and the data (Schreier 2014). The unavailability of new codes by interviewees required to answer the research otherwise known as inductive thematic saturation helped to determine when coding was complete (Saunders et al. 2018).

The data analysis follows guidelines proposed in Appendix S. Firstly, a thematic content analysis (Rapley 2014; Thornberg and Charmaz 2014; Thompson et al. 2018) was conducted using pre-identified main codes specific to the research questions. These main codes, which were based on the research questions (Schreier 2014) are: **1) Entrepreneur Interaction Using Digital Platforms** – this looked at the various ways the digital platforms were being used to interact by the entrepreneur; **2) EE in T&T** – this provided insight on how participants viewed entrepreneurship and components of the EE to help assess the influence of digital platforms. The EE Pillars (World

Economic Forum 2013) guided the codes identified and categorised under this main code and was designed to aid understanding of the EE in T&T; **3) *Influence of Digital Platforms on EE*** – this noted digital platforms impact on the EE. It was useful to consider this influence in the context of the code EE in T&T to help answer the research questions. During this process, outcomes and related structures and components are identified to explain the codes.

Secondly, each code is reviewed and **4) *Affordances*** and **5) *Constraints*** are identified from the data coded based on principles previously outlined (Majchrzak and Markus 2014a; Majchrzak et al. 2016; Evans et al. 2017); Volkoff and Strong (2017); (Bucher and Helmond 2018). For example, an affordance for the code, *Influence of Digital Platforms on EE*, could be simplified transactions, which arose from various events (e.g. contacting a customer) and could have involved structures (like digital platforms and or banks, or meeting on the street) and may have led to consequent events (like the implementation of a new payment system). This affordance could, however, also relate to codes from *Entrepreneur Interaction Using Digital Platforms*.

Subcodes were simultaneously generated from the data when necessary (Thompson et al. 2018) for each round of coding. Interpretations for this coding process was guided by a combination of empathy and suspicion when deciding if the data should be taken literally (Willig 2014) and was supported by reviewing secondary data on digital platforms. This facilitated reflection on interactions and subcodes identified under each main code. During both coding and analysis, linked memos were used (Hutchison et al. 2010) for additional notetaking on the ideas emerging from the data. Linked memos also allowed for reflection on the context within which interactions took place and supported clear explanations in preparation for the final step of identifying the most appropriate affordances and constraints and presenting the data.

Thirdly, the codes were reviewed, leading to the removal of some codes, creation of new codes and existing codes being renamed and reorganised (Gibbs 2014; Thompson et al. 2018). For example, when subcodes did not apply, they were placed under the main code (Thompson et al. 2018). This process aimed to decrease the number of codes and make the dataset more concise to answer the research questions (Schreier 2014).

This process followed was:

- Read and code when a relevant category is found
- If a code has already been created that covers this, subsume it under that code
- If no subcode exists, create a new subcode
- If no subcode is needed for relevant data, subsume it under the main code
- If data apply to more than one main code or subcode, code to reflect this

- Review and adapt the codes to best answer the research questions

Fourthly, the relationships between structures and context within which the affordances and constraints were identified and explained. Any changes in structures that occurred because of the use of digital platforms were also identified. This was then redescribed as subcodes under each main code. Inferences were sometimes made about the proposed affordances and constraints within the context of the literature review. Descriptions were added for each of the codes in NVivo 12, to assist with future analysis. Linked memos were used to note emerging insights throughout the coding and analysis process. This process supported systematic and creative thinking as well as later analysis.

Finally, another round of analysis led to a re-examination of the context within which the affordances and constraints came about. This re-examination led to the identification of other affordances and constraints and thus a further review of the coding frame. A final comparison of the most common affordances and constraints then crystallised the findings (Wästerfors et al. 2014). By following these steps, the evidence presented by the data was corroborated, and following comparison, the affordances and constraints that provided the best explanations for the influence of digital platforms on entrepreneurship were selected. Matrix coding was used to find correlations, which would be useful for more in-depth analysis.

Though much rich heterogenous data (demographic data and data about the types of platforms used) was gathered, decisions had to be made about what data should be included, to ensure that the anonymity of the participants was protected. This was also emphasised by several participants, some of whom declined to be recorded for the interview. Instead of focusing on the characteristics of each entrepreneur and specific platforms used, focus was instead placed on general lessons that could be learnt about the use of digital platforms for entrepreneurship. Nevertheless, despite the diversity of participants there was significant similarities in responses.

5.15.1 Finalising Analysis for Presentation

This process, aligned data, theory, and findings to help answer the research question (Klein and Myers 1999; Schreier 2014). Tables are placed before the end of each section following narrative analysis of the findings, which are interspersed with quotations. This allowed for a consistent template which provides 'rhythm' with a recognisable pattern that allows for easier flow of analysis (Chenail 1995, p. 6). The Issue column serves to introduce a statement on the data which was previously discussed in the section. The Evidence from Data column provides a quotation found to be explicative for the issue. Quotations were used to 'star' the data (Chenail 1995, p. 4) by offering first-hand accounts related to issues. The third column labelled Codes lists the codes

that apply concerning RQ1: **Entrepreneur Interaction Using Digital Platforms**, RQ2: **Influence of Digital Platforms on EE** (codes for T&T Entrepreneurial Ecosystem are not listed) and RQ3: (codes **Affordances** and **Constraints**) This arrangement helps to illustrate where there are overlaps between main codes/subcodes (Gibbs 2014). The anonymised name of the authors for quotes include using 'I' for interview 'E' for entrepreneur 'S' for stakeholder, 'P' for platform owner, 'FG' for focus group and 'PT(number)' to indicate which participant in a focus group. Any findings that diverged from the literature are explained for each code.

A hierarchy chart was generated in NVivo 12 illustrating RQ2: **Influence of Digital Platforms on Entrepreneurial Ecosystem**. Additionally, further numeric information was generated for interrelations between codes (RQ1: **Entrepreneur Interaction Using Digital Platforms** and RQ3: (for codes **Affordances** and **Constraints**) using a matrix query (Theodoraki et al. 2018) which helped to inform the creation of a diagram using Gephi software that illustrates these relationships.

5.16 Chapter Summary

This chapter served to explain and rationalise the methodology adopted for this thesis. It builds on existing research that uses TACT as a method as well as methods used for assessing an EE. It justified the method used for the research and explained the research procedure to allow for better insight into how data validity was achieved and how the sample was derived to then present information about participants in the study. It explained how the data is analysed and presented to frame the discussion of the results in the next chapter.

Chapter 6 Discussion: Entrepreneur Interaction Using Digital Platforms

6.1 Chapter Introduction

This chapter, presents and explains the data related to research question 1 (RQ1): **How are digital platforms used in interactions between entrepreneurs, customers, and stakeholders?** The data is summarised under the main code *Entrepreneur Interaction Using Digital Platforms*, under which several subcodes emerge from the data. These codes are fully discussed in the sections that follow and tables are used to highlight data for each code. The coding structure for this research question can be found in Appendix V.

6.2 Entrepreneur Interaction using Digital platforms

Data for the RQ1 main code *Entrepreneur Interaction Using Digital Platforms* revealed 6 codes that can be used to describe how entrepreneurs use digital platforms to interact with other digital platform users, including customers, other entrepreneurs, and stakeholders. These include **1) Intermingling of Online and Offline Interaction**, which highlights how digital platforms are used in conjunction with offline interaction. This includes the subcode *Mixing Face-to-Face and Digital Interaction* that describes how entrepreneurs combine face-to-face interaction with digital platform interaction. Also, the subcode *Different Interaction based on Age Demographics* explains how interaction differs for older and younger customers; **2) Mirroring Culture** examines how interaction using digital platforms reflect cultural and social norms and values; **3) Trial and Error** explains the uncertainty guiding the interaction among entrepreneurs using digital platform, primarily due to continual digital platform changes that demand adaptability. Under this code, the subcodes *Adaptability* which explained the need to be adaptable and *Creativity* which explained the need to be creative when using digital platforms were created; **4) Psychological Manipulation and Distraction** refers to the use of perceived psychological tactics by the entrepreneurs to influence others in their interactions. It also reviews how entrepreneurs themselves may be influenced psychologically. For example, distractions can sway their minds, and they may need regulate their digital platform use significantly; **5) Trickery** highlights how entrepreneurs may overcome constraints that arise from user interaction and the use of deception; **6) Balancing Personal and Private Information, Relationships and Spaces** looks at how entrepreneurs navigate personal and professional digital information, relationships and spaces online to support their entrepreneurship. These codes will now be detailed and fully examined.

6.2.1 Intermingling of Online and Offline Interaction

Most of the research on both digital entrepreneurship and e-entrepreneurship or *netentrepreneurship* discusses entrepreneurship only in the context of digital interaction. However, this research finds that even when digital platforms are used there is a premium value placed on face-to-face interaction by entrepreneurs, customers, local business partners and stakeholders. Therefore, digital platform interaction often occurs intermingled with face-to-face interaction. Several entrepreneurs spoke about being able to sense if someone was being genuine based on their *'energy'* (17IEP) *'aura'* (17IEP), *'warmth'* (47IE), *'personality'* (47IE), *'vibration'* (17IEP) *'an overall good feeling'* (21IE) or the *'magic'* (47IE) of face-to-face conversation. They described face-to-face interaction as important in the context of enabling them to *'see what the person is thinking'* (34IE) believing it was *'better to watch somebody in their eyes'* (13IEP) to have *'a real sense'* (14IE) of the person. Many entrepreneurs felt the need to integrate digital interaction with face-to-face interaction to be able to make better assessments of their customers and business partners. Most entrepreneurs believed that with face-to-face interaction there was *'real legitimacy'* (8IE) and the revelation of *'people's true colours'* (21IE), which could not be assessed only through digital interaction.

This view reflects research which shows the importance of offline communal networks in T&T (Miller et al. 2016) and for Chinese netentrepreneurs using the e-commerce B2C Taobao platform (Avgerou and Li 2013), who relied on community-based relationships and interactions which take place face-to-face, even though the Taobao platform was used for marketing and payments were also made online. To build online communities and networks, entrepreneurs overwhelmingly say they must also meet face-to-face with members of those networks for relationships to gain legitimacy.

This research showed that in T&T entrepreneur interaction using digital platforms could be at odds with face-to-face interaction because of the inability to create the same offline experience. However, entrepreneurs also used a combination of digital and face-to-face interaction that is preferred by most entrepreneurs, and desired by those with whom they interacted. A female entrepreneur (aged thirty-six to forty-five) used multiple social media platforms including YouTube for a video and photography related business explained

'... it's kind of seamless you don't really differentiate between what is traditional and what is online, it's all just one comprehensive communication tool ... I don't really think there's a benefit of one over the other, but I do believe that there should be some sort of connection between the two (face-to-face and online interaction)' (49IE)

Entrepreneurs also continued to use traditional media, like newspapers and the radio to especially when their target market was older

'... for a while I think there's just going to be that (older) segment of the population that just isn't interested in technology doesn't know how to use it'. People ask me all the time if I have (advertised in the newspapers) ... I told him no I have a website, and they are always like what?' (33IE)

Digital entrepreneurs are usually assumed to be individuals that use digital platforms for online payment transactions (Matlay and Martin 2009; Kollmann 2014; Turban et al. 2015; Islam and Alghobiri 2018). However, in this study, many entrepreneurs and their customers do not use digital platforms for local payments. While local purchases are usually made in person, online payment using PayPal is sometimes provided, though it is usually reserved for overseas business transactions.

Additionally, the research shows that hybrid interaction occurs on digital platforms. That is the occurrence of digital interactions and physical interaction at the same time on the digital platform.

'If we have any promotions, like they will set up a (X) show at a location, before it kicks off I'm live on Facebook, 'Hey guys, (X) here. I'm live at (X location). This is what's going on. Specials on today, find a (X) and get to me ... I'm here waiting, I'm here until 5:00PM ... Get it, get it, get it, today, today'. Quick ad. So, I now hear ting, ting, ting, people hit and they see that. They start calling, 'What time are you leaving? All right, I'm close by'. That's business ... I utilise the word of mouth platform by referrals' (8IE)

Entrepreneurs may interact first online and then meet in person, or first have face-to-face interaction, which may then lead to online interaction for business purposes as well.

Local network effects discussed in the literature (Katz and Srapiro 1985) were generally found to be critical, particularly in a small country, and therefore social networks are used to exploit both online and offline network effects which then intertwine for business. For example, offline groups and networks were vital for gaining information and access to networks that are not usually public or easily accessible online locally. Therefore, each type of interaction supports the other in a non-linear way, and offline networks are important for the manifestation of these digital platform network effects. The way these online networks may intersect with offline networks is not generally discussed in the literature but is important for understanding the intermingling of interactions. The lack of attention to how networks interact within EEs was identified as a

shortcoming of current EE research (Stam 2015; Alvedalen and Boschma 2017), and these findings seem to reiterate this.

The importance of intermingling online and offline interaction was also reiterated by those running digital platforms as well. For example, visits were made by representatives of booking platforms to a hotel to help ensure that the entrepreneur could make the best use of their platforms, and offline interactions strengthened virtual relationships. This exchange provided useful support for the entrepreneur and helped to resolve problems that arose as well.

'... there are people from Expedia and Hotels.com they come down periodically to Trinidad and Latin America, and they meet with the hoteliers, they sit with us, and they discuss issues problems, recommendations ...' (55IE)

The code **Intermingling of Online and Offline Interaction** highlighted here shows that explaining how digital platforms are used for interaction without accounting for how this may be intermingled with offline interaction, groups and networks may not give a true assessment of how digital platforms are used in interaction. Table 6 provides further evidence of how face-to-face and digital platform interaction are intermingled.

Table 6: Intermingling of Online and Offline Interaction

Issue	Evidence from Data	Codes
Interaction offline leading to interaction online and then interaction offline	20IS: '... a young guy came in here the other day ... his booth in the market has free Wi-Fi, and you could message him and place an order and pick up an order or have him do a delivery ... that's something you'll never hear of before'	Mixing Face-to-Face and Digital Interaction: RQ1 Different Interaction based on Age Demographics: RQ1 Mirroring Culture: RQ1 Accessibility and Immediacy: RQ3

Interaction supported by mobility	FG1-PT:1 – ‘it helped me to kinda develop a little mobile unit that I could take around a bit easier or do maybe samples ... I've had calls from persons, ‘Are you on Facebook? Are you on Instagram? Are you on WhatsApp?’ ... so, you can send like a picture or something and kinda build from that’	Intermingling of Online and Offline Interaction: RQ1 Accessibility and Immediacy: RQ3 Local and International Visibility: RQ3
Bringing customers to the store	35IE: ‘... when I had my store my neighbour was there same time as me, but he closed the end of November and that was because he was focused on getting foot traffic ... I was focused on online traffic and getting the online people to come to the store and because of that I not only lasted longer I was able to now branch off into a bigger opportunity that makes more sense for me’	Intermingling of Online and Offline interaction: RQ1 Accessibility and Immediacy: RQ3 Local and International Visibility: RQ3
Customer interaction both online and offline determined by time constraints	40IE: ‘... it's a lot easier to say things in person, so I would rather call someone rather than text them it just saves time but ... when someone's asking me for an item or to order a piece it's a lot of back and forth conversation over the phone. If I talk to you about it then we're done in like	Intermingling of online and offline interaction: RQ1 Mixing Face-to-Face and Digital Interaction: RQ1

	fifteen minutes ... so I definitely say in person is better but sometimes it's more convenient to do it over the phone in terms of time'	Accessibility and Immediacy: RQ3 Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty): RQ3
Customers wanting verification	45IEP: 'it is quite different I think dealing with them online and messaging them ... it is just an easier process but meeting with them in person gives more confidence to them and it bring more clarity. It really helps our business far better when we meet with people personally ... because at that time so you can tell who is behind the business it's no longer up to them for them to figure it out'	Mixing Face-to-Face and Digital Interaction: RQ1
Online perception versus reality	21IE: '... sometimes (the story) doesn't add up online until you have a face-to-face conversation with the person ... everything starts off hot and sweaty and then you really see people's true colours ...'	Mixing Face-to-Face and Digital Interaction: RQ1

6.2.2 Mirroring Culture

The research finds that entrepreneur and digital platform interaction mirror culture, since, even though entrepreneurs and customers might correspond online for the sake of convenience, many still desire face-to-face interaction because of the '*island culture*' or the '*very Trinbagonian, very Caribbean, sort of grapevine word of mouth*' (47IE) way of interacting. Culturally, a high value is

placed on personal networking and interaction, echoing research that found that Facebook use can only ever reflect offline cultural norms and practices (Miller et al. 2016). For example, an entrepreneur that did not use Facebook for her business when it was based overseas found that using Facebook was necessary for business in T&T.

'... it's kind of sad too because you don't want it to be so kind of tied to you but in Trinidad maybe that's what it is about ... I don't want it to be like that but I think in Trinidad it may actually works ... Trinidad is definitely different and it's more rewarding not financially but more rewarding in terms of the personal aspect of it. I mean you don't get that in the States. I mean people polite and friendly but they're not trying to be your friend per se' (18IE)

These offline social connections influenced the extent to which online interaction was useful. Entrepreneurs found it beneficial to use a social media platform to support their interactions, even if they had a website because the use of the social media platform supported social interaction and helped build trust with local customers and business partners. This finding reflects research by (Miller et al. 2016), which found there was a customer preference for using Facebook instead of e-commerce platforms for business locally.

'... if I'm doing business with somebody I would look at their Facebook page I would look at their LinkedIn profile look up things that they publicised to see ... if I see third parties who I know. I may ask the third party is this a good person to work with and so I would kind of triangulate on the various platforms' (27IES)

'Trinidadian customers do not go to a website first. If it's a foreign brand they will go on to the website, but if it's a local brand they will not go to the website because they would like to know if you have a Facebook page which I do but I (have) all the information on the website...' (33IE)

'... we wanted to do a website; we had a website in the States but of course, it doesn't make sense having it here so we kind of just stop using it' (18IE)

The adaptability of social media platforms, particularly Facebook, was valued by entrepreneurs and users because they allowed for the flexibility required for culturally informed ways of interacting. This adaptability was evident, for example, with bartering and buying and selling practices migrating from physical communal spaces, to a national space via Facebook groups. In some cases, entrepreneurs used these groups to source and offer resources, and so Facebook also influenced the culture by encouraging interaction beyond family and friendship groups for entrepreneurial activity.

'... there is a bartering group on Facebook ... so you could post stuff that you want to barter, and you can barter with other people on the island. So, it's almost like they're blending the local and the social media platform ... I think it's cool using the local, the traditional culture or practice and just putting it on that platform to make it easier, because normally with bartering you'll barter between like family and neighbours, but with Facebook, you have the whole island to barter with' (20IS)

Additionally, digital platforms, especially social media platforms were thought to be well-suited for supporting the promotion of services linked to the creative sector (for example fashion, entertainment) and the food sector, which entrepreneurs and stakeholders believe provide much promise for entrepreneurship locally.

'in Trinidad, the culture ... we like entertainment, we like to have fun, we like to enjoy, we like the little food too. You will see lots of people popping up saying look we going to have an events management company ... so I think that always kind of ties into the social media too ...' (37IES)

According to entrepreneurs, aspects of culture, for example, the need to discuss and chat about goods and services, even if not purchasing, was evident. Several entrepreneurs reported that users made comments or had discussions on digital platforms (particularly social media platforms) about their goods and services, which made inaccurate claims or unjustifiably criticised the entrepreneur or their business. Entrepreneurs, therefore, needed managerial skills when interacting, particularly since posts could not be removed and the permanency of those discussions could affect their business.

'... some people and them love bacchanal (confusion), and a lot of the things may not be true. One person just has to comment on something, and then you would see fifty other people be 'Yes I did really hear' and they never hear ... so that is my thing with Trinis and social media ... our culture which, at times could be, be quite controversial, it's translating to social media, and that could hurt brands' (F2:PT:6)

Table 7 below provides further evidence of how T&T culture influences how entrepreneurs use digital platforms to interact.

Table 7: Mirroring Culture

Issue	Examples from data	Codes
Impact of small island culture	24IE: ‘... we live in a small island nation, so a lot of other opportunities are created from personal interactions, word of mouth, networking, a lot less than probably elsewhere in the world’	Mirroring Culture: RQ1 Mixing Face-to-Face with Digital Interaction: RQ1
Evolution of culturally informed interaction on local platforms	26IEP: ‘... it's always interesting to see how users make use of any given platform. So, for example, we offered a space for people to talk about (X) ... but they also started using it to sell (X) and then eventually sell household items and all and sundry, so you know those things are also surprising’	Mirroring Culture: RQ1
Customers publicly critiquing entrepreneur for lack of local representation	18IE: ‘you have people who aren't happy, people who say, ‘well are you a local? You know this does not look local. Where are your diverse models?’ It's very true, but these are manufacturer pics ... (someone said) Trinidad doesn't have summer so I said ... ‘people don't say August Camp ... it just like me saying you know get ready for vacation’ ... she was very adamant about it ... she was giving me a lesson about	Mirroring Culture: RQ1 Lack of Control (Users): RQ3

	Trinidad having dry season and rainy season'	
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6.2.3 Trial and Error

Platforms change continuously and unpredictably, so the use of digital platforms by entrepreneurs are characterised by consistent testing or trialling and uncertainty. This trial and error interaction is also true for entrepreneurs that consider themselves social media experts and offer social media services to others. Entrepreneurs must continually decide if using new features of platforms will be beneficial to their business or if they should pay for more advertising with little insight into how valuable doing so could be for their business. There was limited information available about how to best navigate these changes.

'... Facebook is starting to do that now. Every time you post something, and it get past twenty-five likes they encourage you to boost it ... I really don't know; how do I tap that amount of people how do I know that it reaching that volume of people and how do I connect to them ...' (F2-PT:8)

Additionally, while digital skills can be learned, for entrepreneurs' platforms change too quickly and therefore, what they learn can become obsolete very rapidly and without notice after they have perfected it. As a result, they need to learn new skills specific to the platform on a '*trial and error*' (4IE), (F2 - PT:6 and PT:8) basis. According to 1 female entrepreneur (aged 18-25) who managed social media platforms like Instagram for businesses

'social media ... I think you don't need formal training but keeping up with what's going on currently and always staying like one step ahead of everybody else ... University of YouTube for everything ... IGTV (Instagram TV) is relatively new on Instagram. It just came out on Instagram I'm trying to read up on it today. Everybody already had content on it. I don't know how but it's essentially a platform to create longer-form videos. I feel like we have YouTube for that, but we will see how it goes it will probably grow on us eventually' (191E)

While the initial use of digital platforms was found to be easy, as time progressed entrepreneurs needed to invest more time and resources to stand a better chance of being more successful when using digital platforms even though there was little guarantee of success. Entrepreneurs felt pressured to adopt new and unproven offerings of digital platforms (Nambisan and Baron 2013, 2019). Entrepreneurs reported '*learning over time*' (F2:PT:6) but also recognised that they needed

to assess whether using a platform would in any way hinder their ability to reach long term goals even if using it met short term goals.

Entrepreneurs also reported requiring high levels of *Adaptability*, a subcode of Trial and Error because they needed to be able to respond very quickly to identified platform changes. For example, at any moment, changes could affect an entrepreneur's visibility, and require immediate trialling of a new strategy for using a digital platform successfully '*... you have to learn how to adapt to stay ahead of the game*' (56IE) or have '*the ability to change rapidly ... because social media is always changing*' (56IE)

Additionally, adaptability was often seen to go hand in hand with *Creativity*, another subcode of Trial and Error, because it was believed that this is what enabled an entrepreneur to be successful in the ever-changing international digital marketplace. Another male entrepreneur (aged twenty-six to thirty-five) offering social media services explained

'... in the initial consultation if I think that you are really progressive, I'm thinking that I could work with you because sometimes my ideas would be so unorthodox that it will definitely defy ways of traditionally marketing a business ... to me, the person to really profit off of social media are the ones who are creative ... I think that's a skillset' (21IE)

Table 8 provides evidence of how entrepreneur interaction using digital platforms is characterised by trial and error.

Table 8: Trial and Error

Issue	Example from data	Codes
Limited instructions	4IE: ' <i>... some of the skills are not shown on the social media, and that is where a lot of common sense will come in and trial and error, where you could try to do your own stuff</i> '	Trial and Error: RQ1
Learning by doing	35IE: ' <i>... the people that you follow on social media have big followings; one-hundred percent of them have never gone to school for social media</i> '	Creativity: RQ1 Online Learning: RQ2 Supporting Learning: RQ3

	but the people who are teaching how to use social media have no followers'	
Social media 'experts' learning by doing	21IE: '(It is) such a toss-up because you're learning as well and you also wanting to be for want of a better word an expert on things ...'	Trial and Error: RQ1
Platform owner's experimentation	13IEP: 'if that one worked and this is why', or, 'It didn't work. Let's try something out'. So, we're kind of at a stage now where we're just testing different activations to see what happens as a result'	Trial and Error: RQ1 Flexibility: RQ3
Resourcefulness	24IE: '... you have to figure out the answer yourself so you have to be a little bit resourceful ... I have been able to develop that so far as I'm able to in my capacity as being in non-artistic person'	Creativity: RQ1
Standing out from the crowd in the midst of continuous changes	56IE: '... definitely creativity because in the age of social media, where you have a lot of things, products, competing for your attention, you have to find a way to stand out'	Creativity: RQ1 Time Consuming (Information Overload): RQ3
Skills quickly become obsolete	21IE: '... I did a course in social media ... I was able to do certain things to help me and I sharpened up those skills but sometimes they become	Trial and Error: RQ1

	obsolete because of the ever-changing nature of it right ...'	
Creativity in the midst of inflexibility	15IE: 'I don't think there's really too much you could change about it, but ... there's always different creative ways to do the same thing. So that's kind of what we try to do'	Creativity: RQ1

6.2.4 Psychological Manipulation and Distraction

Interaction between entrepreneurs and users were found to be characterised by psychological or emotional manipulation by the entrepreneur. The interaction was believed to require '*a lot of emotions and psychology*' (F2-PT:5). Some entrepreneurs believed interaction was premised on a potential consumer being able to '*see it (what they offer) in their head*' (16IE) and so it was said that attempts were made to use psychology to '*connect with an emotion, not a person*' (F2-PT:6), to '*play with their emotions*' because '*you sell more than a product, you sell life*' or '*sell emotion*'. The belief expressed was that '*selling happiness*' '*feed(ing) today's emotions*' or providing a '*daily quota of encouragement*' was necessary (F2-PT:6). An entrepreneur referenced '*subliminal messages*' (F2-PT:8) and '*tapping into consumers subconscious*', '*stay(ing) in their subconscious or conscience*' or products '*stick(ing) in people's minds*' (44IE), while another entrepreneur was '*... looking at the whole psychology of YouTube*' (27IES).

Entrepreneurs also admitted that they were also on the receiving end of this psychological manipulation reporting that what they see on digital platforms influence them on a subconscious level (29IE) and consequently influence what they decide to do. Some entrepreneurs made conscious efforts to reduce the heavy use of digital platforms to avoid the influence that they may subconsciously have on their creativity.

'I used to save a lot of (X) pins, but now I stopped because I recognised early that if you keep on looking at them ... they seep into your subconscious and you find yourself copying someone else stuff ... it influences what you do' (29IE)

Other entrepreneurs, such as this female entrepreneur (aged twenty-six to thirty-five) who designed fashion accessories stopped using certain platforms because they believed they may be addicted to using them.

'I deleted Snapchat ... there was a time when I was okay using Snapchat without the filters, and then I started using the filters, and it was like I couldn't stop using it. So, I thought that was like borderline unhealthy not in a serious way but it's sort of made me very aware of certain addictive things ... it's very funny, and in hindsight oh the irony of it all is that I deleted my Snapchat and I am obsessed with Instagram stories' (47IE)

Additionally, when interacting entrepreneurs found it was necessary to *'try not to juggle too much'* (51IE-F2) or to try to avoid *'being all over the place'* (29IE). While limited control of interaction is discussed in the literature (Gerardine and Poole 1994; Fox and Moreland 2015; Sutherland and Jarrahi 2018a) there is little research on how distractions within the digital platform, particularly, social media platforms, can impact entrepreneurs' interactions and influence entrepreneurial activities, processes and outcomes as well. However, this was important amongst the entrepreneurs under study.

'sometimes you find yourself just aimlessly just going like that; what are you looking for nothing, you just scrolling through and before you know it half an hour is gone ...' (29IE)

There was too much information, unwanted interaction, and distractions that could lead an entrepreneur away from their business goals when interacting with other digital users, like customers, other entrepreneurs and business partners.

Given recent concerns about the potentially negative psychological influences of digital platforms on behaviour stemming from the belief that digital platforms employ psychological tactics to keep their users on their platform (Locklear 2017; Rosenstein and Sheehan 2018), these findings provide new insight into how digital platforms may be influencing entrepreneur interaction and activity. Digital platform use was found to require not only self-regulation but significant mental discipline because of distractions that continually presented themselves to entrepreneurs when using them. This issue, in some ways, reflects research on digital entrepreneurs in platform ecosystems (Nambisan and Baron 2013, 2019). This research revealed that entrepreneurs needed to balance their goals with platform demands, and with delicate balance because their entrepreneurship also depended on a thriving platform ecosystem. Table 9 provides further examples of how psychological manipulation and distraction manifests in entrepreneur interaction using digital platforms.

Table 9: Psychological Manipulation and Distraction

Issue	Example from data	Codes
Subliminal messaging	F2:PT8 – ‘it's all subliminal. In other words, it is resonating in the eyes and then in the subconscious ... so it's all about that in terms of when I'm selling a product because sometimes the least valuable thing about a product is the physical part of it’	Psychological Manipulation and Distraction (RQ1)
Distracted by too many platforms	29IE: ‘I'm on Instagram. I have my own Facebook page. I am on Twitter. I'm on that new one Vero although I am not really active there, I am still looking at it and I actually figure I should just focus mostly on Instagram and Facebook instead of just being all over the place’	Psychological Manipulation and Distraction: RQ1 Time Consuming (Information Overload): RQ3
Distracted by unwanted interaction	56IE: ‘Spam became a thing, and I was like, I don't like groups because there was too much to manage ... you have a lot of things, products, competing for your attention’	Psychological manipulation and distraction: RQ1 Time Consuming (Information overload): RQ3 Lack of Control (Users): RQ3

6.2.5 Trickery

Entrepreneurs employed trickery or deception to prevent and overcome problems that could arise with interaction. The findings for this code was not discussed in the literature review. However, trickery was identified because of online interaction with computer-generated bots on digital platforms that are difficult for an individual to distinguish from human interaction (Oentaryo et al. 2016). It was believed that the use of digital technology meant it was easier to

trick someone into believing something that was not true, therefore increasing risk and uncertainty for the entrepreneur.

'Filters is the devil, you're responding ... to something that is absolutely not real. This also presented problems when trying to understand the kind of businesses we were working with, and sometimes when we eventually met representatives of a business they presented a totally difficult image to what was seen online' (FG2:PT:8)

The second focus group (FG2) provided significant examples of this. For example, in FG2 an entrepreneur explained how fake accounts were used to overcome unwelcome and inaccurate comments, how the platform was tricked into aligning with the entrepreneur's goals and how they tricked their competitors through their interaction to support their interests (See below).

Tricking customers

FG2

PT:8 – *'what could help you out with that ... please have a separate email account ... and have you as a bogus person under a different name, so you could deflect when those negative thing ... always have that just in case'*

PT:2 – *'You could have two if you want'*

PT:6 – *'That is the desperately drastic measures that we have to do. You can be somebody else, the voice of reason would comment'*

PT:8 - *'I have that on my page, all of my pages'*

Tricking the platform

FG2

PT:8 - *'I will tell you a little secret ... if you post something and you like it below and share it too ... you must like it ... because the moment you like it, it shows up, it opens up all the things that you've liked before'*

PT:5 – *'Excellent advice'*

PT:7 – *'Excellent'*

Tricking competitors

FG2

PT:8 – *'I will troll and see what they have. Look at ... how (X) presented themselves and sometimes my aim will be to put out something that they would like and the moment I get them to like it, I repost it. By default, they don't want to validate your work. They don't want to endorse your work. But the moment you can trick them ... you just repost, and their followers become your followers'*

Additionally, entrepreneurs crafted the image they wanted of themselves online to trick their customers even though they recognised it did not reflect reality. For example, this female entrepreneur (aged twenty-five to thirty-six) in the food industry explained how they tricked customers using Instagram.

'... in my heart I know I'm not proud of this, but if I make it and they eat it they would be like ... it's the best thing ... you're the best because of how I portray myself on social media and how I portrayed my items on social media it will stick in people's mind' (44IE)

Entrepreneurs also reported falling victim to trickery from other business partnerships which were first forged online. For example, a business partner may evidence a sociable personality online, however this does not always reflect an entrepreneur, customer or stakeholder's offline interaction, which one entrepreneur coined as *'delusions of grandeur'* or *'a lot of fake being pushed as real'* (FG2:P5). This sometimes led to conflict and accusations of misrepresentation by entrepreneurs, customers, business partners and other stakeholders.

'... her (client's) post was very inspirational ... but when I actually met her she was really not nice at all ... I don't blame that on the platform itself but I do give the platform some part to play in projecting her image ... maybe I was gullible to what she was projecting ...' (21IE)

All the entrepreneurs in the Southern focus group explained how they believed the social media platform they used was being used to con locals by one business that tended to pop up on all their news feed.

FG2

PT6 – *'... he has become an influencer ...'*

PT8 – ‘... He get some grass outside and he shake it in a bottle and he say come buy this from me. This will cure it; and he uses the social media platform and he sells anything ... they buy his products’

PT1 – ‘and he has stores, so it's like our flawed culture translate to flawed social media ...’

Some entrepreneurs indicated that they believed the number of followers and likes a user has on digital platforms was not real because some individuals bought ‘fake friends’ (12IES-F1). Table 10 offers more examples of trickery.

Table 10: Trickery

Issue	Example from Data	Code
Potential to be tricked when doing online business with others overseas	21IE: ‘I had a business arrangement that went very South recently ... I think my fault was that I was a little too trusting, that I gave a lot of money to somebody who I didn't have that much of a relationship with to manage ... it can be very difficult to manage remotely’	Trickery: RQ1 Mixing Face-to-Face and Digital Interaction: RQ1 Constraints in Using Digital platforms (Risk, Fragility, Uncertainty): RQ3
Data provided inaccurate	21IES-F1: ‘if I pay money to spread out the ad, I don't do it for you to sit and click. In China, we have people sitting, thousands of workers in one building, just to click on ads.’	Trickery: RQ1 Constraints in Using Digital platforms (Risk, Fragility, Uncertainty): RQ3

	<p>19IE: ‘... online you could always pretend to be someone else ... it's a lot easier online to be nice ... but in terms of business if something is serious I would not conduct it on Instagram I would ask for a WhatsApp number or a phone number so I could call you to organise the meeting in person’</p>	<p>Trickery: RQ1</p> <p>Mixing Face-to-Face and Digital Interaction: RQ1</p> <p>Constraints in Using Digital platforms (Risk, Fragility, Uncertainty): RQ3</p>
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6.2.6 Balancing Personal and Professional Information, Relationships and Spaces

Entrepreneurs either synchronise their perceived offline persona with the image portrayed online or attempted to separate their personal and professional image. What entrepreneurs choose to do influences how they interact for business. Some entrepreneurs also perceived a need to integrate their personal and professional networks for finding success when using digital platforms for entrepreneurship. The need to balance personal and professional usage for social media platforms was a recurring theme, which served to highlight the difficulty faced in distinguishing between public and private spaces. Research has found that accepting a friend request on a social media platform is both political and social behaviour and there could be a high social cost attached to rejecting the invitation of someone who is merely an acquaintance or a friend of a friend (Boyd 2010). Further, being in the public eye decreases an individual's privacy and the push to publish private information coupled with the inability to control the display of information on a social media platform (Boyd 2010) contributes to the difficulty an entrepreneur may face in finding the balance they desire.

‘... I'm not even really a Facebook person personally in the beginning ... I tried to keep it separate (because of) the attachments to me ... there are some businesses who show who they are and what they are wearing I don't do stuff like that because I feel like it might limit my growth ...’ (18IE)

An entrepreneur described leveraging ‘*maco people*’ (44IE) or individuals that find pleasure in finding personal information about others and gossiping about it which was also found in the literature describing the use of Facebook for business in T&T (Miller et al. 2016).

'... social media is not for everybody; my personality fits on social media because the people that I target are the people who like to meddle in other people's business ... they want to maco people, and those are the people that I target because ... once maco people know about you will be known' (44IE)

However, even when this is leveraged, there was a need for some balance

'... because the crime in Trinidad is very high, it puts your life at risk. People know that you do deliveries all over the place, cash upon delivery so people would know that you have cash with you, so that is the huge disadvantage (44IE)

Additionally, digital platforms, particularly social media platforms were found to support entrepreneurs who did not believe they had the social disposition necessary to use digital platforms for advertising services by helping them to create a more sociable and approachable persona online. An entrepreneur who was very public and social via digital platforms (also evident by a review of their digital platforms use) said *'I like my solitude ... this was made to help introverts to stay in their homes'* (29IE). Some entrepreneurs found they were able to separate them and used only the business side of the platform or used their personal profile for business. However, others found that though they wanted to keep their personal and professional social media profile separate for interaction, this was difficult to do because of platform requirements which demand or reward integration of both. They sometimes did so because their personal profile pre-existed the use of the business profile, and they usually ended up connecting in some way. Table 11 provides some examples of how entrepreneurs balance their personal and private information, relationships, and spaces when interacting.

Table 11: Balancing Personal and Professional Information, Relationships and Spaces

Issue	Example from data	Codes
Not wanting personal space invaded	48IE: 'I prefer online because I'm not a face-to-face person. I just like to sit behind a computer and respond ... I don't want to deal with customers at all ...'	Balancing Personal and Professional Information, Relationships and Spaces: RQ1 Mixing Face-to-Face and Digital Interaction: RQ1

Changing between face-to-face and online depending on sociable mood	44IE: '... it really depends if I want face-to-face or online ... there are times when I just don't want to see people ...'	Balancing Personal and Professional Information, Relationships and Spaces: RQ1 Mixing Face-to-Face and Digital Interaction: RQ1
Personal and business pages connect to evidence personality for business	22IE-F2: '... I really try to draw a line as far as business you know ... I am known to some extent in the country and in my circles, and even when people look at my feed they tell me that they kind of figure out the kind of person that you are ... they would approach me and say things'	Balancing Personal and Professional Information, Relationships and Spaces: RQ1 Local and International Visibility: RQ3 Mixing Face-to-Face and Digital Interaction: RQ1
Inability to separate personal and public	22IE-F2: '... even though I separate my business page and my personal page they sometimes connect because ... I am the face of the business, so at the end of the day I really can't separate them, so I still have to maybe (manage) the content of my personal page'	Balancing Personal and Public Information, Relationships and Spaces: RQ1
Using only personal accounts	16IE: '... I believe people they'll come natural instead of if it is a business account ... cause everybody have a business account and then normal account, but I don't believe in that ... because you let people see your lifestyle, like how you live ...'	Balancing Personal and Public Information, Relationships and Spaces: RQ1

Keeping it real online by showing everyday activities and struggles	F2-PT:6: ‘... I keep it real even if you see my Instastories you're going to see me eating at twelve o'clock, you're going to see, what I started doing recently ... I actually show you ... the real process ... not fake real ... you let people know you have ups and downs, you struggle ...’	Balancing Personal and Public Information, Relationships and Spaces: RQ1
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6.3 Chapter Summary

This chapter provides new insight into how entrepreneurs use digital platforms to interact. It illustrates how closely online and offline, personal and professional networks, relationships, and spaces intermingle when using digital platforms. Most of the interaction featured is with customers, other entrepreneurs, business partners and digital platform users. EE stakeholders like government, for example, is not significantly featured. It also emphasises that examining entrepreneurship in either a purely digital or a non-digital light may side-line important nuances of digital interaction because of the significant influence culture and social norms have on digital interaction with customers, other entrepreneurs, business partners, and digital platform users more broadly. It also provides important context into how digital platforms are used to interact within an EE.

These findings shed light on how entrepreneurs employ trickery and psychological manipulation as they interact to circumvent the potential fallouts from interactions to reach their goals. It further explains how entrepreneurs, business partners, and customers may fall victim to these ploys, because of user behaviour and platform distractions. There is limited research on these types of influences in the entrepreneurship literature, and this study shows that such interaction merits further research as entrepreneurs report both influencing and being influenced in psychological terms. They seem to require a high level of mental discipline to reach their goals when using digital platforms. Finally, the chapter explains the way digital platform interaction is characterised by trial and error because of their ever-changing and unpredictable nature and illustrates how entrepreneur interaction using these platforms is characterised by adaptability and creativity for interaction to be beneficial.

Chapter 7 Influence of Digital Platforms on EE in T&T

7.1 Chapter Introduction

Following the discussion on how digital platforms are used in interaction by entrepreneurs (RQ1), this chapter addresses the issues raised in the second research question (RQ2): **Have digital platforms played a role in changing the entrepreneurial ecosystem in Trinidad and Tobago?** While the role that digital platforms play in accessing EE resources is briefly discussed in the literature, this research finds that digital platforms are vital for supporting access to some EE components. In some cases, entrepreneurs would cease to exist without using digital platforms. Importantly, however, the research also found that digital platforms have had very little or no influence on other very important EE components such as funding and finance. While there is general agreement that the government supports entrepreneurship, views vary on the effectiveness of this support.

The chapter first provides an overview of the code *EE in T&T*, which could be categorised as complex, informal, and fragmented (See Appendix W for coding structure). This categorisation explains how entrepreneurs and stakeholders believe the EE operates, what they expect from it, as well as the influence of government policies within the EE. It then reviews how digital platforms have influenced the EE by looking at the coding for RQ2 *Influence of Digital Platforms on EE*. These are **1) Online Learning; 2) Copying; 3) Customer Data and Targeted Advertising; 4) Supplies Intermediary; 5) Encouraging Micro-entrepreneurship and New Business Ventures**. The coding for EE in T&T is found in Appendix W, and the coding for Influence of Digital Platforms on EE is provided in Appendix X. The pillars and components of the EE (World Economic Forum 2013) model (See Table 1) informed the coding (See Section 5.15).

7.2 An Overview of the Complex, Informal and Fragmented EE in T&T and Reflections on the Limitations of Digital Platform Influence

7.2.1 Perception of EE: Siloed, Informal, Fragmented and Unstructured

The EE in T&T is generally perceived to be complex, informal and fragmented, echoing arguments of some EE scholars (Isenberg 2016; Malecki 2018; Spigel and Harrison 2018). Digital platform use had a limited impact on this complexity. Entrepreneurs and stakeholders, however, generally believed that despite complexities, T&T's EE components needed to interact to be effective.

Chapter 7

Stakeholders report that organisations work in *'silos' rather than 'work in harmony'* (20IS) with the result being that many agencies

'are stepping on each other's toes because one would be offering something and one will be offering something similar so ... the intention might have been good, but the implementation might not have been the most efficient' (23IS)

One entrepreneur stated

'... it's not an ecosystem right now it's just fragmented people trying to do their stuff'
(32IS)

The EE was also thought to be under-developed because of the country's continued dependence on the energy sector

'... the government is still wrapped up in the notion that the oil economy is going to reverse and then we will be ok again' (29IE)

This view reflects some research that found a weak ecosystem existed because the interaction between different EE components was insufficiently supportive (Spigel 2017). Despite high levels of high-growth entrepreneurship in the energy-dependent economy of Calgary, Canada a weak EE was still apparent (Spigel 2017).

Entrepreneurs and stakeholders collaborated with familiar, trusted and close-knit groups (for example, based on family ties, location and ethnicity, and connections with influential large business networks) and sourced EE resources through these types of social groupings. There was a belief that an unwillingness to collaborate contributed to the lack of interaction within the EE and that this unwillingness inhibited the development of entrepreneurship. Connections like *'your last name'* (24IE) was said to influence support for entrepreneurship by formal institutions, a revelation that is similar to findings by (John and Storr 2013; Hossein 2015). This finding lends support to the arguments that EEs can be fragmented because of the existence of varied social grouping within them (Stam 2015; Malecki 2018).

'... you cannot group entrepreneurs into one bucket right. They are not a homogenous group. In Trinidad and Tobago, you have different subgroups that support entrepreneurship differently ...' (23IS)

Digital platform use did not appear to provide easy access to important networks but instead, social, and family connections offline helped to build legitimacy and trust needed for entrepreneurs to work together.

'you need the clique and the friends to support you. Trinidad is very clicky, and no matter if your product or your service is nonsense they would support you' (43IS)

This research corroborates findings in prior EE studies, on the importance of social, cultural factors in determining how an EE develops and influences interaction with other EE components (Spigel 2017).

In some cases, respondents believed that protectionism of large businesses discouraged the development of entrepreneurship because as a female entrepreneur (aged twenty-six to thirty-five) in the food industry who used Twitter, LinkedIn, Instagram, Facebook and PayPal explained.

'you live in a little island where a small percentage of people control the commerce, a lot of the (business) deals' (24IE)

'they won't just not support you, they will work incredibly hard to support corrupt dealings to work against you if you even posed a threat to other people who are bringing in products' (24IE)

This view reiterates findings in the literature (Bailey et al. 2015), which was that large businesses in the EE could potentially and intentionally deter entrepreneurial activity and by extension, the development of the EE (Spigel 2017).

To overcome limitations of this siloed, complex, informal, and fragmented EE entrepreneurs came to depend on digital platforms to source information and resources outside of the EE.

7.2.2 Perception of the EE: Primary/Secondary Education and Culture Unsupportive

A significant number of respondents opined that entrepreneurship was not embraced in the primary or secondary school education system, where instead students are encouraged to be employed by others. Digital platforms had limited influence on this. A male entrepreneur (aged thirty-six to forty-five) offering education and training services explained.

'entrepreneurship' like a bad word in school ... I don't know if it's changed now ... the top streams of the so-called bright class was the science and the languages, but if you can't get into those classes they dump you in business ... nobody eh picking business ... work out fine for me ... when you come out in the real world business runs the show ...' (50IE)

A stakeholder also argued

'... I think culturally really it's not something that we push in a big way you don't tell your child to grow up to be an entrepreneur ...' (32IS)

'... people look at other people who want to start businesses as vagrants for want of a better word rather than entrepreneurs ... I think if a lot more people embrace entrepreneurs, then more people would want to take the risk, but I think people are afraid ...' (25IS)

There was, however, one distinction. Some entrepreneurs had family members or 'forefathers' (23IS) who were entrepreneurs, were exposed to entrepreneurial activities at an early age, and so they decided to do the same, though the education system did not expose them to entrepreneurship. A female entrepreneur (aged 26-35) in the fashion industry who used Instagram, Facebook and Etsy explained.

'... what encouraged me to get into entrepreneurship ... my family because ... my mom and my aunt they opened their own business together ... my uncle owns his own business ... so I grew up around that owning your own business sort of vibe (48IE)

Noticeably, however higher education provided training and support and was generally thought to be beneficial. Incubators were recently introduced, and most interviewees believed that these incubators could be improved.

'... it seems like they go into the incubators, but there's no real channels to get them out of it, so it's almost like they go in and they never graduate per se. Their ideas never become commercialised ... they don't have that support from actual people who are successful because they don't want to share the wisdom per se? (9IES)

While mentorship programmes exist, several participants believed that they were not very effective because mentors believed they should be rewarded for mentorship. There was an unwillingness to share information.

'mentorship is a difficult one because ... it's not a significant part of our culture for persons to be giving freely of their time and their services to support entrepreneurship development, so we have had some real difficulty trying to get persons' (3IS)

Additionally, a lot of mentoring happens informally and

'... many people have mentors, but they don't necessarily publicise it ...' (37IES)

Mentorship support ranged from providing information and access to networks to other activities like helping to source supplies. These mentors were sometimes instrumental in the development of the business, assisting in providing new networks and business avenues for the entrepreneurs, new international insight and helping them to source products or expand to a wider market.

Some entrepreneurs also reported that their mentors were overseas.

'my (X) mentor who taught me a different medium (X) (and) provides that particular material as well ... (X mentor) is actually in Germany right now doing (X) so I spoke to (X mentor) about manufacturing (X), so right now we working on developing (X)' (47IE)

Informal or formal mentorship with international entrepreneurs, which proved to be very helpful.

'sometimes people who are small fish in the small fishbowl they can be suspicious because usually, you mentor somebody in your own line of business I guess it's easy for someone Canadian than someone from Trinidad because there's no threat ... most of our foreign mentors basically give them all of their secrets ... because they know in the morning that they have a new idea so that it's a little less insecure with a foreign mentor' (27IES)

'... we have mentorship from a guy they brought in from New York ... he went through our whole business profile, and he literally nit-picked everything. So, now ... we know where to go, where to take things. So, it was actually good; it was actually one of the first time that it felt as if it was productive (2IE-1)

As far as digital platforms were concerned, they were influential for mentorship mainly because they facilitated easy communication, particularly with mentors located overseas.

7.2.3 Perception of EE: Easy to Start a Business, Difficult to Finance Growth

Access to finance was necessary for accessing other components of the EE, including human capital. Furthermore, even when the government was supportive it was still believed there was insufficient support for businesses that wanted to grow. Therefore, while entrepreneurs identified opportunities and entered the first (Opportunity Identification) or second (Nascent) phase of entrepreneurship identified by GEM, they were less likely to take the risk of scaling.

Entrepreneurs generally believed there was little to prevent them from starting a business in T&T.

'... I used to hear people saying that ... to ... open a bank account, it's very difficult when you are a new business and I did not experience all of those things' (5IE)

Some of the entrepreneurs interviewed were from other parts of the Caribbean who came to T&T because they thought the environment was more suitable for entrepreneurship. Some were T&T citizens that lived outside of the Caribbean (for example, Canada, the USA or the UK) for a long time and decided to return home to set up a business. Others had a connection to the country

because of family ties but were born overseas. According to an entrepreneur that previously lived in a larger Western country

'I wouldn't say big fish, but I enjoy being a medium fish in a tiny, tiny pond ... I would be a minuscule fish in a very small pond (if I had) little X Company in (X North American country) they will be like who are you? We don't know who you are and there's a lot more competition and there's a lot more standards to meet ...' (24IE)

On the other hand, some entrepreneurs believed that corruption affected entrepreneurial growth.

'Trinidad is probably one of the most corrupt countries in the world and people like covering their ass and they would never give young entrepreneurs the opportunity to go outside and do business right because it means not putting extra money in their pockets' (17IEP)

Most entrepreneurs believed the EE should support easier access to finance and funding to assist those who needed help to start or wanted to grow a business. The fact is that in T&T finance and funding were overwhelmingly sourced from family networks (Oxford Business Group 2016) while access to funding from financial institutions was thought to be for those with already high levels of disposable income. On the other hand, if funding was sourced from the government, what was provided was thought to be either too little or for micro-entrepreneurs who did not plan to grow. It was also believed that access to funding came with too many requirements that an entrepreneur could not fulfil.

'... you have 2 extremes you have those who have great ideas and can be really upscaled to national regional businesses ... and those who could come and go ... so they never really know if they making a profit or loss so they're using their salary to quell their business not realising that not making no profit ... so they remain as small as their disposable income ... they have those who are real risk-averse ...' (27IES)

Another entrepreneur, while addressing the issue of government funding articulated that:

'the government has funding, and they tried to help ... there's a grant that's out now from the government but it's for small companies and they want audited financial statements, and audited financial statements is about ten thousand TT \$ a year ... and they want a couple years' worth of it ... small businesses can't really afford to spend that money' (1IE)

Additionally, there was no viable venture capitalist funding for entrepreneurs. Those entrepreneurs that could source seed funding had difficulty sourcing funding to scale the business. The use of digital platforms, therefore, appeared to have no influence on the ability of an entrepreneur to access funds, and those interviewed did not indicate that they made use of crowdfunding platforms.

'... banks, by their nature are risk-averse, so they're hesitant to give entrepreneurs the start-up capital as well as the working capital that they might need ... people have to take the private loans, go to friends and family ... and, unfortunately, we don't have a good angel investor network ...' (10IS)

Finance was also believed to be essential for accessing human capital as businesses grow. As in the GEM study (Bailey et al. 2015), human capital was believed to be available should an entrepreneur need it. However, they also needed to be able to pay for it. Some entrepreneurs were using digital platforms and the web to meet their human capital needs. For instance, specialised digital services (for example, Waze for (accounting), and Google Drive (administration) were increasingly being used to perform tasks.

'... our people I think are pretty well-educated ... the only problem is that educated people who are also really highly-skilled also need to be paid well and (an) entrepreneur might not be necessarily in the position to pay you very well ...' (32IS)

The ability to access human capital was also specifically related to the ability to access funds needed to pay for human capital or to use digital platforms to access this capital. In large part, digital platforms had limited influence on access to human capital.

7.2.4 Perception of EE: Government Support and Entrepreneurs' Ambitions

Some entrepreneurs believed that government support and policies were often not in sync with the concerns and goals of entrepreneurs using digital platforms, particularly those entrepreneurs who have intentions to grow and expand or internationalise using digital platforms. Entrepreneurs suggested that the government could play a better role in facilitating partnerships internationally. This view reiterates research that found entrepreneurs believed that quite too often government support did not align with an entrepreneurs' international ambitions (World Economic Forum 2013). However, while it may be considered best for government support to be aligned with entrepreneurs' activities, the fact is that entrepreneurs depended on customers, suppliers, other entrepreneurs, and the digital platforms as well for their business activities (Nambisan et al.

2017), and government stakeholders may not necessarily consider such influences when providing support.

While some stakeholders believed that entrepreneurs needed *'a global mindset (because) the world has changed, and we need to be more export-oriented'* (23IS) this research found that many entrepreneurs already possessed this global mindset as found in other research (World Economic Forum 2013). Some of them were bringing initiatives with an international agenda to the government with the mindset that these initiatives would not only promote their business but also positively promote T&T online as a place of innovation and a place to do business. However, in some cases, when international partnerships designed to support entrepreneurship locally were set up by entrepreneurs and promoted via digital platforms by entrepreneurs, the response from the government was less than encouraging. Therefore, some entrepreneurs believed *'... sometimes it's better not to go through government'* (F2-PT:1).

This entrepreneur explained

'... we called up the Ministry of (X). They say that we have to go to (X government agency), we sent it (the document) to (X government agency), up till now we ain't hear nothing yet. This is like at least 2015. Nothing, they embarrassed us because they never send back nothing official to say ok this is official (X project) ...' (30IE-1)

This issue is reflected in research which found that entrepreneur initiatives in the creative sector (related to T&T's Carnival) were sometimes hindered or received insufficient support and that at times the government support was misaligned with entrepreneur needs (Burke 2014). Entrepreneurs' use of digital platforms appeared to influence entrepreneur activities in these areas by providing opportunities for business, especially overseas, but it did not seem to have much influence on government policy.

'... our country still depends on the energy industry so that not much is spent on culture ... They don't support culture ... even Carnival they don't see it as a business they don't support our entrepreneurs like our wire benders ... all these people struggle; calypsonians, soca (music) artistes (X) was lucky because (X) had ... (X family) who were professionals so that they could have supported ...' (41IE)

Digital platforms created new opportunities for some entrepreneurs, who then needed to manage expectations of customers and potential customers since the demand for their products sometimes outstripped their ability to provide them.

'... through social media's Facebook, we've grown too fast, so we didn't have a structure in place to facilitate the people who are interested. So, a man from Haiti say, 'Well, ah interested, can you all do a model to send across here?' We eh reach the stage ah modelling, we just posting content online and it just taking off. So, it's even to manage your social media expectation with the reality of what your business is' (F2:PT:7)

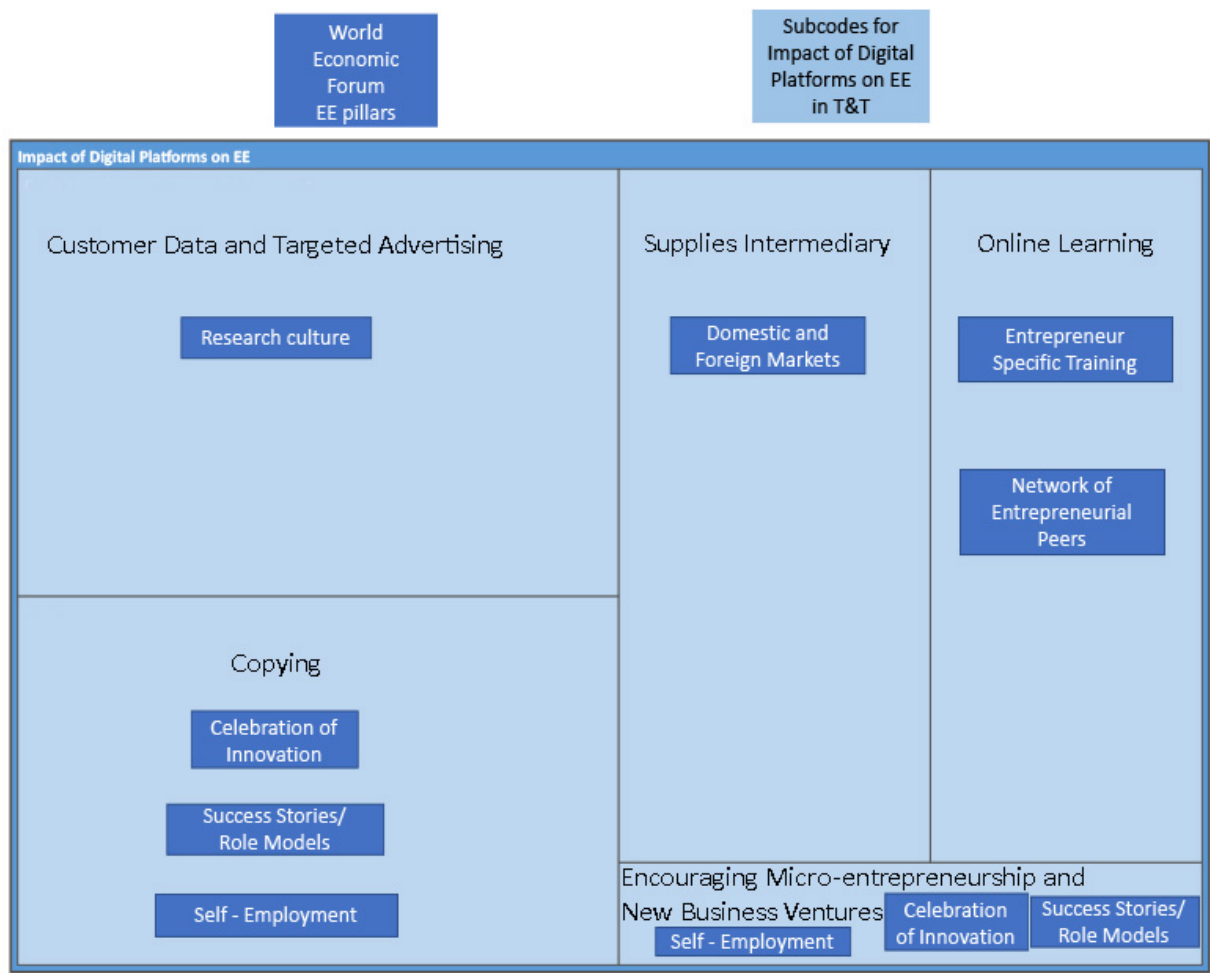
As far as entrepreneurs' needs are concerned, there is some measure of consensus that government support should be informed and influenced by entrepreneurs and others who are familiar with entrepreneurial activities that are supported by digital platform use. This view stemmed from the belief that individuals in charge were sometimes not knowledgeable about what entrepreneurs needed and possessed a very limited understanding of digital platforms and other technologies in the context of entrepreneurship.

7.3 Influence of Digital Platforms on the EE in T&T

This section responds to the second research question: **Have digital platforms played a role in changing the entrepreneurial ecosystem in Trinidad and Tobago?** The codes for this research question are provided in Appendix X. The codes under ***Influence of Digital Platforms on the EE*** discussed in this section are: **1) Online Learning**, which explains the influence digital platforms have had on an entrepreneur's ability to educate themselves and thereby support entrepreneurship and the EE; **2) Copying**, which explains the influence of digital platforms on copying and how this influences entrepreneurs and the EE; **3) Customer Data and Targeted Advertising**, which explains the importance of data and data analytics to entrepreneurs in an EE; **4) Supplies intermediary**, which explains the importance of digital platforms in helping entrepreneurs to access supplies from overseas to support their business and; **5) Encouraging Micro-Entrepreneurship and New Entrepreneurial Ventures**, which explains how digital platforms have encouraged micro-entrepreneurial activities, new ventures and in some case supported entrepreneurial innovation in the EE.

Figure 12 provides a hierarchy chart generated in NVivo 12 for the code Influence of Digital Platforms on EE. The size of each rectangle represents how many times the node has been coded, and each rectangle should be viewed in the context of the others. Additionally, components of the World Economic Forum's EE pillars (See 2.4.1) is provided in the darker blue rectangles where applicable to the code to illustrate overlaps.

Figure 12: Hierarchy Chart (Subcodes for Impact of Digital Platforms on EE in T&T) Mapped to World Economic Forum EE Components



7.3.1 Online Learning

The use of digital platforms, especially YouTube, and Massive Open Online Courses (MOOCs) helped entrepreneurs to access the information they needed and to develop skills. This type of learning is not considered in the EE literature which tends to focus on more formal learning in universities and incubators or support systems like professional services and mentorship (World Economic Forum 2013), though e-education is limitedly mentioned (Sussan and Acs 2017). However, this type of learning was considered necessary in an environment where adaptability and creativity were vital for successful entrepreneurship. Learning in this way was helpful because sometimes what was learnt at a certain point in time was irrelevant later on because of digital platform changes. Further, entrepreneurs did not always want to do an entire course and preferred to select exactly what they needed from an online course.

'YouTube would probably actually be my go-to, because usually, when you're trying to solve a problem, it's usually like something small, like, you don't need to take a whole course to learn ... YouTube would usually have the answer ...' (15IE)

Online learning was also crucial for improving the quality of goods and services as well as for accessing information that may not be accessible locally:

'the first guy to bring it down he got inspired from watching YouTube, and he learned how to do it on YouTube ... because you don't really have training for that down here' (43IS)

Alternatively, training may be too expensive to access. Digital platforms, therefore, provided an easy, cost-effective way to learn.

'I use eDx.com it's an online school, so they offered free programs, if you don't want the certificate you don't pay, so I don't ask for the certificate' ... (28IE)

While traditional education was valued the concern was that the education system was unable to address the need for entrepreneurial skills. Learning, however, was supported through involvement in online groups locally and internationally, which helped individuals to keep up to date. In this case, digital platforms were supporting the development of support systems for networks of entrepreneurial peers (World Economic Forum 2013).

'... there's this (Facebook) group, (X name) they have training and stuff ... they offer (training) that may have traditionally been offered by government agencies' (20IS)

While digital platforms contributed to the ever-changing EE they were also important for providing information and facilitating the development of skills set needed by entrepreneurs to successfully adapt to the changing environment.

‘... on YouTube they have a lot of videos and information on the products ... so I just gage a lot of information on comparison to models, what's trending, what's the topics. So that keeps me sharp, any questions anybody pose to me, I can answer them off the bat’ (8IE)

However, it should also be noted that this was not limited to only digital platforms, but the wider web, which included Google services and websites. Table 12 provides evidence of how digital platforms are used for online learning.

Table 12: Online Learning

Issue	Examples from data	Codes
Refreshing what was already learned	40IE: ‘... I do use YouTube every now and again when I can't figure out something ... if I forget something that I've learned in school I definitely use YouTube ...’	Online Learning: RQ2 Supporting Learning: RQ3
Learning via massive online courses	45IEP: ‘I have just gone through some training myself in marketing, some basic business courses ... I did those courses online with Coursera and Udemy ...’	Online Learning: RQ2 Supporting Learning: RQ3
Relying on platforms to learn	51IE–F2: ‘YouTube was one of the main teachers, I didn’t do any training ...’	Online Learning: RQ2 Supporting Learning: RQ3

7.3.2 Copying

The inability to avoid being copied or in some instances to avoid copying others when using digital platforms influenced the EE, yet this is not considered in the EE literature. Almost every entrepreneur had been copied or expected to be copied. At other times they believed they might have copied others outside of T&T without knowing they are doing so. Some believed that being

copied was a form of *'flattery'* (44IE), (21IE). If for example, an entrepreneur did not publicise their offerings online, this did not mean that they would be safe from being copied in the online marketplace. Instead, this could mean that it becomes easier for someone to copy what is done offline and develop a business online because of the invisibility of the other business in the virtual world.

Furthermore, visibility was believed to be important for ensuring legitimacy and helping to limit the effects of copying entrepreneurs overseas. Some entrepreneurs emphasised the need to have the resources to be able to manufacture quickly and at scale as well as bring products and services to market before competitors. The inability to do so was thought to make it challenging to limit the influence of copying.

'... we have competitors locally who've been doing (X) for 5 years before anyone was doing it commercially. Maybe a company comes out with a similar product then they say they were the first to market ...' (24IE)

The GEM report substantiates that there is much replicative entrepreneurship in T&T (Bailey et al. 2015). For example, local digital platforms competed with Facebook groups for the provision of goods and services.

Additionally, many competing entrepreneurs cut and paste their text and images and videos without permission. Entrepreneurs in T&T fall prey to being copied by others not only in T&T but in other countries. Replicative entrepreneurship can no longer be seen solely within the confines of national boundaries because today, entrepreneurs are being copied many times sometimes without their knowledge.

'... it's obviously wrong, but I think a lot of people don't really know that it's wrong ... someone tagged me and some friend and it was some guy that used all my illustrations to advertise an event, in France or something ... and I just basically messaged the guy and was like, 'You need to take this down' ... and he took it down ... I think once you kind of let them know why it's wrong, and why would what they're do wrong, then the people, for the most part, will kind of accept that and take the response that's necessary' (14IE-T)

Entrepreneurs also believe that because of copying more caution should be given to decisions about what is publicised and when it is publicised online.

'if you show your plans online ... some people might try to copy it, or some people might try to make products the same as yours ...' (24IE)

The potential for flexibility or recombination not only for entrepreneurs creating digital services (Yoo et al. 2012) but also for those entrepreneurs that use digital platforms for various activities can make it difficult to enforce copyright or intellectual property laws both locally and internationally. Entrepreneurs, therefore, believe that the use of digital platforms in the EE is defined by copying, on both a local and global scale. The ability to cope with this reality is required for an entrepreneur to operate successfully. Table 13 provides evidence of how copying has influenced the EE.

Table 13: Copying

Issue	Evidence from Data	Codes
Embracing copying	56IE: '... I used to be like, why are you doing that? 'Why? Why? Why? Why? Why are you trying to compete with my business? Why?' I used to feel threatened, but now I embrace it ... I chose to look at it in a different way. What I'm actually trying to do is create a landscape where there are diverse avenues for (X service). So, they are not necessarily my competition, but they're more feeding into the system that I'm trying to create ...'	Copying: RQ2 Lack of Control (Copying): RQ3
Copying and platform competition	13IEP: '... I'm not sure if it's copying, but they are just trying to keep up ... so whatever, we do, then they'll come with an answer ... but from a real copyright issue, we've had the reverse ... when we first launched as X platform), (X) came and sued us and said we were taking their name'	Copying: RQ2 Lack of Control (Copying): RQ3

Difficulty enforcing copyright law	9IES: '... I couldn't even imagine trying to enforce a copyright infringement down here or trying to have any sort of recourse if somebody does copy it ... (It's) quite prevalent to me'	Copying: RQ2 Lack of Control (Copying): RQ3
Copying seen as flattering	21IE: '... a competitor completely, wholesale took the content and just put in their information like word for word ... really bad imitation is the greatest form of flattery ... they are not going to be competition if your business is based on trying to compete or copy'	Copying: RQ2 Lack of Control (Copying): RQ3
Need to heavily publicise work online to avoid the impact of copying	30IE-1: '... when your (X) are patented it takes nothing off of anybody to go and take this (X) that you have registered and pull it and have your exact (X) and just change a few things in it and make it theirs, so you have to find ways and means to capitalise on your designs, do a big show, do a big hurrah, so everybody see ... and everybody knows that is the original so now it makes it a little difficult for anybody to steal my design because the thing about it is I've built a name I've built a brand and my brand is a distinctive international brand ...'	Copying: RQ2 Lack of Control (Copying): RQ3 Local and International Visibility: RQ3
Need to be constantly looking for copying and misuse	41IE: '... you will find things up on platforms that we had no clue about and ... we may not want to	Copying: RQ2

	expose it through that media ... and you don't even know about it and it's being done and then they will gain financially, but we have been able to minimise that by monetising our music ...'	Lack of Control (Copying): RQ3
Copying by businesses overseas	12IES-F1-: '... the Chinese market is a bigger and bigger market for us every day ... after just a year, they have closed the gap between them and the rest of the world ... so it's really aggressive down there. So, we will just get more and more of these challenges, and they have a different legal system than we have. So, if anyone copied, there's not much you can do. You just have to do what you do. Keep doing it and be different ...'	Copying: RQ2 Lack of Control (Copying): RQ3

7.3.3 Customer Data and Targeted Advertising

The impact these platforms have on the EE is significantly related to targeted advertising by entrepreneurs, which are enabled because of access to customer data and market insights provided by digital platforms. This impact is important, yet it is not significantly acknowledged in the EE literature, in research on the use of digital platforms by entrepreneurs in T&T or generally. However, the management information systems literature recognises this dependency on user data as a characteristic of digital platforms (Elmer 2004; Couldry and Turow 2014; Loebbecke and Picot 2015; Alaimo and Kallinikos 2017; Schwarz 2017; Mayer-Schönberger and Ramge 2018) as a defining feature of digital platforms. This insight is also usually reserved for research on digital marketing (Harris et al. 2019), which is outside the scope of this study.

Those entrepreneurs that use digital platforms seem fully aware of the importance of demographic data (for example, age, gender, location) and metadata, and a significant number of participants have benefitted from paying for the data these platforms provide.

'... you can control the demographic and where you want your content to reach or win that part of the world, what you selling and what you are trying to present.' (F2:PT-8)

Entrepreneurs can now access a lot of useful data that can give highly targeted insight into the behaviours and preferences of their customers that is not available in the offline world. However, this was not determined by the number of likes and comments, but by being able to get demographic information, and know user preferences for more targeted advertising.

'I'm better able to try to cater to what people want to consume, and the way they want to consume their content' (46IE)

Customer data was found to have a major impact on entrepreneurship.

'... it wasn't this organised 3 years ago ... But now I can tell you all the figures ... how much I'm making, how much I'm losing, because, you know, I'm using a platform Shopify' (2IE-1)

Targeted advertising was found to be a critical value of a platform versus Google Ad services, which would require promoting a website which many locals do not necessarily prioritise. Table 14 provides some evidence of the importance of data for entrepreneurs.

Table 14: Customer Data and Targeted advertising

Issue	Example from Data	Codes
Helping to narrow targeted advertising	5IE: 'If I had to do an ad, I'd specifically put in that I'm looking for age group twenty to forty up ... and people interested in (X) stuff ... and so it's very specific and it helps me to narrow down my demographic as opposed to just random stuff on the internet ...'	Customer Data and Targeted Advertising: RQ2
Need for local data	17IEP: '... we know the crevices we know the crannies as we would say here in the Caribbean. They don't know all those little potholes we know them because they are not on the ground, so our marketing is very	Customer Data and Targeted Advertising: RQ2 Mirroring Culture: RQ2 Data Supporting Learning: RQ3

	strategic we don't get hyped like an Instagram ... if you don't have business analytics behind it, it does nothing for you ...'	
Cost-effective targeted advertising	15IE: '... if you put an ad in a newspaper ... you got a whole city and that's enough whereas with Facebook ... you could choose how much money you wanna spend. You could direct those ads to people, like hot leads ...'	Customer Data and Targeted Advertising: RQ2 Local and International Visibility: RQ3
Targeting customers most likely to buy	18IE: '... I could see exactly who likes what so when I have my sale like I was telling you I can say, oh well, you want it, and they would come back and buy it, cause that was the deal-breaker'	Customer Data and Targeted Advertising: RQ2 Data Supporting Learning: RQ3
Easy breakdown of customer profiles	2IE-1: '... our customers are literally eighteen to forty-five, and I can tell this through Shopify because Shopify breaks all this down for me ... Instagram breaks all this down for us, so I can see that the people who view our profile are between ages 18 to 45 ...'	Customer Data and Targeted Advertising: RQ2 Different Interaction Based on Age Demographic: RQ1 Data Supporting Learning: RQ3
Ability to see who views information	37IES: 'when you post content on LinkedIn you may not get as much engagement and likes as you might get on Instagram and Facebook, but people watching, CEOs watching ...'	Customer Data and Targeted Advertising: RQ2 Local and International Visibility: RQ3
Providing insights for international expansion	41IE: '... I was able to go in and look at the thirty top countries that ...	Customer Data and Targeted Advertising: RQ2

	<p>appreciate X Music ... (X music) has grown through the use of the internet' ... and we have all the figures because we can compare before we were on the internet what it was liked. We can also compare before we monetised (X) music on YouTube what it was like ...'</p>	<p>Local and International Visibility: RQ3</p> <p>Data Supporting Learning (RQ3)</p>
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7.3.4 Supplies Intermediary

Digital platforms play an important role in helping to find supplies needed in the EE, particularly where they are not available locally. Entrepreneurs become aware of new resources via the web that could be of use to their business. The web then becomes a conduit for accessing these resources which are not always available locally. This code reflects research that finds that entrepreneurs, particularly those from small or developing countries, often depend on resources from outside their country (Malecki 2018). The existence of SkyBox companies in T&T, described in the literature review, has helped to increase access to overseas goods by entrepreneurs. The use of these services helps to overcome the hurdle of ordering from digital platforms (for example, Amazon) and online stores in the United States or Europe that do not deliver to T&T or have very high shipping costs. An entrepreneur explained how they used Skybox to buy goods from Amazon.

'... you have a monthly subscription of something round about fifty US \$... according to what you are using it for. If it's like mass shipping you're using it for, you'll have some other charges included but generally, Skybox is free to set up and according to what packages you want with it, then you add on the prices ... It's easy, easy, easy. All you need is your email information, your contact information for the market that you in and it's easy to set up' (8IE)

Further, the dependence on products from outside the country precedes the use of digital platforms and is imbedded in historical and economic arrangements with western countries that encourage importing of manufactured goods and exporting of raw materials (Toney, 1995) and may influence customer preference which then influences what entrepreneurs offer.

'Trinidadians on the whole have a penchant for everything foreign ... ingrained in the culture ... entrepreneurs are taking advantage of that' (6IS)

Additionally, entrepreneurs use these platforms to source goods and services that are either unavailable or too expensive to source locally

(I) purchas(e) a lot of things that I can't get in Trinidad or that's too expensive to get in Trinidad which is not online via those websites ...' (5IE)

and generally believe that Amazon was trustworthy

'I order a lot of stuff (on) Amazon because I know it's safer ... It's cool. I trust Amazon'
(16IE)

The easy payment and delivery of goods from overseas compared with the difficulty faced in locally paying for and delivering local goods overseas perpetuates this and influences entrepreneurial development.

'... we hear ads around Christmas time - shop local - discouraging people from shopping online ... they introduced the 7% OPT an Online Purchase Tax to discourage people ... but the problem is that even after you pay your duty and your Vat and the 7% it's still cheaper than what they want to sell it in the store here for. (With) ... Skybox companies ... you go on Amazon they give you an address, you buy it, ships to that address and they bring it to your house right, they bring it straight up to your doorstep, and that is so convenient you know you order something on Saturday, and by Wednesday it's by your doorstep. That's fantastic yes, you can run in the store and get it right away, but you know we pick and choose what you want to use that for and what we want to use the online purchasing for ...' (26IEP)

The use of digital platforms, therefore, encourages entrepreneurial activity but also increases the purchasing of goods outside of the country, which can influence the types of entrepreneurial opportunities available as customers can increasingly bypass local resellers. It can also influence the effectiveness of government policies for entrepreneurship as it may discourage the local population from buying local goods. Therefore, while the use of digital platforms to source supplies supports the EE, it also changes it. Table 15 below provides evidence of how digital platforms act as a supplies intermediary.

Table 15: Supplies Intermediary

Issue	Example from Data	Codes
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Need to use platforms to source large volumes of orders	2IE-1: '... it's pretty convenient because we don't have the production down here available ... that's the only reason why we go out of Trinidad for production ... to get consistent size of orders in the quantities that we want ...'	Supplies Intermediary: RQ2
Using platforms to source and sell goods	12IES-F1-: 'We've used (Amazon) as a warehouse to sell products through ... Amazon it was all about convenience ... We use it worldwide really ...'	Supplies Intermediary: RQ2 Accessibility and Immediacy: RQ3
Everyday use of platforms for supplies	1IE: '... we use those often enough, but Amazon more than Alibaba. Alibaba is if we buy big machinery. Amazon whatever we need for the upkeep of the business'	Supplies Intermediary: RQ2
Being solicited to purchase products from outside of the country	19IE: 'sometimes you do find distributors online because ... every once in a while, you find that somebody from Pakistan or China has messaged to ask if you need something like (X) ...'	Supplies Intermediary: RQ2 Local and International Visibility: RQ3
Cheaper to buy through online platforms than locally	50IE: 'a lot of international stuff now is easy to access thanks to the www ... it had a small (X) in the mall for one thousand TT \$ I take the name went on Amazon see it	Supplies Intermediary: RQ2 Accessibility and Immediacy: RQ3

	for fifty-nine TT \$. I went for the fifty-nine TT \$'.	
Using digital platforms for research on supplies instead of for purchasing	24IE: '... we source our equipment from China, we use Alibaba ... we do a lot of research on our equipment online we would do research on suppliers online'	Supplies Intermediary: RQ2
Amazon considered more trustworthy/reliable than other e-commerce platforms	50IE: '... I've been using Amazon for years ... we have ordered all kinda things on Amazon it's the most trustworthy. I prefer trustworthiness like the other day I ordered an (X) from some Chinese website up to now I eh get the (X) yet. It most likely it was a con job ...'	Supplies Intermediary: RQ2 Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty): RQ3

7.3.5 Encouraging Micro-Entrepreneurship and New Business Ventures

International digital platforms were inspiring entrepreneurs to create local versions of international digital platforms. This influence was noted especially with the introduction of a local online gig economy platform for transport TTRideShare, which was introduced nationwide and quickly became popular following Uber's ceasing of operation. In this case, Uber was important for supporting several EE pillars (World Economic Forum 2013). This influence includes innovation (celebrating innovation EE component) as a new local gig economy platform was developed. They also provided an example that local entrepreneurs could follow (role model/success stories EE component) and supported self-employment (another EE component), of the drivers that used the service (See Figure 12). However, the new local digital platform was only launched after Uber stopped their service.

'... (TTRideShare) is extremely popular and because ... (Uber ceased operations) they have a couple of new travel platforms that came up as well that trying to follow that trend to provide more options for the travelling public and for the government but their system is set up a little different for the drivers in terms of payment plans structures and all these

other things but as you know Trinidadians have a follow fashion, kind of reactive society functions. The reaction to that was ay we can do this too, so it provides more options' (8IE)

Entrepreneurs generally believed that locality provided a competitive advantage for the provision of digital services which could be more difficult for international platforms to compete with, especially if they were not specifically focused on the T&T market. Therefore, in some ways, they were supporting innovation as entrepreneurs were creating new services, tailored to the local market, sometimes adapting what was already offered by international platforms. Some also believed that digital platforms encouraged innovation by incentivising entrepreneurs to develop new products that could not be found online.

Additionally, the use of platforms was also encouraging competition from micro-entrepreneurs that used or created, for example, Facebook groups or pages that offered similar services.

'... you can do it quite quickly ... I think that's why you got all these little start-ups (for example, Facebook groups/pages) ... how successful they actually are and how much they actually serving the client I don't know' (13IEP)

Digital platforms seemed to be encouraging individuals to find diverse ways of gaining income and engaging in self-employment, though these initiatives were low risk, replicative and usually remained small. Additionally, Encouraging Micro-Entrepreneurship and New Business Ventures, had the least influence on the EE (See Figure 12). Table 16 provides some evidence of this influence on the EE.

Table 16: Encouraging Micro-entrepreneurship and New Business Ventures

Example	Evidence	Codes
Incentivising the creation of new types of products and services	10IS: '... if you are talking about resellers ... who just basically are buying foreign products and reselling the same thing on the market. It does affect them ... the businessman's associations, the various associations complain about that ... but it	Encouraging Micro-Entrepreneurship and New Business Ventures: RQ2

	helps stimulate a level of innovation in entrepreneurs to create new things ... specialised things that are not available online'	
Encouraging micro-entrepreneur resellers	11IS: 'they are micro-ecosystems ... I (someone) decide to buy 2 cell phones and sell one in Trinidad so I could make an extra thousand ...'	Encouraging Micro-Entrepreneurship and New Business Ventures: RQ2 Supplies Intermediary: RQ2
Influencing traditional entrepreneurship	11IS: 'Yes, (digital platforms influence) traditional entrepreneurship ... for example, you may see a device online that somebody bought for babies like, 'Oh, wow, that's cool you know, 'Let me go and buy twenty of those and try to sell it to friends and family''	Encouraging Micro-Entrepreneurship and New Business Ventures: RQ2 Supplies Intermediary: RQ2
Encouraging individuals to explore entrepreneurial opportunity	16IE: 'if the people see how people use it in the market ... they say, 'Hey, that could be me''	Encouraging Micro-Entrepreneurship and New Business Ventures: RQ2
Using social media to develop businesses	37IES: '... there are people who became popular because they posting regularly on social media, because they attractive. Now they throwing parties, six-hundred TT \$ to go their party ...'	Encouraging Micro-Entrepreneurship and new products and services: RQ2 Mirroring Culture: RQ1

Encouraging new entrepreneurs that copy	FG:PT:8 – ‘You see they go on YouTube and watch how to make a (X), and make it and then you just saturate the market’	Encouraging Micro-Entrepreneurship and new products and services: RQ2 Copying: RQ2 Lack of Control (Copying): RQ3
Levelling the playing field	F2-PT:8: ‘... I love social media and the platform more because it levels the playing field ... versus I going to a government organisation ... because I will tell you I don't think that I could survive as a person in business if I was living in a country such as this with all this politics ... Entrepreneurs have popped up and survived because they can't survive without those platforms. That's what helps them get there’	Encouraging Micro-Entrepreneurship and new products and services: RQ2

7.4 Chapter Summary

This chapter provides new understanding of how EEs are supported using digital platforms while emphasising the limits of digital platform influences on important EE components and pillars. It offers insight into the perception of the EE in T&T by both entrepreneurs and stakeholders and the fragmented, informal, and complex nature of the EE. It illustrates the importance of digital platforms in providing access to information, data, and both within and outside EE. While entrepreneurs can access support from communities and networks using digital platforms, they seem unable to use digital platforms to access critical networks that exist locally and offline. Instead, membership in offline networks supports strong ties which facilitate more effective online collaboration. Digital platforms support the ability for entrepreneurs to source goods and

services from outside of the country. They also enable the provision of goods and services that feed local appetites for foreign goods. Infrastructure and historically situated arrangements encourage receiving goods instead of sending goods overseas. The ability to easily access goods from overseas, therefore, hinders government attempts to support local entrepreneurship and the subsequent growth of the EE.

However, digital platforms have appeared to open new markets to entrepreneurs who may not be visible offline but become visible online internationally. Additionally, operating out of T&T appears to provide opportunities for entrepreneurs to differentiate themselves in an online global marketplace that is dominated by western entrepreneurs. Customer data and targeted marketing have also been beneficial in helping entrepreneurs to target specific markets and find success, and so is vital for learning in the EE.

Digital platforms use also appears to have limited impact on the EE because culturally, individuals tend to prioritise working for others over pursuing entrepreneurship. The decision to become an entrepreneur was generally believed to be based on ethnic, familial, and network divisions, which evidence the fragmented nature of the EE, as diverse groups work in silos. Further, some believed that actors in the EE, for example, large businesses may actively inhibit its development. Digital platforms are used by entrepreneurs to help them overcome local constraints by accessing information, resources, and networks internationally. This chapter provides a new understanding of how EEs are supported using digital platforms while emphasising the limits of digital platform influences on important EE components and pillars.

Chapter 8 Affordances and Constraints

8.1 Chapter Introduction

Following discussions about how digital platforms are used in interaction (RQ1) in chapter 6 and the influence that digital platforms have had on the EE (RQ2) in chapter 7, this chapter, chapter 8 identifies the affordances and constraints that arise with digital platform and entrepreneur relations. The coding for RQ1 and RQ2 is reviewed, and the data is analysed. The data analysis procedure is detailed in Section 5.15. This chapter will also evaluate these affordances and constraints and compare them with those identified and discussed in the literature review (see Table 2 and 3).

Firstly, technology affordances will be analysed (See Appendix Y for coding of **Affordances**). Secondly, the codes **Constraints** that influence the use of these platforms will be analysed (See Appendix Z for coding of constraints). The earlier synthesis of affordances (Table 2) and constraints (Table 3) helped to avoid renaming of affordances already discussed in the literature and built upon existing research to allow for an informed and concise assessment of the findings.

Affordances include: **1) Collaboration**, **2) Accessibility and Immediacy**, **3) Flexibility** **4) Local and International Visibility** and **5) Supporting Learning**, under which is coded *Data Supporting Learning*. **Constraints** is divided into two main codes **Constraints in Using Digital Platforms** and **Constraints in the EE**. The first main code **Constraints in Using Digital Platforms** includes the subcodes 1) *Lack of Control (Platforms)*, which has the subcode *Algorithms Continuously Changing*; 2) *Lack of Control (Users)*; which has the subcode *Lack of Control (Copying)* and 3) *Time Consuming (Information Overload)*. The second main code **Constraints to the EE** includes the subcodes 1) *Online Payment Limitation*; 2) *Inability to Ship and Transport*; 3) *Not Buying Local Things Online* (under this code there are two subcodes *Need for Local Promotion of T&T* and *Older Customers Not Shopping Locally Online*); and 4) *Training/Expertise Required*.

8.2 Affordances

Entrepreneurs use digital platforms because they find them beneficial. **Affordances** of digital platforms include: **1) Collaboration** or the potential to work or interact with others to create content or realise a particular outcome; **2) Accessibility and Immediacy** or the potential to easily access and exchange information and resources at unprecedented speed; **3) Flexibility** or the potential to use digital platforms in the way they want to use it and when they want to use it; **4) Local and International Visibility** or the potential to use digital platforms for finding information

as well as for making yourself visible or identifiable online locally, on a large scale and globally; **5) Supporting Learning** or the potential for entrepreneurs to do research, learn new skills and gain new expertise. Under this code, the subcode *Data Supporting Learning* was created and referred to the potential to learn because of the availability of data.

Except for Supporting Learning, all these affordances were identified in previous literature, though a few were identified separately. However, an accessibility affordance was identified separately from an immediacy affordance. On the other hand, TACT is significantly referenced in online learning literature (Conole and Dyke 2004). Nevertheless, the data show that both accessibility and immediacy were intricately connected and so instead, they were grouped. A visibility affordance was previously defined and was separate to an extending reach affordance which referenced the potential for large scale and global reach and visibility. In this study, however, both are combined to describe a local and international visibility affordance for entrepreneurs using these digital platforms.

8.2.1 Collaboration

A collaboration affordance, or the potential to work or interact with others to create content or realise a particular outcome (Faraj et al. 2011; Mesgari and Faraj 2012; Junglas et al. 2013; Majchrzak et al. 2013; Ellison et al. 2015; Fox and McEwan 2017; Karahanna et al. 2018) was identified in the data. Collaboration was also found in the TACT business literature but focused on entrepreneur collaboration with large businesses for mutual support (Carah and Angus 2018). Entrepreneurs initiated contact and then worked with other individuals they sometimes never met, both locally and internationally, to support their entrepreneurial activity. This collaboration provided the opportunity for new entrepreneurial ventures as in the case of the following entrepreneur explained how they worked with musicians in Africa that they never met to produce new music, evidencing how weak ties developed online could be very useful (Granovetter 1973; Granovetter 1985)

'... (X) will collaborate with people in Africa and never see them, never meet them but we could do it. We can learn other people's heritages ... through some of the platforms so that you can communicate that kind of way and I think it has created a kind of unity between the different cultures ... and I think that we should embrace it ...' (411E)

Entrepreneurs, therefore, supported each other through online networks (Majchrzak et al. 2013). For example, entrepreneurs helped each other when they had questions regarding the development of their business. Additionally, being able to form and then manage or join open and closed groups online supported entrepreneurial endeavours (Ellison et al. 2015).

'... I'm also in some Facebook groups that are specific to pros ... you have to like answer questions, proving that you're a pro, and also send them, like a link to your website for them to check it out before you're approved to go into the website' (51E)

In some cases, customers played an active role in supporting the entrepreneur by helping them to build social ties and providing legitimacy to the business (Kietzmann et al. 2011; Carah and Angus 2018). For example, an entrepreneur described and showed the WhatsApp group formed with customers that has encouraged and informed entrepreneurship activities that took place with customers offline.

'You have different (customers) sharing their opinion their suggestions in the group so we support each other we encourage each other ...' (281E)

Online groups and virtual networks helped to support offline social and business networks that were important for entrepreneurial activity like advertising. For example:

'... if it's the collaboratory event then it utilises everybody's platform ... the artwork is going out on each of the (X number of) other persons; be it on their page, under stories as well as (X business)' (471E)

The potential for sharing and distributing content that is unrelated to one's self to others or a sharing affordance (Mesgari and Faraj 2012), is also identified. For example, when collaborating individuals used these platforms to share potentially useful information to other entrepreneurs and customers, find resources and in turn, support their business.

'I use YouTube videos that I can send to my group so if they want a visual of a particular type of (X) and I can't meet them ... you come up with even motivational words to say to these persons to encourage them ... to make them feel better about themselves all that I get on Pinterest' (281E)

'I have an assistant. She's not in Trinidad ... I just met her the other day ... I found her from the same business group (Facebook group)' (211E)

In some, but not all cases this helped to *'create a sense of relationship'* (491E), though these ties appeared weaker than those formed through face-to-face interaction, similar to the findings of Smith et al. (2017). Table 17 provides some evidence of collaboration by entrepreneurs.

Table 17: Affordance: Collaboration

Issue	Example from Data	Codes
Relationship building	49IE: 'with social media platforms there's feedback, and there is the ability to reach out to people and have them reach out to you, and that creates a sense of relationship ...'	Collaboration: RQ3 Balancing Personal and Professional Information, Relationship and Spaces: RQ1
Meeting for collaboration	F1:PT:3: 'One of the things that digital platforms help you to do is collaborate, that whole aspect of collaboration really and being able to have these meetings over all these different platforms'	Collaboration: RQ3 Mixing Face-to-Face and Digital Interaction: RQ1
Helpful advice and support	29IE: 'I have found businesses that would help my businesses through Instagram, and also Facebook in addition to finding fellow (X type of entrepreneur) and finding people who have expertise in certain areas and can give you advice ...'	Collaboration: RQ3 Local and International Visibility: (RQ3) Online Learning: RQ2
Working with other entrepreneurs	35IE: 'the people that I've worked with to do my (X) and stuff I have found because they all have their own platforms online, so when I have seen their work online, and I have reached out to	Collaboration: RQ3 Local and International Visibility: (RQ3)

	them in terms of working for them and collaboration ...'	
Friend/user communities providing visibility	43IS: 'I shared it in groups and stuff because I couldn't afford de boosting ads on Facebook it too expensive ... I shared with my friends. My friends list is nearly four thousand ... and some people shared it. I shared it in some groups that I joined ... so it went viral fast'	Collaboration: (RQ3) Local and International Visibility: (RQ3) Accessibility and Immediacy (RQ3)
Organic community building that supports customers and stakeholder networks	56IE: 'So people would know about things that's coming up, and then eventually the group take on a life of its own where people started to communicate and share their own stuff and it start to live'	Collaboration: RQ2
Providing opportunities for international collaboration	21IE: 'I remember an Australian business guy, so interesting, we had to call on Skype because he made a comment on my Instagram and that's how we connected ...'	Collaboration: RQ3 Local and international visibility: RQ3

8.2.2 Accessibility and Immediacy

An accessibility and immediacy affordance or the potential to easily access and exchange information and resources at unprecedented speed is identified. Accessibility refers to the potential to easily access information and resources (Conole and Dyke 2004; Boyd 2010; Halpern and Gibbs 2013; Fox and McEwan 2017; Karahanna et al. 2018). Immediacy refers to the potential ways digital technologies allow information to be exchanged at unprecedented speed when compared with face-to-face interaction or use of print media (Conole and Dyke 2004; Majchrzak et al. 2013); Xuefei and Joshi (2016); (Fox and McEwan 2017; Dong and Wang 2018). Accessibility and Immediacy were found to be interconnected and related to a spatial affordance

or the potential for communication and action anywhere and at any time and so were combined. This Accessibility and Immediacy was also found in entrepreneurship research adopting TACT where a digital platform was vital for accessing resources quickly in a Chinese village (Leong et al. 2016) and helped entrepreneurs overcoming local constraints. It is also evident in research which found digital platforms enable entrepreneurs to more easily work from home (Falco and Haywood 2016), or anywhere they choose and in a flexible fashion (Xuefei and Joshi 2016; Sutherland and Jarrahi 2018a).

Immediacy was important for realising the benefits of accessibility, and so both were combined. This is evident in the way entrepreneurs quickly chat online to provide information or clarify an issue, thereby saving time. A male entrepreneur in the fashion industry (aged twenty-six to thirty-five) who used Facebook and Instagram explained

'... if I'm busy, it's easier for me to talk online or whatever because I work from home as well ... usually, if I need to go and meet up with somebody, it's like, okay, I need to drive twenty minutes to get there, meet you there for twenty minutes, drive back twenty minutes. So, it usually takes up more time...' (15IE)

Also, some entrepreneurs thought that digital platforms provided an easier way to find information than using an online search engine. This ease of finding information relates to the browsing others content affordance (Conole and Dyke 2004) and research by (Dong and Wang 2018).

'... I think Instagram is way better because the way Instagram was designed with the logo and everything it's way more attractive than going to Google ... people will literally like once they unlock their phone they will go straight to Instagram and search for the business name instead of like going to Google as Google would give you like all of the unnecessary things that you don't need ...' (44IE)

This accessibility and immediacy affordance was in some ways aided by integration and connectivity between platforms and websites (Dong and Wang 2018) and the availability of easy to use tools that in some ways helped to overcome platform constraints.

'... I think Instagram is simple to use, and it connects to everything. Everything has an App that connects to Shopify for what we want to do' (21E-1)

Entrepreneurs could also use digital platforms to source supplies they needed quickly and from overseas, they could browse information, quickly contact sellers and then decide who they wanted to purchase from, therefore making a more informed decision. Accessibility and

Immediacy related to accessing supplies with help from Skybox companies that developed to support this demand.

Entrepreneurs could potentially gain customers quickly when they posted information by making themselves and their contact information online. Customers followed their activities, and new business information came up regularly in the customer's newsfeed.

'They stalk me ... so, for example, we got the new stuff on Monday they've been messaging me so stuff sells out before I even get it so this is a challenge that I have ... it takes a while for me to get the (X) so what I end up doing is to keep people engaged I would post things that would arrive the week after so once I posted people would start asking and then I reserved for them and then they come and they buy it (18IE).

Table 18 provides some evidence of Accessibility and Immediacy affordances

Table 18: Affordance: Accessibility and Immediacy

Issue	Evidence from Data	Codes
Seamless integration	F2:PT-5: '... Instagram is one app, and it has a message system built in ...you can do everything seamlessly there ...'	Accessibility and Immediacy: RQ3
Multiple ways to be reached	26IEP: '... the online interaction gets things done a whole lot quicker ... they are all forms of communication, so you need to be available on every single platform possible ... whether someone sends you some sort of correspondence via LinkedIn, WhatsApp, Facebook, Instagram, Twitter anything ...'	Accessibility and Immediacy: RQ3
Quickly connecting with customers	20IS: '... I could go to my phone and check several businesses like in a heartbeat,	Accessibility and Immediacy: RQ3

	like whether it's on Facebook, Instagram ... WhatsApp. They'll send you WhatsApp in a heartbeat. Especially the younger ones.'	Different Interaction Based on Age Demographic: RQ1
Remote working	21IE: '... I for one love the idea of working remotely ... I have a client right now I do work for an ad agency right here, I never see them, 4 times for the last 3 years ...'	Accessibility and Immediacy: RQ3
Easy access to company data	2IE-1: 'I can tell you because ... it's all through using Shopify ... 1 click and you get all the information'	Accessibility and Immediacy: RQ3 Customer Data and Targeted Advertising: RQ2
Platforms enabling easier searching	33IE: '... I don't think I use Google a lot business-wise ... I have a certain level of expertise now that I could go to whatever platform or site I want to as opposed to having to search around for options'	Accessibility and Immediacy: RQ3

8.2.3 Flexibility

Digital platforms offer flexibility, an affordance allowing for the potential to use digital platforms in the way they wanted to use it and when they wanted to use (Faraj et al. 2011; Leong et al. 2016); Xuefei and Joshi (2016); (Sutherland and Jarrahi 2018a).

'... I don't think any platform pushes you to do something their way, you have total freedom in this, you have options, I mean you are literally dictating what you want, if I want for example to offer a special rate, I say now for this month I am going to give twenty percent off that is my decision, they have not pushed me to give twenty percent ...' (55IE)

Flexibility also afforded entrepreneurs an opportunity to work remotely and to learn at their own speed, and without going to a physical classroom. This flexibility is also linked to a spatial affordance, as they could learn and work anywhere at any time did not need to be in any one place.

'I prefer the online settings (of YouTube and online classrooms) ... I can move at my own pace' (11E)

'I've done work even when I'm on vacation. I can still message my virtual assistant. It's so much easier to do that now' (21E)

Real-time data provided by the platform supported flexibility as entrepreneurs could adapt their interactions online based on data which gave some insight into what activities they should focus on, so they could make better-informed business decisions. Flexibility, therefore evidenced a control affordance (Mesgari and Faraj 2012) referring to the potential to control and personalise your conversations and information (See Table 2).

'The platform allows you to have insight, so you now see who is seeing your content, age, gender even sometimes their interest. So, you can swipe left and see what they are looking at and you are able to tailor your content to that' (53ISP)

Additionally, the flexibility provided by digital platforms, particularly social media platforms were particularly useful since in some ways it allowed for adapting to the local culture (particularly social media platforms). As mentioned earlier, digital platform use mirrored the culture when entrepreneurs interacted. Some entrepreneurs also believed that digital platforms sometimes anticipated what the public required and adapted to suit. Table 19 provides some further evidence of how flexibility is afforded to entrepreneurs.

Table 19: Affordance: Flexibility

Issue	Evidence from Data	Codes
Providing necessary tools	34IE-T: '... I think that the developers and engineers on these platforms ... they try to put more and more tools to give us more access to be able to generate the type of outcome that we want ...'	Flexibility: RQ3

Flexibility with the physical location	1IE: 'online means I don't have to be in a location ... online means I can respond between meetings... as I move from place to place while I'm in a waiting room'	Flexibility: RQ3 Accessibility and Immediacy: RQ3 Mixing Face-to-Face with Digital: RQ1
Tools under user control	26IEP: '... the idea is to make it as easy as possible for the user so that ... the platforms are offering more and more tools ...'	Flexibility: RQ3
Platforms allow for control	50IE: 'platforms are more controlled in terms of what you want to do ... you could keep control of your thing'	Flexibility: RQ3

8.2.4 Local and International Visibility

One of the most frequently cited affordances is visibility or the potential to use digital platforms for finding information as well as for making yourself visible or identifiable online locally, on a large scale and globally (Treem and Leonardi 2012; Vitak and Kim 2014; Fox and Moreland 2015; Albu and Etter 2016; Dong and Wang 2018). In one case, an entrepreneur cited visibility as a goal.

'So far it has helped immensely ... because, some of my goals would be to have more visibility and these are goals for now, to have more visibility and definitely Instagram and Facebook help with that ... visibility. Visibility is everything now as opposed to like when it was location, location, location, now it's visibility, visibility, visibility' (5IE)

The literature tends to distinguish this visibility from extending reach or the potential for large scale and global reach and visibility (Wellman et al. 2003; Boyd 2010; Mesgari and Faraj 2012; Sutherland and Jarrahi 2018a). However, in this data visibility and extending reach seem connected, for by being on the web entrepreneurs are automatically more likely to be seen not just locally but overseas and could

'... reach a wider community not just in the Caribbean but outside of the Caribbean ... (to create) ... some really good possibilities' (191E)

even if it is not always for the audience, they originally targeted.

'When it comes to finding clients, it's easier on Instagram because it's a social network ... so there are more people there looking for people' (191E)

'With the advent of social media platforms ... the playing field has become level because ... I have had access to work with international people, well-known people, have travelled all over this world. People have bought me to do ad campaigns and design campaigns ...' (FG2:PT8)

Digital platforms were believed to have created an online marketplace for products and services locally, even though individuals may not carry out online payments.

'Social media allows us to create our own little small economy, micro economy so that we could market products and sell products ... we can't sell it directly on social media, but ... you could make people aware, it could really market products so that people now could find you' (11IS)

'... for our business, we have a Facebook page and what we try to do is to have a presence, a social media presence because we realise that a lot of persons are on social media, even though our main clientele would be like institutions or corporations or like business owners ... we tend to use the page to get the contact information out there because we operate what we would call our virtual office' (FG1:PT3)

A self-presentation affordance or the potential to reveal and present information about one's self (Wellman et al. 2003; Mesgari and Faraj 2012; Treem and Leonardi 2012; Halpern and Gibbs 2013; Junglas et al. 2013; Vitak and Kim 2014; Schrock 2015; Fox and McEwan 2017; Karahanna et al. 2018), which relates to visibility was also evident. For some entrepreneurs' social media platform use was sufficient for marketing their businesses.

'I believe the platform is sufficient because at least in my area it allows you to connect with people which is basically what I need. It allows you to advertise fully to a number of people it gives out the option of not just people following you but you following people as well so even if they are not following you they could see your stuff' (51IE-F2)

Visibility was also especially helpful for levelling the playing field for entrepreneurs by providing an opportunity to publicise and then sell their goods and services to a wide market, without having a store, or having to pay for advertising in print media, which was expensive. This was one

reason an entrepreneur closed their store to focus on using digital platforms for business. A male entrepreneur (aged twenty-six to thirty-five) that sold technology goods provided digital services to businesses using social media platforms such as Facebook and explained

‘When you are in brick and mortar you have tons of overheads you have a physical store, you have rent, you have products, then you have to invest in not just online marketing but offline marketing as well ... your online business might just be marketing, and online marketing is very cheap it's under-priced right now compared to ... going to take out an ad in the paper’ (35IE)

Table 20 gives further evidence of the local and international visibility affordance.

Table 20: Affordance: Local and International visibility

Issue	Example from Data	Codes
No need for a physical store	F1:PT-3: ‘... digital platforms, really expand your reach especially now when you don't have the overheads of a storefront, you do your Facebook and Instagram pages, and you build your followers ... Facebook has these sell your stuff sites. So, you would now you have your products, you'll take photos, you put up a short description and a price ... and persons will contact you and I'm telling you in minutes of me putting up (X product), WhatsApp phone calls, messages will begin to go off’	Local and International Visibility: RQ3 Accessibility and Immediacy: RQ3
High visibility and reach aids understanding of new market.	F2:PT:7 – ‘... right now people from 4 or 5 African countries, three Latin American countries will message us just through Facebook ... we saw that people from all over the world start to	Local and International Visibility: RQ3 Accessibility and Immediacy: RQ3

	message us without us putting ourselves there'	
More customers browsing	44IE: '... it's way better because that is the medium now ... whenever people get bored they will open Facebook, Instagram; they would browse, and they would see my post, and they would become more aware of who I am what I am and the product that I'm selling and this way better than video or TV or newspaper ...'	Local and International Visibility: RQ3 Accessibility and Immediacy: RQ3
Ability to pay for increased reach for customer types	48IE: '... Etsy has this option where you could have sponsored posts just like Instagram and Facebook, so you could pay your daily fee, and you sponsor your posts, and it pops up in the actual search and what's good is that you add tags to your item like your listing. If somebody types in (X) your own may come up with (X) so it's like a whole database thing that they have, and everybody is just part of it'	Local and International Visibility: RQ3
Benefits of paid ads over website use	5IE: '... I started to like Instagram and Facebook because, now I can do the sponsored ads, and so my visibility has definitely grown, as opposed to the static website where people will have to search for me specifically ... when I pay to have those ads pop up, I would	Local and International Visibility: RQ3

	definitely make the money back ...'	
Reaching international communities	29IE: 'from using the platform what I have found is that sometimes I am talking in circles and I would discover that there are people that I have never met ... that follow my work, and I didn't expect that they would know anything about me ... I have had some calls where people wanted me to do things for them, and I was like how did they find out about me ... I don't work in those circles, it's kind of humbling sometimes'	Local and International Visibility: RQ3 Collaboration: RQ3
Platform dependent businesses	55IE: '... I think without the platforms the hotels would be empty I'll be very honest. If we didn't have those platforms there would be no business in the hotels because a lot of the business comes through the platforms ...'	Local and International Visibility: RQ3
Early adoption of platforms beneficial	F2:PT:8 – 'It's there forever. So, you find that today it's easy to Google our stuff because it's been there for quite a while. You'll find a lot of people who've been my competitors in my field are now kind of playing catch up ... Instagram, Facebook are merging these platforms it means	Local and International Visibility: RQ3

	that your content started to float over into all of the other ones ...'	
Online communities supporting visibility in offline customer communities	51IE-F2: 'in using a platform you may not talk to your neighbour but they might be on some social media platform and they may not even know that you have a business then they realise ay, so it kinda adds to community making people more aware of people right within the community so you kind of support each other as well ...'	Local and International Visibility: RQ3

8.2.5 Supporting Learning

Many entrepreneurs spoke about learning via platforms and accessing information, expertise and '*little tips and tricks*' (47IE) from users, groups and digital platforms themselves. Digital platforms therefore afforded **Supporting Learning** or the potential for entrepreneurs to do research, learn new skills and gain new expertise. The subcode *Data Supporting Learning* also explains the importance of data sourced from these platforms for learning. While the literature discussed affordances in terms of broadly being able to access information, this research found that new learning resulted from the use of digital platforms, which could help entrepreneurs with their business activities as well as make better business decisions.

The use of these platforms enabled entrepreneurs to develop specialised skills needed for entrepreneurship. It also helped entrepreneurs with the development of their products and services as was found by research by (Mohammid 2017), where entrepreneurs used what they learned online to modify their products.

'we use YouTube to learn how to operate machinery, how to build things, how to fix things ...' (1IE)

YouTube was particularly influential, and in some cases, was called '*University of YouTube*' (191E) or '*School of YouTube*' (35IE) or described as a '*main teacher*' (51IE–F2). This was often complemented by sites set up specifically to offer online courses, or Massive Open Online Courses (MOOCs) such as FutureLearn, Udacity, Coursera, Skillshare and Lynda.com. Entrepreneurs also

Chapter 8

felt free to contact others wherever they were for support or advice and tried to join overseas communities that support the development of skills needed for their business endeavours.

Platforms were also being used to do extensive research needed to plan for the business.

Entrepreneurs reported using them to

'... find out all the news that is happening that is going on globally within the (X) field and ... to tailor my content to make it relevant to the Caribbean' (35IE)

or said

'... before we actually go ahead to purchase we more or less do more research through YouTube ...' (34IE-T)

Digital platforms were also important for learning because of the fast rate of change and so often were the only source of information available to learn about new trends or new ways of doing business or even about how to use the platform efficiently as well.

'I have done (courses) in the past like when I first started. I don't find it was that helpful, but I just use social media trainings and stuff like that; Instagram, how to better use Facebook for more sales conversions and stuff like that' (18IE)

'Pinterest (for learning) ... everything you want to get knowledge on ... I could type it in Pinterest, so I have formed folders with things...' (28IE)

Additionally, both customers and entrepreneurs learnt and taught and thereby supported each other at the same time.

'...I'm not somebody that will say sale on (X) is ninety-nine dollars and ninety-nine cents TT \$ now ... come and buy it while stock lasts, you will never visit any of my platforms and see that. What your gonna see is the top 5 reasons why I love (X) and then in the description at the bottom there is a link to the product to go and purchase it but you would have learnt a great deal about it ... you can assess whether it's good enough for you to go and purchase or maybe you can take that information and say ok, let me go on YouTube let me go on some other blogs ...' (35IE)

Further, the availability of data on users helped entrepreneurs to learn more about their customers, thereby supporting market research and targeted advertising that help some entrepreneurs to increase sales.

'... everything is via WhatsApp, and we have a database where we have name, contacts, location and their list of orders and we have a program where we would just put the

name, contact, location and what is the most popular (X) ... so next time they order we could always suggest something almost similar to what they have ordered (44IE)

Many entrepreneurs could learn by accessing information and data they needed from platforms.

Table 21 provides some example of the Support Learning affordance.

Table 21: Affordance: Supporting Learning

Issue	Example from Data	Codes
Learning via massive online courses	15IE: 'I actually just signed up for Skillshare ... I used to use Lynda.com as well, (a) website where you learn how to do different things'	Supporting Learning: RQ3 Learning via platforms: RQ2
Used to learn specialised/specific techniques	47IE: 'in fact if there's any sort of, not necessarily training ... if there's something very specific I would like to accomplish ... a finishing technique ... I will use YouTube ...'	Supporting Learning: RQ3 Learning via platforms: RQ2
Important for refreshing learning	8IE: '... there are a lot of access points for anyone who is in my field of work to get product knowledge. I take advantage of those things. I always check to see what's the latest developments, updates on the international markets. What am I competing against ...'	Supporting Learning: RQ3 Learning via platforms: RQ2
Knowledge exchange with other entrepreneurs	18IE '... I do more Facebook, so I want to teach (another entrepreneur) a little bit more about what I do and she does more Instagram so I would learn from her so she's a collaboration ... as well by the way she's a friend, she did my (X) for my (X) and we became friends'	Supporting Learning: RQ3 Learning via platforms: RQ2 Collaboration: RQ3

No skills required	33IE: 'I don't think there's any special skills involved ... platforms like YouTube are basically filled with videos telling you how to do everything. There's really no excuse'	Supporting Learning: RQ3 Learning via platforms: RQ2
Learning from what others have done	34IE-T: '... sometimes depending on the type of software or equipment we might be testing out we tend to instead of going through the manual all the time scan through YouTube to not only see how other people are using it but also see the video and some of the problems that other people would have with the type of equipment or software'	Supporting Learning: RQ3 Learning via platforms: RQ2
Research	17IE: '... I use ... YouTube for research, Google, well Google because Google owns YouTube so I do a lot of research'	Supporting Learning: RQ3 Learning via platforms: RQ2
Visibility in online networks supporting unexpected learning	14IE: '... There's only one that liked it, she commented, she was really surprised at my work and then as she did that ... all her other colleagues that (are) in her network and stuff ... because these are foreigners ... they started commenting and complementing and critiquing ... positive feedback and even though they had a negative, they would have done it in a way that builds you ... that experience was a shock ...'	Supporting Learning: RQ3 Local and International Visibility: RQ3 Online Learning: RQ2

8.3 Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)

Digital platforms offer many affordances to entrepreneurs but their use is simultaneously, inherently and continuously risky, uncertain, unpredictable and fragile, therefore emphasising what has been explained in the information systems literature (Gawer and Cusumano 2008; Zittrain 2008; Tilson et al. 2010; Yoo et al. 2010). The first **Constraint** is **Constraints in Using Digital Platforms**. Encapsulated under this affordance are related affordances which build upon the **Lack of Control** constraint found in the literature: 1) *Lack of Control (Platforms)* relates to the potential inability to anticipate platform changes, influence platform rules. *Algorithms Continuously Changing* was coded under this. This subcode reviews how changes in algorithms potentially constrain entrepreneurs; 2) *Lack of Control (Users)* refers to the potential inability to control user communication, like comments, and spam. Another subcode, *Lack of Control (Copying)* refers to the potential for copying locally and internationally, when digital platforms are used; 3) *Time Consuming (Information Overload)* refers to the potential need for significant time investment to use the platforms and the inability to assess and control information provided on the platform.

In some ways, it could be argued that entrepreneurs that use digital platforms can be characterised as risk-takers, a historical (Mills 1848) and still popular way to describe entrepreneurs (Jonsson 2017). Entrepreneurs have flexibility when using digital platforms, but simultaneously, they also lack control, and this can become difficult to manage (Nambisan and Baron 2013; Nambisan et al. 2018; Nambisan and Baron 2019). As highlighted in the literature review, these constraints co-exist and overlap with affordances. Constraints related to Lack of Control (Platforms) and Lack of Control (Users) are also sometimes related. For example, when a platform mandated that they open their profile against their wishes, some entrepreneurs then had to manage an increase in spam, which demanded more of their time. Constraints illustrated varying levels of *information control* and *conversation control* (Fox and McEwan 2017) that required entrepreneurs to manoeuvre both platforms and users and managed risk by being able to distinguish what is real when interacting via platforms as described in research using TACT to explain trust and entrepreneurship (Sutherland and Jarrahi 2018a). (Sutherland and Jarrahi 2018a) One entrepreneur illustrates the overlap in lack of control of users and platforms below.

'I really advise against building of anything on Facebook. I know people contacting me and saying that overnight they lost access to all their followers, the business gone. One guy was selling pictures. He used Facebook, he loaded up all the pictures there and showcasing it; overnight gone. He was refused access because one user had commented on one of the pictures and put up some link to some child pornography stuff, that was a virus ... but because of that, Facebook automatic routines shut them down...' (F1-PT:4)

Further, when there was a high speed of change on digital platforms, for example with changes in regulations or algorithms, the adding of new features or removal of old ones, this led to continuous uncertainty, which entrepreneurs had to be able to adapt to continually. For some entrepreneurs, the publicity of reviews encouraged more efficient services, others believed that the way users interacted culturally online and locally could hurt businesses. The uncertainty inherent in platform use is considered limitedly in TACT literature (Conole and Dyke 2004), and in some entrepreneurship literature (Nambisan 2017; Nambisan and Baron 2019).

In some cases, even where entrepreneurs said there was no negative impact of platforms on their entrepreneurship they contradicted themselves during the interview, demonstrating a sort of *'technological unconsciousness'* (Beer 2009, 990). The data reveal that entrepreneurs must find ways to avoid issues surrounding this, also by circumventing platform rules, dealing with online social norms as well as manipulating other users too.

Additionally, entrepreneurs who offered social media services had to grapple with constantly high levels of uncertainty, fragility, and risk, which could only be addressed with high levels of adaptability and creativity.

'... I definitely had to change my strategy because to be honest, that's why Instagram doesn't produce as many leads for me because of the change of the algorithm. That completely change things for me and my business, and then you find yourself even on Facebook having to boost more, pay more to reach into the eyeshot or earshot of potential customers. It has been one of the challenges. You have to spend more money to get it ... often so many changes ... you have to constantly be abreast of certain things like for instance Instagram just released Instagram TV ... sometimes it can be stressful because it's like what's next and so now I have to sit with clients and be like okay now guys you have to have a new strategy now IGTV as opposed to just having one of those Instastories ... and if you don't evolve you will dissolve ... it can sometimes be a bit stressful ... all of these things I wasn't thinking about last month ... so now I kind of have to adapt and also be knowledgeable enough to help my clients' (21IE)

Some entrepreneurs therefore suggest that a website is needed because

'... you would want to have your own online presence ... because at the end of the day you are limited by the boundaries of the platform ...' (47IE)

However, they generally believed that a website, as mentioned earlier, does not give the business as much visibility as a digital platform locally, particularly a social media platform. Indeed, some believed it put them at an increased risk of being copied. Additionally, for some

entrepreneurs, the risk of online security breaches is a worry. Table 22 provides evidence of constraints related to risk, fragility, and uncertainty.

Table 22: Constraints: Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)

Issue	Example from Data	Codes
Higher risk of inauthenticity	28IE: 'I think putting a face to the person you're talking to makes you feel more comfortable ... because there are so many scams out there you don't know who you talking to, who you're dealing with ...'	Constraints in Using Digital platforms (Risk, Fragility, Uncertainty): RQ3 Mixing Face-to-Face with Digital Interaction: RQ1
Information at risk with platform reliance	40IE: 'I do worry about if my page gets shut down or crashes one day and I don't have my account anymore because it documents everything I do, and it's also where I keep all those things. I delete them from my phone right after I post them'	Lack of Control (Platforms): RQ3
Local platforms competing with international platforms	26IEP: '... it is a little tight rope trying to use social media in a way that drives traffic but does not cannibalise the platform that we have'	Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty): RQ3
Risk from miscommunication increased by unprecedented speed	4IE: '... sometimes online is difficult because sometimes ... (communication) is not clear ... and if you're doing it face-to-face the transaction is	Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty): RQ3

	even quicker and faster than if it's online'	Mixing Face-to-Face with Digital interaction: RQ1
Security risks	F1-PT:4 - '... if your account is being broken into, they have access to all your chats. WhatsApp, everybody uses that ... anybody who gets your phone can get access to those messages even if it's encrypted ...'	Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty): RQ3
Problems with bots	12IES-F1- '... if you just throw in money and you have no idea who saw this ad, who responded to it, or, you know, who visited 2 times, 3 times? Another thing is there are robots out there ... all social media, including Twitter ... fake friends you can buy packages'	Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty): RQ3 Trickery: RQ1

8.3.1 Lack of Control (Platforms)

There was a perceived lack of control of the platforms, even though they were thought to be useful. For entrepreneurs that depended on the use of social media platforms for advertising, they can become prohibitively expensive. Some entrepreneurs using social media platforms also found they could not control their behaviour when interacting using digital platforms and were distracted continuously or wasting time, as discussed in Section 6 Entrepreneur Interaction Using Digital Platforms, which was '*irritating*' (F2:PT-8) and in some cases described as uncontrollable. The affordance of accessibility and immediacy was therefore simultaneously constraining because the use was also characterised by information overload, distraction, and the investment of too much time, which limited the entrepreneur's ability to reach their goals. The identification of this constraint contributes to understanding how digital platforms influence entrepreneur behaviour and is a significant finding, as it is barely examined in the existing literature.

Additionally, a website that is integrated with digital platforms was also seen as preferable for some entrepreneurs because it provided some level of control as well as the appearance of professionalism, even though several entrepreneurs noted that locally most customers tended to review social media platforms instead of websites, which needed to be constantly updated. Other entrepreneurs believed that having information on websites led to a higher risk of being copied. A review of secondary data found that there were twenty-eight entrepreneurs with websites.

For example, an entrepreneur encountered problems with their Facebook page, when Facebook changed their policy regarding profiles and pages. They were unable to add information to the page and instead had to create a new profile and page to provide content. However, because they were an editor and not an administrator of the page, they no longer had any control over their page. Additionally, the URL could not be changed, and so people continued to go to the old Facebook address instead of the new one. They were, therefore, now *'starting from scratch'* (56IE) to rebuild their Facebook presence and separately from what came before but what still existed concurrently.

Platform rules were circumvented because entrepreneurs constantly encountered digital platform boundaries that ran counter to their goals. Entrepreneurs report being *'crafty'* (F2:PT-8), using *'tricks'* (F2:PT-8), and resorting to *'desperately drastic measures'* (F2:PT-8) in what has been described as a *'vicious environment'* (F2:PT:8) because they must find ways to *'beat the system'* (F2:PT-8). Research has found that digital platforms constrain entrepreneurs developing services within platform ecosystems, and in doing so, cause them to act in ways that run counter to their goals (Nambisan and Baron 2013, 2019). This research, goes beyond a focus on digital entrepreneurs in platform innovation ecosystems and finds that entrepreneurs, in general, faced conflict and stress when using digital platforms. Social media platforms, for instance, encouraged them to pay more for advertising and continuously paying for advertisement could be counterproductive as customers could be experience information fatigue.

'I don't want to be annoying, although most people come and they're like oh my gosh I see your ass all the time, and you do a very good job, blah blah, but for other people, they probably sickened, and they might unfollow us ... I'm seeing this all the time, not interested; so, I think you need to figure out a good balance' (18IE)

Further, informal platform rules encouraged outrageous behaviour on the platform to gain views. For example, a male entrepreneur (aged twenty-six to thirty-five) in the fitness industry felt pressured to engage in dangerous acts on YouTube to gain more views. The entrepreneurship literature insufficiently explores the impact of such conflicts on entrepreneurship, but this influences how an entrepreneur markets themselves and may pose a risk not only to their

wellbeing but potentially to their business, if their gamble does not pay off. This is especially important to consider given entrepreneurs also report that while viewership is important an increase in number of likes does not necessarily lead to an increase in sales.

Some entrepreneurs also believe they must walk a '*tight rope*' (26IEP) when managing digital platform use to ensure they do not harm their business. It was believed that international digital platforms do not sufficiently consider the local environment, which can be limiting. Furthermore, entrepreneurs have little control over who sees their information, and these *invisible audiences* (Boyd 2010) can pose a risk to their activity. Further, this lack of control leads to information overload, which entrepreneurs then need to address.

'... I started as a closed account, but then Instagram started putting certain policies (so) in order to really reap the benefits of what you want to do you need to open the account. That's why I decided to just leave it open and with that now, you find ... a lot of companies will latch on and then they will say listen, amazing stuff on your page, take a minute to have a look at ours ... those are the next problems ...' (F2:PT-8)

Some entrepreneurs reported that they depended on digital platforms, such as Facebook, even when they did not want to. This finding relates to monopolisation of digital platforms described in the literature because of the exploitation of network effects and little interoperability between technologies (Conole and Dyke 2004; Fox and Moreland 2015). In this case, they recognised the benefits of the network effects and so used them. In some cases, they also diversify the types of platforms and web services they used to overcome such dependence. However, monopolisation and distraction aside, entrepreneurs also appeared ready to leave a platform for another one if it provided more benefits.

'... I've kind of overcome it, the over-dependence on Facebook. ... it has a lot of limitations now' (56IE)

While interaction is limited by the platform boundaries, it is not generally perceived that platforms are interoperable. Instead, it seems as if the web ecosystem is not just complex but highly linked. Entrepreneurs generally believe that digital platforms do help to better tailor their offerings to the audiences they want to see their business, though this does always necessarily result in increased sales. In some cases, entrepreneurs report being inaccurately matched (Sutherland and Jarrahi 2018b). For example, in the FG2, all the participants reported seeing an advertisement, probably because they are all based in the south of the country. The advertisement, however, did not reflect what they wanted to see. The use of digital platforms (especially social media platforms) was also believed to sometimes present an unprofessional

image of their business, because of the mingling of personal and professional (Fox and McEwan 2017). Table 23 below presents coding related to the lack of control of platforms.

Table 23: Constraint: Lack of Control (Platforms)

Issue	Example from Data	Codes
Inability to tailor for local customers	51E: '... (They didn't) say TT \$ on it. They just had the US \$ amount ... it's just ... the little details in it ... It never portray the image that I wanted to have'	Lack of Control (Platforms): RQ3
Controlled based on platform advertising model	F2: PT:8 '... It's all set to make money, that's all it does. Pushes you in the direction to make money ... I mean Facebook is starting to do that now every time you post something that get past twenty-five likes they encourage you to boost it'	Lack of Control (Platforms): RQ3
Unable to control who sees information	34IE: '... while sharing and receiving information sometimes you never know who you end up sharing information with because ... using the internet and social media anyone is able to access your information on your products, about yourself or about anything that you do; and if needed an individual or another company can use that against you or can use that in a way to always be one step ahead of you as well'	Lack of Control (Platforms): RQ3 Lack of Control (Users): RQ3 Balancing Personal and Public Information and Relationships: RQ1
Need to control perception of professionalism	48IE: 'I think you would always need a website because people like to go and see. It's almost like if you have a website you are ... professional in a	Lack of Control (Platforms): RQ3

	way, it's like 'okay cool they take the time to actually have a website'. You can go to this one specific place, and you have all the information on it'	Balancing Personal and Professional Information, Relationships and Spaces: RQ1
Platforms not catering for T&T needs	29IE: '... I live in Trinidad and the Caribbean and sometimes they won't cater for businesses in the Caribbean ... even though it is a good platform ... sometimes in terms of businesses Instagram can be very America centred. I mean it's made by an American for Americans'	Lack of Control (Platforms): RQ3
Business driven by platform changes	35IE: '... we don't own it so there is nothing that you could change. It is whatever Mark Zuckerberg says. it is whatever he says goes, so whenever there's a new change you can't cry about it Zuck's woke up and said we're doing this today and you've gotta go with the flow, so you can't change the platform you have to change your business and your plans to adapt to the platform that you are using'	Lack of control (Platforms): RQ3 Adaptability: RQ1
Influenced by network interaction	56IE: '... Facebook, the algorithm thing is a big thing ... so based on who you interact with, who you contact or what you interacting with that would show up on top ...'	Algorithms Continually Changing: RQ3

Certain platform features not available locally	26IEP: '(a) lot of companies (that) advertise with us would like to reach that younger Snapchat audience, but unfortunately, Trinidad is not one of the countries that you can advertise on ... but eventually, I'm sure it will be added in'	Lack of Control (Platforms): RQ3 Different Interaction Based on Age Demographics: RQ1 Older Customers Not Using Digital Platforms: RQ3
Entrepreneurs as the product	12IES-F1: '... Facebook, you have no control over ... they think Facebook do them a favour, but it doesn't. Facebook does not exist for you ... you become the product ... you are a Facebook product that they are selling to people and they are controlling their product, not you ... so, again, you have no control over who will see your posts'	Lack of Control (Platforms): RQ3
From cheap to expensive	12IES-F1: '... (Shopify) is a quick and easy platform to get up and doing online shopping but ... same as Facebook, they don't (give) access to do you a favour. They are smart, so they are businesspeople. And they have a platform that anybody can just start with quickly. Really okay and inexpensive; however, there are limitations'	Lack of Control (Platforms): RQ3 Accessibility and Immediacy: RQ3
Pausing plans and operations because of platform changes	21IE: '... because there's so many changes frequently you have to go with the change ... sometimes I've had to really kind of put a pause on some of my own operations ...'	Lack of Control (Platform): RQ3 Adaptability: RQ1

Constantly sending information that is not useful	7IE: '... The cookie trail, so sometimes they might be sending things, things popping up, they're sending things to you, with the intent to see if you're interested in it and sometimes it clog the system ...'	Lack of Control (Platform): RQ3 Psychological Manipulation and Distraction: RQ2 Time Consuming (Information Overload): RQ3
Lack of trust in platform statistics	26IEP: '... my only qualm about it is how truthful are their own statistics ... if someone asked me for statistics and I gave them our own statistics I would think ... I don't know if this is true, this is from you, I don't know if you lying or not but they openly accept Facebook statistics ...'	Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty): RQ3 Trickery: RQ1
Need to go beyond reliance on social media to grow business	F1:PT-2: '... if you have a business for three years and you want to go beyond ... your social media will limit you. It is not as versatile to do what you want to do or probably to give the business image that you want. It would be versatile ... as a marketing platform ... but in terms of expansion plans and so on, it may not always meet the needs that you have in relation to the type of business that you have'	Lack of Control (Platform): RQ3

8.3.2 Lack of Control (Users)

While entrepreneurs welcome the ability to quickly communicate with customers and other users, they do not welcome the inability to control the publicity of what customers say, which may negatively impact their business. This lack of control links to constraints already identified (Gerardine and Poole 1994; Conole and Dyke 2004; Kuo et al. 2013; Fox and Moreland 2015; Sutherland and Jarrahi 2018a). Additionally, entrepreneurs had little control over spam, and in the case of platform-oriented businesses, registration of fake users, and so had to spend significant time and resources on managing this. In most cases, entrepreneurs seemed to be able to assess the authenticity of information (Conole and Dyke 2004), but a few times entrepreneurs doubted their assessment. While using digital platforms facilitated access to the wider market, they also encouraged other entrepreneurs or businesses to contact entrepreneurs in the hope that they could help them get into the T&T market. Others would comment on posts in the hope that they could garner some attention for their business. Contributing to further spamming of entrepreneur accounts.

Additionally, while entrepreneurs were able to communicate easily and quickly online, it was sometimes a *'hit and hope capture'* (39IE-F2) as they were unsure if the message they wanted to send was sent. Often the information was lost in translation via messages which required much clarification. Context collapse or the inability to accurately contextualise yourself online (Fox and McEwan 2017) is highlighted as a constraint in the literature, and this seems to occur with some entrepreneurs in this study who also generally perceived that there is a higher potential for interaction online to misconstrued when compared with face-to-face interaction. Table 24 provides evidence for the code Lack of Control (Users).

Table 24 Constraint: Lack of Control (Users)

Issue	Example from Data	Codes
Asking for information already available	5IE: '... people who would just message or email, but they are not necessarily interested, but they would take away my time by just asking questions ... I have all the information out there, but people would still message to ask the same thing that's there already ...'	Lack of Control (Users): RQ3 Time Consuming (Information Overload): RQ3

Fake accounts	26IEP: ‘... we have (a) few ... users who circumvent our rules by creating twenty and thirty different accounts to try and get something done but you also put things in place to pick up Mac addresses or IP addresses that would tell us that these twenty users are the same person and immediately delete all ...’	Lack of Control (Users): RQ3 Trickery: RQ1
Trolling online	40IE: ‘... the only thing I don't like about it is like trolls and things like that. I find sometimes that's bad for business like this morning I had a guy, I don't know if he is mentally stable ... he commented ... (on) my pictures something that wasn't very friendly ... so I have to go and delete them ...’	Lack of Control (Users): RQ3
Unverified accusations	18IE ‘... they will say stuff like it's overpriced ... cause you could say whatever you want to say, people's minds are made up and then they get vex and speak ill of your company ...’	Lack of Control (Users): RQ3

8.3.3 Lack of Control (Copying)

While the use of digital platforms allowed for ‘de-coupling’ (Autio et al. 2017), and so a multitude of different combinations of information and digital technology, this also supported copying. Several entrepreneurs report using these platforms to copy or adapt what they see for their purposes. While this is a subcode of another subcode Lack of Control (Users), this is discussed in a separate section because it was frequently coded. Additionally, entrepreneurs are copied by others at home and overseas, and in some cases, this is viewed a measure of how successful they

have become as an entrepreneur. Entrepreneurs believed copying was inevitable as most of them experienced copying or, expected to be copied. This constraint includes duplication of content without knowledge of origin discussed in the literature. For example, entrepreneurs in the fashion industry reported that designs from past collections were copied, creative new recipes were copied and an app was copied by another business and following their complaints removed from the app store. Many entrepreneurs in all fields reported that images and written content was copied verbatim, (in some cases with any typos) from their websites and platforms.

In some cases, entrepreneurs posit that what is posted on a digital platform is meant to be shared. In other cases, the entrepreneur employed tactics to allow for those that copy to inevitably support their business. While copying was seen to be an issue that entrepreneurs needed to learn to deal with, this issue has not been discussed significantly in the entrepreneurship, TACT or management information systems literature in the context of digital platform use. TACT research discusses this in the context of online learning (Conole and Dyke 2004) where it has been described as duplication of content without knowledge of who created the content initially. However, this only limitedly addresses the impact of copying on entrepreneurship.

Entrepreneurs were also copied by entrepreneurs in other countries, who found ways to circumvent attempts by the entrepreneur to limit this.

'We have three copy cats in China right now ... they're copying us but they can't copy us completely ... we got customers that called, 'Hey, we saw this one here' ... these copycats have gone over our website, found who we are, because we're posting, you know, on all this social media, when we have things, success stories ... Every single one of this has been written directly from these copycats where copycats are trying to sell their product to the same customers, to say that, you know, you're buying from these people, but you know we have a product that is similar but for half price' (12IES-F1)

The entrepreneur was able to deal with this because of good customer relationships and what they believed was a better product.

'... We have good customers. There's a reason they buy our products. Yes, we are best ... we are, in our niche of things ... I think the relationship now with your customer is very important to protect you against those kinds of things because you will be copied if you're successful, people will copy ... one of these copycats they made an app that looked very like similar to one of ours. I wrote to Google and Apple and I showed them evidence and they took down the app. Three (3) weeks later, the developer came up with a new app ... a little bit different but not much. This time they used text directly copied from our

website, including an error, mistake, that we had in the text on the website. That's how I can know it is ours... So yes, they go to all lengths' (12IES-F1)

Additionally, replicative entrepreneurship was discussed in the research on T&T (Bailey et al. 2015) but this is viewed as a local phenomenon instead of an international phenomenon, and no attention is paid to how local businesses, even those that are replicative may be copied by others overseas because of their visibility on platforms which may be innovative to someone overseas. It is difficult at times to know who first created the content (Conole and Dyke 2004). Being visible means entrepreneurs have a high risk of being copied, though not being online does not guarantee that they would not be copied either. If an entrepreneur is in the early stage of business and is not able to scale quickly, promoting products and services online may encourage others, who can scale to copy what they do.

Additionally, an entrepreneur that is highly visible online, and has more resources can copy someone running their business offline and take that idea as their own, aided by their online publicity. Therefore, while entrepreneurs need to promote their business using the digital platforms, they must also manage the information provided to ensure that they are not copied locally or internationally by others, some of whom may be in a later stage of business and have the finance and infrastructure to quickly scale a business. In some ways this challenges the tendency to link entrepreneurship to innovation and (Schumpeter 1965) business growth (Vesper 1980; Cooper and Dunkelberg 1986), as new ideas and ways of operating may have been copied from other micro and small business operating online or offline that face obstacles in growing or scaling because of constraints in their local environment.

Many entrepreneurs find other ways to circumvent potential fall-out or use other measures like watermarks on pictures, timing the release of information and designs in a way to avoid copying. In some cases, entrepreneurs are unaware of the copying that takes place but are made aware of it by a staff member or by customers, as mentioned earlier. Some entrepreneurs contact those that copy their content to remove it. However, this is difficult to prevent as even when platforms remove what was copied the copied content may remerge in a different form or be presented in a way that makes it difficult to say they are copying. It was generally thought that intellectual property law does not sufficiently address the issue of copying, and there is little recourse when copying takes place both locally and overseas.

However, the impact of these digital platforms on entrepreneurial activity was reiterated by entrepreneurs who said they intentionally avoided using platforms at times because it influenced the creative process. Entrepreneurs said that what they saw influenced what they eventually did and led to replication instead of anything innovative. Some made an extra effort to stay away

from certain digital platforms at times as they found that using them decreased their ability to offer something new. While this research does not focus on the novelty of ideas and opportunities, it does point to the need to challenge the conception of digital entrepreneurs as always providing novel ideas, goods, services, activities, and markets (McClelland 1961; Drucker 1985).

Entrepreneurs also find that they are unsure if they have copied someone else's idea online because there is so much information available online globally. Furthermore, entrepreneurs report that some entrepreneurs are learning the skills they need for entrepreneurship and in turn, competing with the entrepreneur or taking the initiative to create the product for their personal needs rather than purchase them.

Table 25 provides evidence of how entrepreneurs believe copying to be constraining.

Table 25: Constraint: Lack of Control (Copying)

Issue	Example from Data	Codes
Copying digital ideas discussed in person	24IE: '... there was a gentleman who I interviewed who was very fascinated by all of this and who went and bought the domain the day after ... then he tried to sell it back to me for like (X US \$), so you see how these people are unscrupulous ...'	Lack of Control (Copying): RQ3 Copying: RQ2
Affected by inability to bring products to market quickly	30IEF: '... the difference is that by the time they put it on the shelf they have enough money to already make (X) amount of pieces that is distributed to (X) amount of stores so they guarantee (X) amount of money for that design, but when I make something fresh out of my head without that backing and put it out there then it's really stolen from me and I made no money in	Lack of Control (Copying): RQ3 Copying: RQ2

	it so this is why most of my things I internalise ... I put a few scratches on paper, and I keep my things in my head because I know what I have faced already and it's painful ...'	
Competing with informal entrepreneurs	13IEP: 'deciding at what price point we would come in at to deliver, who the other competitors are, because they know there's obviously cheap versions. There are people wanting to post on Facebook by themselves'	Lack of Control (Copying): RQ3 Copying: RQ2
Inability to stop copying of content	34IE-T: '... people would always copy your content, and there's literally nothing you can do about that because you know even if you find your content they could just cut the branding ...'	Lack of Control (Copying): RQ3 Copying: RQ2
Potential customers copying entrepreneurs	4IE: '... people are doing things for themselves ... whereas before if they don't have those platforms or they don't have the mechanisms, they're coming to you, I need this made, I need this created, I need to get this'	Lack of Control (Copying): RQ3 Copying: RQ2
Copying information available to compete with innovative offerings	9IES: '... it makes it a lot easier for people to see your pricing, to see your ingredients, to see how it is marketed ... we've had a few creations that are now being locally assumed ... (as the) ... standard product down here. I	Lack of Control (Copying): RQ3 Copying: RQ2

	mean it's flattering to an extent ... but they kinda forget that it originated here'	
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8.3.4 Time Consuming (Information Overload)

Time Consuming (Information Overload) refers to the potential need for significant time investment to use the platforms and the inability to assess and control the information provided on the platform (Conole and Dyke 2004). Entrepreneurs reported being 'consume(d)' (41IE), (21IE), (7IE), (F2-PT:8), 'sucked in' (5IE) by 'overwhelming' (F2-PT:2) interaction on the platform that show 'things to draw you in' (F2-PT:8) to look at things that are not business-related. They also say that information 'pile(s) up' or 'clog the system' (7IE) and believed digital platforms could also be a 'time-waster' (29IE). It was also said that

'the information kind of gets lost in translation because there's so much people ... so sometimes your page could kinda get lost...' (F2:PT-1)

This links to research that found entrepreneurs in platform ecosystems were often pushed in directions they did not want to go (Nambisan and Baron 2013, 2019). Users, including customers and other entrepreneurs or suppliers, can also pose a problem. For example, entrepreneurs report that

'... we constantly have tons of people presenting services, ram cramming our e-mails, ram cramming us from parts of the world. It's crazy, manufacturing production and latest designs, latest gadgets, some of them not even patent as yet in terms of when they're trying to get into third world countries to see if they could get someone to spread it ...' (F2:PT-8)

Additionally, though it is recognised that psychological needs influence interaction on digital platforms (Blease 2015; Karahanna et al. 2018) the way that emotions and psychological tactics are employed by both platforms and entrepreneurs is not discussed in the entrepreneurship, management information systems or TACT literature. However, this is important and influences entrepreneur interaction on the platform.

Table 26 provides evidence on the time-consuming nature of digital platforms as well as information overload.

Table 26: Constraints: Time Consuming (Information Overload)

Evidence	Example	Codes
Distractions require more time management	5IE: ‘... to use successfully you definitely need to have time management because those things suck you in if you're not there for business. If not, you're gonna waste 2 hours just doing that scrolling motion ... I went to do something, and I just got sucked in and I'm just reading about something happening in Trinidad instead of doing the actual work ...’	Time Consuming (Information Overload): RQ3 Lack of Control (Platforms): RQ3
Working on the platform for twenty-four hours a day	8IE: ‘... I have so many Facebook applications that I can't keep up. So, my assistants, they help me with that, I also empower my (X siblings) sometimes. I say ‘Guys, guess what, I'll give you XYZ.’ ‘Sure.’ ... the Internet doh sleep. I will be sleeping ... people up late in the night thinking and would just send a message twelve or 1 o'clock in the morning ... I don't have time to be up looking at that app ...’	Time Consuming (Information Overload): RQ3
Individuals asking for information already available online	F2-PT:7: ‘... you would post something in the morning, that (X) is twenty TT \$, this is the link to the website.	Time Consuming (Information Overload): RQ3

	People will come and inbox you and ask, 'Hi, what's the price of the X you just posted?'	
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8.4 Constraints in the EE

The data finds that relationships between digital platforms and entrepreneurs replicate inequalities and societal constraints in the offline world (Conole and Dyke 2004; Boyd 2010) and entrepreneurs are blocked from realising some affordances of the platforms because '*... the internet allowed for it but the physical infrastructure kind of provides a hurdle*' (4IE). The second main code of **Constraints** is **Constraints to the EE**. Subcodes include 1) Online Payment Limitation which referred to cultural and infrastructural payment constraints; 2) Inability to Ship and Transport which was seen to affect internationalisation and growth of businesses; 3) Not Buying Local Things Online which was perceived to affect the ability of entrepreneurs to pursue entrepreneurship locally and internationally. Under this code there are two subcodes *Need for Local Promotion of T&T* and *Older Customers Not Shopping Locally Online*; 4) Training/Expertise Required refers to the belief of some entrepreneurs that they would benefit from more training especially as they expanded, and more advanced skillsets were needed. Entrepreneurs must either learn these skills or hire them.

EE constraints influenced the ability to use these platforms effectively as a resource and illustrate links to research on the influence of societal rules and norms on digital platform use by TACT scholars (Zammuto et al. 2007; Markus and Silver 2008). For example, while it is possible to gain local and international visibility, entrepreneurs face issues related to limited willingness to pay for good locally online, inadequate payment infrastructure, limited issuance of credit cards, prohibitive services for overseas shipping or perceptions locally and overseas that goods and services provided from T&T are of inferior quality when compared with Western products. Therefore, even when entrepreneurs can overcome platforms, many times, they then encounter environmental constraints that hinder entrepreneurial development. A female entrepreneur (aged thirty-six to forty-five), in the fashion sector explained the limitations of using PayPal for receiving payment.

'in terms of online payments, we wanted to do the PayPal and people aren't as responsive to the PayPal ... I don't feel they feel comfortable enough and then a lot of people just don't have credit cards and the people who do come in the store they have

credit cards but they would shop in person ... We deliver to remote areas ... they buy but they would do the bank deposit and then we will TTPost it to them but you know how it is in Trinidad ... most people don't want to because you have to stand up in line for a very long time so I tried to tell them but you can pay PayPal but then in remote areas they don't have a credit cards or (don't) feel comfortable enough using their credit card for that purpose, so it's kind of tricky ... The other people who come to the store they wouldn't pay extra to get it delivered or shipped to them when they could just come here and buy it, so I think that would be good for ... expand(ing) and (to) start shipping to other countries' (18IE)

8.4.1 Online Payment Limitations

The problem faced with using payment platforms locally is in some ways similar to what was found with the unwillingness of entrepreneurs to use crowdfunding platforms in Sweden (Ingram et al. 2014). As in the literature review, stakeholders interviewed cited a lack of e-commerce infrastructure and cost as the reason more individuals were not purchasing local goods online.

'banks and digital small companies banks are very hesitant to (give up control) ... so you find people having to go through PayPal or through checkouts, and they'll end up losing like fifteen percent on each transaction' (10IS)

One entrepreneur explained the problems believed to be faced with using PayPal locally.

One of the few that works is PayPal, but the problem is, you need to have a Visa card connected. If that can be a debit card, but only one bank provides them ... the other banks require a Visa card. Now, a new business will not get a credit card. Majority of people in Tobago don't get credit cards ... So, it's not really an option for everybody. But first of all, let's say that you get a Visa card, then you can receive the money from PayPal. But PayPal, because we don't have any financial or system because government has not done anything to communicate with them. PayPal has said to Visa that you are in control over Trinidad and Tobago. What happens is if I pay you on PayPal and you have a Trinidad and Tobago account, PayPal will keep your money for thirty days ... thirty full days. And then the first of the month of every month they are sending you to your Visa card everything that was on your PayPal account ... which means if you get paid in the end of the month, it can take you up to 2 whole months before you get money on your account. Sixty days right. The fees are okay, after thirty days you can request PayPal to deposit immediately, and that takes about 3 working days and you paying a fee of around fifty TT \$ or something. So, you can get your money quickly. But again, it's about fees (12IES-F1)

However, many entrepreneurs either offered online payments or wanted to offer it and did not indicate that reasons cited by some stakeholders, such as tax avoidance, or insufficient e-commerce infrastructure, were an issue. Some of these entrepreneurs circumvented this issue, for example, because they had Visa cards issued in the United States of America when they lived there, and so continued to use this account. Most entrepreneurs instead believed that culturally, customers did not want to pay for local goods online locally because there was a lack of trust.

'... some people don't want to have a PayPal account, they just want to place an order just for this item now, but don't really want to keep no PayPal account because they always feel that something's gonna have a charge or something is gonna come up or the one thing popping up every minute to remind you well, are you gonna shop today or are you going to buy this? So, if there is a medium where you could just go in and pay for it ... simplify it, I think it would be easy for them ...' (F2-PT:1)

It seemed that the unwillingness of the public to use digital platforms created less incentive for investment in payment platforms. This finding illustrates the importance of culture in supporting the ability to use digital platforms for entrepreneurship. It also shows that a focus on developing infrastructure for an EE may fail to grasp these types of cultural influences, which could affect the success of government infrastructure efforts if not considered. Table 27 below provides evidence of how online payment is constrained.

Table 27: Constraint: Online Payment Limitations

Issue	Example from Data	Codes
Payment offline despite availability of online payment	13IEP: '... most people pay us via checks, so we have to send our driver to go and collect it, or they drop it off with their driver, but I would much rather they just wired it ... I mean, we're very much online, here ...'	Online Payment Limitations: RQ3
Payment locally by cash or check and payment overseas using digital platforms	15IE: '... in Trinidad, you would usually pay by cheque or cash or bank deposit and then my clients abroad would they usually pay me on PayPal'	Not Buying Local Things Online: RQ3 Intermingling Online and Offline Interaction: RQ1

Unwillingness to purchase online even when on a business website	9IES: ‘... they would browse, and they would actually put stuff in their cart and then after, rather than just giving the credit card, they would just make a phone call ... and they would rather just come and pick up the product themselves’	Online Payment Limitations: RQ3
Large companies still paying via cheque locally even though entrepreneurs encourage online payment	26IEP: ‘so the PayPal platform for people paying to advertise on (X). You know a lot of the local, big companies would still pay via cheque but the four hundred small venders, for example, someone looking to book an ad for a few days (a) long extended campaign, PayPal is definitely the way to do that. It's faster, it's more secure it's more convenient than telling people to go to the bank and drop off a check we do pay a small fee to PayPal, but it's worth it’	Online Payment Limitations: RQ3 Intermingling Online and Offline Interaction: RQ1 Accessibility and Immediacy: RQ3
Cultural belief that face – to face interaction for local payment is more secure	F2-PT:7 ‘... the mindset is not there ... for some reason (they) prefer ... going in the bank. You want the teller to write your balance in your book ... I would love if I doh have to go and talk to nobody, my transaction, everything online. I good to go. PT:1 - Until they have a problem. PT:7 - Until they have a problem, yes.	Online Payment Limitations: RQ3 Mirroring Local Culture: RQ1

	PT:1 - ... Trinidadians are reluctant. People still want to be able to tell off a teller. You can't tell off a chat'	
Local e-commerce infrastructure issues	11IS: '... you pay through platforms, and that's the real problem ... because ... I know a guy who has built a local Shopify, but it doesn't matter if you can't connect, to a Royal Bank or Republic Bank'	Online Payment Limitations: RQ3

8.4.2 Inability to Ship and Transport

Shipping and transportation of goods overseas was more problematic for entrepreneurs than receiving goods from overseas. An entrepreneur highlighted below explained the many problems faced in providing goods and services to an international market. This entrepreneur had many complaints about overseas shipping, which affected their ability to actualise the accessibility and immediacy affordance for their business. For example, they found that speedy shipping was expensive and that the slower inexpensive service was unreliable.

'... delivery is the worse, shipping internationally is the worse, right now I'm trying to revisit the shipping, because TTPost real wicked, dey does have your packages for all kinda month and ting, have people angry. Well, it depends on the service you use. If you use TTPost has Express which is about one-hundred and fifty TT \$ to send something TT, to the US very expensive, which is only five to eight days right. One hundred and fifty-seven TT \$ I have to charge my customer twenty-something TT \$ to ship when my (X) is twenty TT \$ so I avoided that by using the registered mail which is \$TT 11 but it takes two to three weeks and it's not one of those services that is prime like priority, so they just throw it in the corner (48IE)

The entrepreneur goes on to explain how this affected their business. For example, deliveries were sent very late, causing customers to be upset.

'... it got me very very upset because I sent three orders out a time and what happened is the person ordered it in the middle of May ... I shipped it out at the end of May ... according to them it was shipped in the beginning of June so I'm thinking that my package is already on the way. I got two emails from customers; they were like it was a

gift and I didn't get it yet, what is going on, because on the package it says pre-shipment ... so, I call TTPost and the lady was like, 'so nobody called you'? I said: what do you mean? she said well there was an issue in the post office and they only sent it out week before Thursday, so the end of June is when my package actually left the country so I am most upset because these two people want refunds and they're like I don't want it anymore it was a gift, and I'm like I can't give a refund because it's not my fault, I could give you a refund for the shipping, but I don't want to have to deal with that (48IE)

In another case, the order was sent to a different country

'... I have another episode where I had like five orders to send out to the States for Christmas, just this one day and all the orders went straight to Australia instead of the States and then never got it to Christmas, and they had to reroute for Christmas and send it to the States, crazy eh, so that's my issue ... (48IE)

The entrepreneur wanted to only use the express service, but this would mean they make no or little money

'... when you pay the one-hundred and fifty-seven TT \$ is actually pretty good because it is DHL, but if you want to ship something with DHL generally it's like two-hundred TT \$ for a little box like this, a little package like this. So, my plan is to try and get a hub in the States, I have a couple friends and they would handle the shipping for the States because you losing out and I've ... kind of subsidised ... sixteen TT \$ to ship ... I don't want to go back to the seven TT \$ because I find like I don't want somebody to get that package in a month or a month and a half like that's what's happening with this damn TTPost service, so that's the issue ...' (48IE)

A bias for importing instead of exporting hindered the ability for entrepreneurs to grow their businesses and service in overseas markets. Some entrepreneurs wanted to be able to manufacture locally, but this was in many cases problematic, as this sector was not sufficiently developed. Therefore, even when entrepreneurs had a demand for their goods, they could not competitively provide them.

'... having to get paid if you sell a product outside of Trinidad and Tobago, how you shipping it out, the cost of things to ship it out there ... so, on one hand, it's improving the exposure of the business but on the other hand because we don't have the resources to accommodate it. It's challenging' (25IS)

Shipping and transportation locally also faced constraints because of traffic and lack of transport between the islands of Trinidad and Tobago.

Evidence of constraints regarding shipping and transportation as it related to transactions via digital platforms is highlighted in Table 28 below.

Table 28: Constraint: Inability to Ship and Transport

Issue	Example from Data	Codes
Lack of infrastructure leads to limited e-commerce which leads to less investment in e-commerce by entrepreneurs	23IS: ‘... it has allowed facilitation for people to get things that they want from outside, but many companies in Trinidad don’t have that e-commerce platform where you could shop and buy and deliver. So, it’s not a service that they are offering, so if you are not offering the service then people have no choice but to go the bricks and mortar route’	Inability to Ship/Transport: RQ3 Intermingling Online and Offline Interaction: RQ1 Supplies Intermediary: RQ2
Difficulty competing with international platforms in part because of limited manufacturing	9IES: ‘I mean Amazon and stuff is huge down here. I mean, it’s all about the international shipping ... so it’s just hard to compete locally ... because there is no manufacturing’	Inability to Ship/Transport: RQ3 Not Buying Local Things Online: RQ3
Lack of critical mass for local delivery service	9IES: ‘it’s just been difficult to get the goods from here to there in a small quantity. They had this company (X). So, it was very similar to Just Eats, it lists all of these restaurants. So, they had their menus online and stuff, and they	Inability to Ship/Transport: RQ3 Not Buying Local Things Online: RQ3

	would pick up the goods and try to deliver, and I mean they crashed and burned. Not from lack of trying, but just for the fact that people had to pay ten percent more to have the goods delivered and then they would be dealing with the restaurants who would not be necessarily that friendly to them. 'Cause the restaurants also had to take a ten percent cut, so they just weren't able to achieve a critical mass, they wouldn't get enough people ordering from them'	
Entrepreneurship because of infrastructural issues	55IE: '... it's sad because the Tobago hoteliers could experience so much more business not just internationally, but the local market especially like a weekend ... everybody wants to go to Tobago, and you can't get to go Tobago. The ferries are full, the planes are full ... tourism could be so much more for Trinidad and Tobago ...'	Inability to Ship/Transport: RQ3

8.4.3 Not Buying Local Things Online

The data revealed that payment was an issue because e-commerce was not developed locally. In some cases, this related not only to perception of corruption but also a sense that large, established international platforms may be better or more efficient. It was also believed that there was more recourse if something goes wrong using an international platform than for a local

transaction. Therefore, it seemed that the system-like trust highlighted by (Lankton et al. 2015) was high for e-commerce platforms like Amazon.

However, the human-like trust said to be afforded by digital technologies (Lankton et al. 2015) did not seem evident with the use of these platforms. For example, entrepreneurs welcomed the accessibility and immediacy that digital platforms afforded, but the culture placed a higher value on meeting face-to-face. This preference for face-to-face interaction reduced the willingness to engage in e-commerce locally, therefore, affecting the ability for entrepreneurs to use digital payment platforms for payment even where customers could pay online.

Further, even where local products were available online, it was thought that culturally

‘Trinidad is not ready to buy local products, on a local platform ... They're not ready for us’ (21E-2)

It was also believed that customers often shopped for goods they could source locally offline

‘They rather go in PriceSmart, they rather go Hilo they rather go to the store and get it’ (21E-2)

‘we would still go and buy the local stuff here locally. I mean that just makes more sense it makes no sense for me to buy, I don't know a piece of jewellery, a band or something like that through ETSY when I could just go locally to them’ (26IEP)

Additionally, entrepreneurs generally found that customers of all ages were less likely to pay for local goods and services online, but it was also much less likely for entrepreneurs to be able to advertise to or communicate with older demographics online as well.

‘there is still going to be some old lady who says you should market more because they never hear about it yeah because they didn't read about it in the papers and they did not see it on a billboard, like who is spending all that money lady ... I could get into like a whole long conversation with her about the best use of my money for advertising, but instead, I'm like okay’ (33IE)

Therefore, if an entrepreneurs’ targeted demographic was, for example, forty-five years or older, this to some degree, influenced how successful advertising on the digital platforms could be. Therefore, a fluid combination of digital and offline interaction was especially crucial for entrepreneurs trying to reach these demographics. Table 29 provides evidence related to the constraint of **Not Buying Local Things Online**.

Table 29: Constraint: Not Buying Local Things Online

Evidence	Example	Codes
Inability to convey a message of high-quality goods and services	14IE-T: 'At times ... you can send up a wrong message ... (about) ... the quality of work that is put out from the country'	Need for Local Promotion of T&T: RQ3 Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty): RQ3
Need to appreciate local platforms to encourage their development	12IES-F1: '... you can be successful if you know local people better than any other, and right now local people don't appreciate everything out there ... If we can focus on our products, you can be very successful using a platform here ...'	Mirroring Local Culture: RQ1 Need for Local Promotion of T&T: RQ3
Influence of digital platforms influencing appreciation for local culture and related entrepreneurial ideas	29IE: '... having such easy access to social media (means) we are losing ... what makes us Trinidadian and it's being swallowed up by American ideas which aren't always the best thing'	Need for Local Promotion of T&T: RQ3
Inability to offer online purchases locally because of scams.	41IE: 'well you know Trini they call them Trickydadians, the paper ticket that they get, they were taking it and scanning it and giving it to people ... when we abroad it's all about concert tickets online ... but for our local show, we don't do it ...'	Lack of Control (Users): RQ3 Mirroring Local Culture: RQ1

8.4.4 Criminal and Corrupt Activity

Crime and corrupt activity were thought to damage the positive perception of T&T needed for entrepreneurs to do business online locally and overseas. While the use of the digital platforms afforded local and international visibility, this affordance was not always actualised because of it. Additionally, while platforms allowed for speedy payment, a lack of trust, propped up by perceptions of high levels of crime and corruption limited the use of digital platforms, even though entrepreneurs wanted to use them

'... Particularly in Trinidad and Tobago with such a high crime rate and people have died trying to buy and sell using cash face-to-face and therefore if using something like PayPal and you paying online this much safer, so the person knows that you've got money. If I bought something for me, you don't have to come to my house and put this in my hands it's in the bank ...' (27IES)

Ironically, customers seemed to prefer face-to-face payments, though this was seen to increase the likelihood of both theft and physical attacks.

Additionally, several interviewees believed the growth and internationalisation of their businesses was affected by high levels of corruption or a *'greasing culture'* (6IS). As mentioned earlier, this limited the ability to actualise affordances from digital platform use.

'... you need to have the right connections in order to get business done internationally ...' (12IE-F1)

'you see it's a tricky thing to be a morally righteous person and say that I would never engage in ... this kind of corruption because we live in a place (where) that is how business is conducted ... by who do you know, how can I get ahead, who's going to say this thing for you. and I've seen that happen so if you want to be this person who's going to operate in the straight and narrow way you going to fail here absolutely ...' (24IE)

Table 30 below highlights evidence of this.

Table 30: Constraint: Criminal and Corrupt Activity

Evidence	Example	Codes
High levels of crime	43IS: <i>'... you know how Uber bailed out in Trinidad? Well they left because one of their drivers was murdered ... so it</i>	Criminal and Corrupt Activities: RQ3

	kinda would affect everything ...'	
Lack of trust in administrators not platforms	12IES-F1: 'no matter where you go abroad, the least secure Google emails are still much more secure than any local providers that we find. Because nothing is more secure than the weakest link and there's no weaker link than a corrupt administrator ... and that's why I say that ... nothing is safe here at all. There's always someone who is willing to do anything for money'	Criminal and Corrupt Activities: RQ3 Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty): RQ3
Concern about the influence of bad publicity of T&T on entrepreneurship	13IEP: '... If people are publicising (crime) all the time on social media, and then that gets out, it will mean that (it may affect) various people who are looking to come on holiday or to do business and whatever ... I'm not sure if there is anybody managing that and I can see that that could be quite detrimental ...'	Lack of Control (Users): RQ3 Criminal and Corrupt Activities: RQ3

8.4.5 Lack of Training/Expertise Required

Entrepreneurs generally found digital platforms easy to use, but they also believed that they needed to develop, or source further skills related to the use of digital platforms and the wider web as well. The functional affordance (Mesgari and Faraj 2012) for entrepreneurs was in some ways also a conditional affordance (Hutchby 2001; Chemero 2003; Scarantino 2003) as it was dependent on the entrepreneur's capacity to develop or source training and or expertise and was dependent on an individual's capacities. Some entrepreneurs could sufficiently actualise

affordances because they lacked the skills or expertise to do so or lacked the money to hire those skills. Table 30 provides evidence of this.

Table 31: Constraint: Lack of Training/Expertise Required

Issue	Example from Data	Codes
Need for expertise	8IE: '... You must be computer savvy. You must be smartphone savvy because it's important to know how to utilise the tools. That is the best advantage you have with these platforms'	Training/Expertise Required: RQ3
Expertise from someone younger	18IE: 'I think (for) Instagram I probably would need help from somebody who is younger, you know and is more in tune'	Training/Expertise Required: RQ3 Older Customers not Using Digital Platforms Online: RQ3
Needing to understand how to use digital platforms in a responsible way	4IE-T: '... you have to at least learn about using the cell phone ... learn remote apps and the information they require because you don't wanna say yes to something that you didn't choose ... our cell phone ... will have private information that you may not want to go out'	Training/Expertise Required: RQ3
Training needed for more in-depth use of social media	34IE: '... if you want to get into the fine detail of social media like we do then some serious knowledge and training and different workshops would have to take place'	Training/Expertise Required: RQ3

Issue	Example from Data	Codes
Needing to hire social media managers	41IE: '... you have to have the skills and we are fortunate that on our management team we have people who are very skilful at using that like (X) manager is very skilful at that and then he has his assistant who is even more skilful. I am not ... he taught me, and it was necessary to know so. I know some of it ...'	Training/Expertise Required: RQ3
Needing to source programming skills	44IE: '... everything is via WhatsApp, and we have a database ... my (family member) is a programmer, so he programmed something for me'	Training/Expertise Required: RQ3
Lack of training decreasing effectiveness	46IE: '... I think it's my lack of training in using them that made me not as effective as I want to be'	Training/Expertise Required: RQ3

8.5 Discussion of Affordances and Constraints: Coexistent, Overlapping and Intertwined

Affordances and constraints identified are not only distinct (Leonardi 2011), but vary by degree and exist simultaneously as well as in conflict and are always intersecting and impacting on the entrepreneur, digital platforms and the social environment (Majchrzak et al. 2013; Volkoff and Strong 2013). For example, the visibility provided by digital platforms levelled the playing field leading to more opportunities but also resulted in inevitable risk from digital platforms, users, and other entrepreneurs that may copy both locally and internationally, usually with no recourse.

Furthermore, even where this leads to new opportunities, entrepreneurs face constraints that are not digital but related to the lack of infrastructure needed to support entrepreneurship. The

Accessibility and Immediacy affordance of digital platforms is convenient for entrepreneurs as they can perform activities quickly and easily. However, for many, this does not replace the need for some face-to-face interaction to ensure messages are not misinterpreted and to allow for the physical experience of face-to-face interaction which could not be translated offline (Conole and Dyke 2004) particularly in the face of invisible audiences (Boyd 2010).

The rapid changes on platforms (Conole and Dyke 2004; Kuo et al. 2013) is also difficult to manage, and so entrepreneurs are often playing catch up and are continually learning through trial and error. Furthermore, high levels of accessibility and immediacy on platforms are facilitated by digital platforms being designed to monopolise attention, and this leads to information overload and lack of control as entrepreneurs may face difficulty in managing interaction (information and conversations) with others on the platform (Fox and Moreland 2015) which occur continuously. Additionally, even when the platform was very flexible in other ways, they were not. For example, the platforms were still believed in some cases to be very Americanised because, for example, they sometimes did not allow for tailoring to a local audience and therefore limited the ability to use the platform as desired.

Some entrepreneurs tried to separate their personal and business image, but found platforms constrained their ability to be private (Boyd 2010; Vitak and Kim 2014; Fox and Moreland 2015) (Conole and Dyke 2004; Kuo et al. 2013). Others used the platforms to reflect their personality. For example, they used videos to help present what they believed was a more realistic and representative image. In some cases, entrepreneurs report that using these platforms led to perceptions of a lack of professionalism. Therefore, they had to find ways to overcome this, for example, through using a website, even though several entrepreneurs believed the website was mainly necessary for international customers or to lend more legitimacy to the business, signalling the importance of cultural context in determining how digital platforms are used. Therefore, even if some entrepreneurs did not receive many e-payments, they often still felt compelled to invest in a website as well.

Moreover, while digital platforms offered a collaboration affordance, this seemed primarily relevant to international relationships. This affordance was actualised locally only if an entrepreneur was already connected to important local business, friends, or family networks. However, the international collaboration also faced problems of trust, evidenced by weaker social ties sometimes, especially in the absence of face-to-face contact, which limited the ability to capitalise on both the visibility and collaboration affordance.

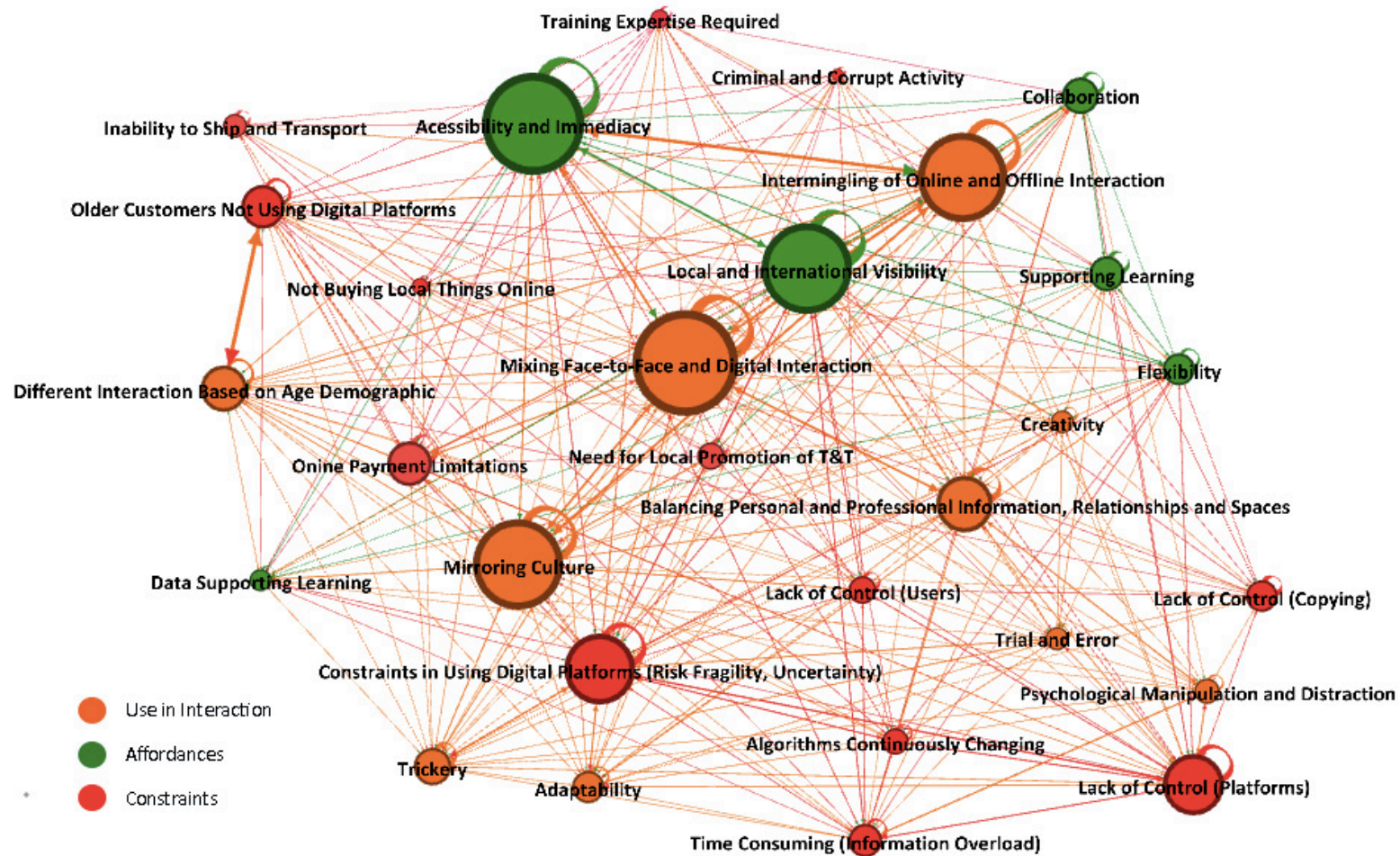
Furthermore, even while platforms were believed to be easy to use and accessible, skills needed to use the platforms were developed through trial and error and required significant time

investment. Some skills thought necessary and important to allow for desired control required further, usually expensive investment, particularly as the business began to grow. Further critical skills included adaptability and creativity, which seemed to come about because of interaction on ever-changing digital platforms, and this too affected the ability to actualise resources.

Affordances and constraints, coexist, overlap, and are embedded in the context of the local and social environment. For example, the imbrication process (Leonardi 2011) is evident with the effect of the introduction of Uber and their abrupt closure. Uber was generally embraced by drivers and the public when it launched. However, entrepreneurs thought Uber did not understand the local environment sufficiently. Uber later had to introduce cash payment despite safety issues because the public required it. They were also directing drivers to no-go areas in those cities, leading to the attack and a murder of a driver and prompting them to halt operations there. Uber's withdrawal, however, paved the way for local services TTRideShare (TTRS) run by locals which seemed able to learn from and in some ways develop on Uber's service. Uber drivers then migrated to TTRS, and the platform now offers its service to the entire country, therefore supporting entrepreneurship in the country with the provision of a local platform as well as by providing a new entrepreneurial avenue for taxi drivers.

This case illustrates the intertwining of actualised and non-actualised affordances, constraints, unintended consequences, actors, and outcomes (McGrenere and Ho 2000; Stendal et al. 2016), which create new outcomes for entrepreneurs. This also evidences the importance of local knowledge and context for the successful use of platforms by entrepreneurs and helps fill a gap in TACT research related to an understanding of the process by which affordances are actualised (Strong et al. 2014; Anderson and Robey 2017); Autio et al. (2017); (Nambisan et al. 2017). A matrix coding query done using NVivo shows the overlaps in coding for RQ1: ***Entrepreneur Interaction Using Digital Platforms*** and RQ3: ***Affordances*** and ***Constraints*** (See Appendix AA). The diagram below (See Figure 13) uses this matrix coding query to generate a network diagram using Gephi open graph visualisation software and illustrates how codes overlap and coexist. The lines represent the strength of connections between codes.

Figure 13: Illustration of Connections in Coding Entrepreneur and Digital Platform Relations (RQ1: Interaction and RQ3 Affordances and Constraints)



8.6 Chapter Summary

This chapter explained the affordances and constraints evident with the use of digital platforms. It shows how affordances and constraints are intertwined and co-exist and, in some ways, illustrates the process by which various affordances are actualised or are instead constrained. This discussion also illustrates how some affordances identified in the literature review, like the communication affordance and spatial affordance is inherent for all the affordances identified in this data. Affordances, therefore, need not be differentiated as an affordance in a digital context, but instead assumed, as all entrepreneurs use digital platforms to communicate in some way, and all entrepreneurs communicate across spatial boundaries.

The chapter provides new insight into the interdependencies of affordances and constraints and helps us understand how relationships between entrepreneurs, digital platforms, and the environment are manifested. It shows that the use of digital platforms is generally helpful because they afford accessibility and immediacy and collaboration both locally and across borders and with varied actors, including customers, suppliers' other entrepreneurs, and business partners. Using digital platforms has helped to level the playing field for some entrepreneurs by providing them with visibility in new markets at home and overseas, and they are used to help entrepreneurs learn. These affordances co-exist with varying levels of constraints for entrepreneurs based on their needs, expertise, and the cultural, social, and infrastructural environment, which may be historically situated.

Further, while the use of platforms is helpful, they direct entrepreneur choices and behaviour, in ways which may not always align with the goals of the entrepreneur. For example, entrepreneurs may feel pressured to be more open with their information than they would like to, which then leads to constraints like distraction and information overload. Additionally, digital platforms use is characterised by risk, uncertainty, and fragility, which is influenced by the lack of control of both platforms and users, which is often connected and simultaneous. This chapter, therefore, provides much-needed insight into the affordances and constraints of digital platform entrepreneur relations and supports TACT as a useful way of understanding the influence digital platforms have had on entrepreneurship.

Chapter 9 Discussion of Theoretical Implications and Recommendations

The previous chapters (6-8) have presented and analysed the data concerning the research questions and sought to provide answers about the influence of digital platforms on entrepreneurship in T&T. Chapter 6 provides new insight into how entrepreneurs use digital platforms. Chapter 7 provides insight into the ways the use of digital platforms has influenced the EE in T&T. Chapter 8, identifies affordances and constraints of digital and platform relations and examines and explains how they, coexist, interrelate, and overlap. This chapter will discuss the theoretical implications of the research. It will then outline recommendations for entrepreneurs and policymakers seeking to support entrepreneurs in T&T.

9.1 Theoretical implications

9.1.1 A TACT Template for Research on Digital Technology Interaction

The use of TACT as a theory and a method has proven useful for understanding the complex interactions and relationships between digital platforms, entrepreneurs, and their environment. However, affordances identified are extremely broad (Majchrzak et al. 2013), and many of them apply to information communication technology (ICT) in general. This broad application may lead to the assumption that some of these affordances, such as accessibility and immediacy and local and international visibility, should be assumed and so their identification and use may be weak and or ambiguous. Indeed, the spatial affordance was not identified because it was deemed relevant for all digital platforms, though they are manifested in different ways.

However, this research builds on TACT research (Wynn and Williams 2012; Majchrzak et al. 2016) that recognises digital platforms are information communication technologies, and so inherently offer certain types of broad affordances. Some of these affordances are common across all platforms (Visibility, Accessibility and Immediacy). Some of these affordances may vary by degree (Flexibility). For example, flexibility was evident with social media platforms, but not with e-commerce platforms like Amazon. Other affordances can be identified depending on the type of platform used (Collaboration and Supporting Learning). For example, learning was supported by using social media platforms, Massive Open Online Courses (MOOCs) and to some extent e-commerce platforms, that gave '*tips and tricks*' (47IE). Additionally, those that used the gig economy platform Uber were able to learn more about how the digital platform operates and therefore create a similar platform, but the platform did not appear to set out to teach their

users. The actualisation of these affordances enabled digital platforms to be a resource and to offer resources.

Additionally, the code **Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)** recognises the overlap between formal and informal rules influenced by both the platform and its users that influence the ability to actualise affordances. Therefore, the constraint *Lack of Control (Platform)* and *Lack of Control (Users)* can be used for future research by assessing the level of those types of constraints based on an individual's goals and their relation to **Constraints in the EE**. For example, if an entrepreneur's goal is to increase sales, they may use a digital platform for advertising.

However, platform rules may influence the visibility of their business on the platform (for example, needing to pay significant amounts of money to boost a post on Facebook), and so be very constraining. Alternatively, the achievement of this goal, for the same entrepreneur, at another time could instead be constrained by informal rules surrounding how interaction should occur on the platform (for example, needing to respond to a request immediately), yet this may be influenced by cultural ways of interacting that manifest on the platform, that may or may not be supportive. Further, if the same entrepreneur, comes to believe they have high levels local and global visibility on the platform but is then unable to offer their goods because of offline shipping constraints, they cannot actualise the Local and International Visibility affordance. Further, if the customer then negatively rates the business, the inability to control the visibility of this rating may constrain the entrepreneur, and potentially affect sales.

Further, the code **Constraints in the EE** has broader value for other studies examining the impact of rapidly evolving digital technologies on society if changed to the code **Constraints in the Environment** which can focus on relationships with relatively stable culture, social norms, and institutions. Additionally, the historical roots of these social norms and cultures can be traced for improved anticipation and identification of interconnected problems and better-informed solutions. The extent to which observations about the application of TACT can be applied is broad, and while observations about the specific influence of digital platforms on entrepreneurship relate to T&T, the method for evaluating entrepreneur relationships in an EE can be applied again. Qualitative methods were particularly useful for understanding underlying issues and relationships using TACT, which would be difficult to uncover using quantitative methods, especially since a lot of platform data may not be accessible to researchers. By focusing on interactions and relationships, TACT helps to explain the limits of digital platform influence on entrepreneurship and the EE, which are embedded in social and historical contexts, that usually lie outside the scope of the information management, entrepreneurship, and EE literature.

9.1.2 EEs as Siloed, Informal, Fragmented and Unstructured

This research evidences the limitations of EE research that takes for granted that an EE is a single formal entity. In T&T the EE is very siloed, informal, fragmented, and unstructured as it is based on family, ethnicity, government and friendship networks. However, much of the EE research does not look at EEs in this context. Further, the literature usually does not explain how this influences interactions and activity within an EE as well as the effectiveness of an EE (Stam 2015; Isenberg 2016; Alvedalen and Boschma 2017). This research points to a need to recognise this. While existing EE models may be a useful guide, it is important to allow for the development of EE models specific to the different countries in question, particularly since the cultural, historical and infrastructural context was very important. Additionally, different components may be heavily dependent on other components. For example, in T&T family was important for accessing funding, and this influenced the ability to access other important resources in the EE, requiring some entrepreneurs to source resources outside of the EE using digital platforms.

9.1.3 Importance of Other Actors in the EE

The use of the EE concept helped to understand how digital platforms are used by entrepreneurs to interact within an EE, especially since most of the entrepreneurship literature focuses on the entrepreneur (Nambisan et al. 2017) though entrepreneurs co-create with others online (Sussan and Acs 2017). The government played a significant role in providing access to resources for some entrepreneurs, though this did not always meet the entrepreneur's needs. Further, powerful actors, like established businesses, were said to influence its development, yet with some exceptions (Spigel 2017) these types of businesses are left out of the EE literature and models, which focuses on large businesses potentially providing venture capital support. Indeed, some large local and international businesses were believed to be acting against the development of a supportive EE for new entrepreneurs, that can leverage digital platforms to level the playing field. This finding should be further explored, as the EE literature usually suggests that an EE is supportive.

As others have argued (Mason and Brown 2014; Auerswald 2015; Mack and Mayer 2016; Stam and Spigel 2016; Alvedalen and Boschma 2017; Spigel 2017; Spigel and Harrison 2018) this research also points to a need for the literature to better examine why an EE forms and the effect it actually has on entrepreneurship. For example, In T&T, the government seemed to be a very important resource for the EE and supported infrastructure, but many entrepreneurs used digital platforms to operate outside formal parameters. Further, a significant number of entrepreneurs did not believe government support aligned with their interests.

9.1.4 International Influences on EEs

The EE in T&T was influenced by international actors, which included other entrepreneurs and suppliers that helped entrepreneurs to overcome local barriers in the EE. Digital platforms facilitated interaction between entrepreneurs and international actors and are an important resource for entrepreneurs. While internationalisation was found to be important for entrepreneurs (World Economic Forum 2013), EE research insufficiently recognises this, and so there is much more scope to examine this because of the EE focus on local boundaries. For some entrepreneurs' international connections and relationships are vital for existence as seen, for example, with access to supplies overseas, which digital platforms facilitate. Therefore, this contributes to the development of theory that integrate digital platform ecosystems and EE concepts and research such as digital entrepreneurial ecosystems (Sussan and Acs 2017) to show interactions and relationships both within and outside of a country that may influence entrepreneurship (Autio et al. 2017).

9.1.5 Influence of Psychological Manipulation and Distraction

The research finds that entrepreneur interaction with customers, users, and other stakeholders is characterised by perceived psychological manipulation, yet this is not usually explored in the literature, though it is discussed extensively in marketing literature in relation to consumers (Higgins and Scholer 2009; Li et al. 2012; Handa et al. 2018). However, this also affects how entrepreneurs can effectively use digital platforms. Cognitive or mental skills, such as the ability to not be distracted, are also necessary for an entrepreneur to use digital platforms effectively and to meet their goals (Nambisan and Baron 2013, 2019). It also appears that entrepreneurs believe they must use the manipulative tactics, such as false representations, that they too sometimes fall prey to when interacting with customers. These findings can be further analysed theoretically using TACT (Karahanna et al. 2018) given digital platforms are increasingly said to use extreme psychological tactics to sway behaviour (Locklear 2017; Rosenstein and Sheehan 2018).

9.1.6 Skills: Adaptability and Creativity

The entrepreneurship literature has characterised entrepreneurs by their personality and skills, like leadership, for example, and this research finds that those using digital platforms require constant and continuous creativity and adaptability. However, the use of these platforms is helping to enhance or develop these skills (Volkoff and Strong 2017) and the impact this has had on the entrepreneur and entrepreneurship, in general, is not usually explored. Continuously changing digital platforms could also potentially change the type of entrepreneur who would continue using them (Obschonka et al. 2017) (not only an adaptable but a creative person) having

implications for the way entrepreneurship is defined in the future. Research about what constitutes an entrepreneur in the context of the development of creativity and adaptability could also potentially contribute to the growing literature on entrepreneurship in the creative sector (Hausmann and Heinze 2016).

9.2 Entrepreneur Recommendations

An objective of this research is to provide recommendations to entrepreneurs using digital platforms for entrepreneurship. The following is a list of recommendations based on the research findings.

9.2.1 Dealing with Copying

Almost all entrepreneurs interviewed reported being copied or in some cases copying others, both locally and overseas, often without their knowledge and indeed there a body of literature on copyright issues in digital areas (Harper 2014; Edelman 2015; Xu 2017). Entrepreneurs need to be able to grow and expand in a crowded online marketplace, that has high levels of copying and where rival businesses that copy may be able to grow faster. For example, some entrepreneurs manipulated businesses that copied their business ideas by manipulating them into *liking* their business on social media, thereby increasing the number of people who followed their business. In other cases, a higher quality product could always be differentiated, helping an entrepreneur to maintain loyal customers. Entrepreneurs also made plans about what they would release online, as having information continually online could lead to increased copying not only locally but internationally and without their knowledge. Entrepreneurs must also investigate ways to get creative in adapting or recombining what already exists. This copying constraint can be supported by producing higher quality and value products. They could also benefit from learning more about intellectual property rights and ways to deal with this in an online environment. Concerning entrepreneurs copying others, it also appears that entrepreneurs may benefit from spending time away from digital platforms to refresh their creative process.

9.2.2 T&T Branding

Entrepreneurs can better work together to promote T&T as not only a place to do business but a place of creativity and multiculturalism to promote a compelling T&T brand which can help to differentiate T&T entrepreneurs in the digital marketplace and help them to compete internationally. Entrepreneurs can learn about work in this area from other countries in the Caribbean and overseas (Dinnie 2016; Place Brand Observer 2017).

9.2.3 Entrepreneurs Working Together to Lobby Government

While there is an environment of mistrust, entrepreneurs should try to come together to develop a group where they can support each other offline and bring their interests to bear on policies like larger business associations do. The formation of a group, network or association could be particularly helpful in lobbying for interests pertaining to entrepreneurship (Scott and Itai 1993), particularly for micro and small business, especially since the government may often be unaware of such concerns.

9.2.4 Finding Ways for Offline Engagement

While digital platforms are useful, most entrepreneurs reported that it was not a replacement for physical interaction because culturally, individuals preferred face-to-face interaction, and the *vibe* of this interaction could not be replicated online. Additionally, locally based online networks (particularly on social media platforms) were helpful because important offline networks supported them and so it appears that simply being online is not enough for developing strong business ties. Therefore, entrepreneurs must find ways to engage and network with important stakeholders offline.

9.2.5 Time Management

Entrepreneurs report facing difficulty managing their time when using digital platforms and this issue relates to research on entrepreneur productivity (Salas-Fumas and Sanchez-Asin 2013). Having to manage multiple platforms, including for both personal and professional use, and amidst distractions demanded much time and so sometimes outweighed the benefit of being able to communicate quickly. The need for time management was particularly true for social media platforms. Entrepreneurs must find ways to monitor their time spent online to make the best use of their limited time resources. It can also be helpful to have a dedicated social media platform manager tasked with continually developing social media expertise.

9.2.6 Opportunities for Local Platforms

The research found that there are significant gaps in the ability of digital platforms to cater to the local markets. A digital platform that is easy to use addresses an important need and is tailored to the local culture can potentially do very well in the country and may help to fuel the development of the technology sector locally. This finding was evident with Uber, which struggled to deal with the local constraints surrounding the use of this platform. However, Uber's arrival (and exit) from T&T paved the way for the development of a locally based ride service that could benefit from learning about Uber's business and capitalise on their local knowledge. This opportunity is also

evident with the introduction of Skybox companies that cater to T&T's demand for international products. Learning about the digital services offered internationally and focusing on introducing products and services that cater to the needs of T&T seems to provide a significant opportunity for entrepreneurs.

9.2.7 Managing Information Storage

Many entrepreneurs report storing of information on digital platforms, whether they be correspondence information, photos, or general information about their business. Therefore, much information that may be important to the business is at risk of being lost, for example, on social media platforms. Entrepreneurs must find ways to store important information in other secure places to ensure that this does not happen. Paid-for cloud services can be used, which are probably more secure than keeping it in their house on paper or on a platform whose rules continually changes potentially putting access to information there at risk (Wu et al. 2013). However, using the cloud also carry a security risk which entrepreneurs must consider (Wu et al. 2013).

9.2.8 Supplement Learning Online

Most entrepreneurs report using digital platforms to supplement their learning. For example, YouTube and Massive Online Open Courses (MOOCs) are used to gain new skills. They also become members of or participate in closed groups to support this. Entrepreneurs can continue to capitalise on the use of online platforms to learn what they need for their business. Additionally, fundamental skills and training related to an entrepreneur's industry or trade is also helpful because entrepreneurs may suffer or be disadvantaged in the long run if they lack an understanding of basic information related to their industry or trade. Further, entrepreneurs using digital platforms still need to understand the fundamentals of business administration, management, and marketing. Offline and online courses can help to develop knowledge and expertise.

9.2.9 Leveraging International Connections and Networks

Entrepreneurs using digital platforms are already exposed to a wider marketplace online. Where local resources are not developed, entrepreneurs should look for support outside of T&T. They can also source mentors, human capital, or even funding internationally, or from the Caribbean diaspora and other international networks to support their entrepreneurship. Some research has already indicated the importance of the diaspora for economic development and entrepreneurship (Minto-Coy 2016; The World Bank 2016). Though some entrepreneurs voiced

their willingness to engage in crowdfunding initiatives to support their entrepreneurship, this is not at all developed locally, but entrepreneurs can explore whether these types of digital platforms may be of benefit, especially if they are targeting an international market.

9.3 Policy Recommendations

Following the recommendations to entrepreneurs using digital platforms, this section suggests recommendations for government agencies that work to support entrepreneurship, which is also an objective of the study.

9.3.1 Current Issues and Limitations in Developing E-commerce Transactions Locally

Barriers to e-commerce include the lack of a centralised verification process for T&T, the requirement to use a credit card to receive money using PayPal in T&T (e.g. a Visa or a Visa debit card) (Oxford Business Group 2017). This facility is not always readily available to an early-stage entrepreneur (Oxford Business Group 2017). These barriers also mean that it takes longer for an entrepreneur to receive payments. Therefore, e-commerce becomes much more expensive for a T&T entrepreneur than it would be for someone based in the United States, for example (Oxford Business Group 2017). Additionally, it was believed that T&T's small market and the unwillingness of banking institutions to give up direct control with their customers, leads to limited improvements in e-commerce because there is less incentive to invest in it. Local e-commerce platforms like WiPay, however, are being used and are more cost-effective, and there should be more research on these local options.

However, policymakers should also be aware that cultural issues influence the willingness to use digital platforms for payment. There is a desire to know and see where their money goes and a lack of trust that inhibits the use of payment platforms locally even when they are available and accessible and even when the same platforms are used for international payments. Therefore, even where entrepreneurs did not see barriers to receiving payment online, the public was generally unwilling to do these types of online transactions locally. This barrier may also exist because individuals culturally prefer face-to-face transactions or have little trust in local companies operating online, without corresponding physical interaction, even though meeting face-to-face to exchange money seemed to carry a higher risk of theft and even violence.

Some stakeholders believed that an unwillingness to pay taxes influenced an entrepreneur's decision not to use e-commerce platforms. However, a significant number of entrepreneurs in this study either provided a way for local customers to pay online or indicated that they would

like to do so. If the issues outlined are not acknowledged and tackled, even when online payment solutions are cost-effective and readily available, consumers may still be unwilling to use them.

9.3.2 Making Shipping Overseas Reliable and Cheaper

While it was easy for individuals to source goods from overseas, it was extremely challenging for them to reliably send goods overseas because doing so was prohibitively expensive. The local postal service was said to be unreliable, and the postage of an item using the express service offered by a foreign postal service like DHL can exceed the cost of some items. It was also cheaper to shop for goods from overseas online than it was to purchase the same goods where they were available locally, even with the introduction of the 7% Online Purchase Tax (OPT). Governments can support initiatives that allow for more affordable and competitive shipping and transport by encouraging and supporting the development of innovative services and related infrastructure that also help to sell T&T goods overseas. Shipping can also be made more competitive, for example, by making the local postal service more cost-effective and reliable and innovating as was seen with the Skybox companies. This issue is particularly worrying for entrepreneurs who often say they have customers overseas but are unable to do shipping cost-effectively.

9.3.3 Support from Digital Platforms for Diversification

Digital platforms seem to have promoted innovation, especially in areas for which visuals are essential, and for which there is much potential in T&T, such as the creative sector. Initiatives such as CreativeTT is encouraging. Most of the entrepreneurs in this study were not focused on buying and selling but instead said they were trying to innovate by providing new types of products, sometimes influenced by access to the wider marketplace, which was full of ideas and for which they created new offerings, often with a very T&T flavour. Additionally, there is much opportunity for innovation in relation to services that can use local knowledge and data analytics (Wedel and Kannan 2016; Rohm et al. 2019) to meet a specific need in T&T, particularly since it is difficult for international digital platforms to completely meet local needs and requirements, because of their western leanings.

9.3.4 Gender and Age Balance Amongst Entrepreneur Stakeholders

While half of the entrepreneurs interviewed in this study were female, the entrepreneurial stakeholders were overwhelmingly male and tended to be older. Furthermore, some female entrepreneurs reported feeling they were excluded from important business networks because of their gender. Given the literature review (Ramkissoon-Babwa 2015), and this study evidenced that many entrepreneurs were women, it is important for women entrepreneurs and entrepreneur

stakeholders to be better represented particularly in decision-making or policy making regarding entrepreneurship. Further, this study finds that digital platforms are used primarily by young individuals none of the stakeholders interviewed was under the age of twenty-five. Therefore, in addition to women, the government could involve more young entrepreneurs to help support their business programmes and encourage their involvement in business networks.

9.3.5 Public Relations Campaign: Supporting Positive Representation of T&T

T&T news and aspects of its culture are made more visible online, and so more effort needs to be made to promote a positive image of T&T. A digital strategy to help promote T&T as a place of creativity, multi-culturalism, and business seems important in supporting T&T entrepreneurship. Initiatives by other countries (Place Brand Observer 2017) can be informative. Furthermore, entrepreneurs have represented T&T in many forums internationally, and in this study, it seemed mostly without government support. Entrepreneurs reported being reluctant to source funding from or get involved in some government initiatives, because doing so may hinder their entrepreneurial efforts or because their efforts would be ignored. Nevertheless, the types of activities many entrepreneurs are engaged in, particularly in the creative sector provide substantial entrepreneurial opportunities, particularly if the country has a positive image globally.

9.3.6 Support with Intellectual Property Rights

Copying not only locally, but internationally is a major concern for entrepreneurs in this study and all entrepreneurs in the digital age (Menard 2016). Many entrepreneurs reported having to find ways to circumvent this, by either not posting certain types of information, posting a lot of information, reporting incidents of copying to the digital platforms or simply trying to provide the best product available. However, there was no guarantee that they would not be copied, and entrepreneurs felt helpless to address this. While there is some research in the T&T context (Radauer 2015), there needs to be more consideration of digital influences. Additionally, not only is policy important but practical education and training. A guide can be developed to support entrepreneurs in dealing with issues around intellectual property online to reduce copying and the impact of copying when using digital platforms.

9.3.7 Encouraging Links to Diaspora and Caribbean Networks

A significant number of the individuals interviewed indicated they previously lived overseas, were from the T&T diaspora in the Americas or Europe, or from another Caribbean country. The tendency for people from the Caribbean diaspora or the Caribbean more generally to come to T&T to set up a business, illustrates that many believe the country to be a suitable and preferable

place for engaging in entrepreneurship. The economy and location were thought to be supportive to entrepreneurship endeavours, and doing businesses in a small country like T&T were seen to offer increased potential for entrepreneurs on the international scale, particularly since many individuals believe they can operate businesses from any location because of the convenience offered by digital technology.

They also believed that being from a small country could make their entrepreneurial offerings better stand out online. However, these diaspora networks and Caribbean links are insufficiently exploited for the development of entrepreneurship though they provide a market for locally produced goods and services and support entrepreneurs looking to develop their businesses locally for the benefit of T&T. There can be better links with influential persons from the diaspora and the rest of the Caribbean in varied business groups or industry networks to support entrepreneurship locally (Minto-Coy 2016; The World Bank 2016). Individuals in these networks may be able to help entrepreneurs source funding, find human capital, or even be mentors.

9.3.8 Support for a Venture Capitalist (VC) or Business Angel Network and Incentives for Funding Entrepreneurs

In many cases, entrepreneurs sourced finance from family or were self-funded. There seem to be few alternative sources of income for someone who does not already have significant assets or high levels of disposable income. Tax breaks for investing in new firms may also be considered (Acs and Szerb 2007). Lack of finance is hindering the growth of entrepreneurship. An unwillingness to share information and resources outside of a businessperson's network influenced the non-existence of a well-formed VC network in the country for the few businesses that could scale rapidly. However, working with diaspora networks may provide opportunities for business funding, particularly for micro and small enterprises. Similarly, government policy can support incentives for the financing of entrepreneurial ventures as well. The development of a VC network (Islam et al. 2018; Bertoni et al. 2019) or business angel network (Bonini et al. 2019) for T&T that could potentially be linked to the rest of the Caribbean could support this.

9.3.9 International Mentorship

The research found that sourcing mentors locally was problematic because mentors expect payment and because mistrust was inherent in mentor/entrepreneur relation locally. However, mentorship was taking place usually informally in T&T but also with internationally based mentors. The government could better support mentorship programmes connecting T&T entrepreneurs with internationally based entrepreneurs (for example, those known to them in their international networks) that allows for the exchange of information and ideas where there

appear to be lower levels of distrust and more support for formal mentorship. This international mentorship could be supported through government involvement, particularly since programmes that facilitated this were found to be helpful. Guidelines can also be put in place for these types of mentorship arrangements, given entrepreneur concerns about copying.

9.3.10 Support for Creativity, Entrepreneurship and Digital Literacy in Education

Many entrepreneurs said the education system does not support entrepreneurship as a viable career path because it focuses on other disciplines, like sciences, for example. Educators, therefore, could consider highlighting the importance of adaptability and creativity in today's environment as well as the potential for entrepreneurship in any given path despite one's choice of subjects. The development of an entrepreneurial mindset is also important for students, bearing in mind that technology is continuously changing and so the skills needed in the world of work also change all the time. Additionally, given distraction was said to be a problem, helping children to deal with this issue is also essential. This research underscores the importance of creativity, particularly in relation to absorbing other ideas and recombining these ideas in new ways. It also highlights the need for support in managing digital platform distraction, and this should be encouraged in the education system. Research on affordances and constraints of digital technology in online learning could prove useful (Conole and Dyke 2004).

Chapter 10 Conclusion, Limitations, and Suggestions for Future Research

10.1 Conclusion

This research focuses on the influence of digital platforms on entrepreneurship in T&T. It examines the interactions and relationships between digital platforms and entrepreneurs in their environment, offering interdisciplinary insight into the influence of digital platforms on entrepreneurship. It goes beyond the tendency to pay attention to either non-digital or digital influences on an entrepreneur by explaining how entrepreneurs use digital platforms to shape their environment and how digital platform use shape their environment.

The examination of digital platform interaction and relationships in the context of culture and the socioeconomic environment has uncovered new information about the impact that digital platforms have had on entrepreneurs in Trinidad and Tobago. It follows limited research which recognises the importance of social, cultural and economic factors on the ability to use digital platforms for entrepreneurship (Dy et al. 2018). The study provides new insight into how digital platforms influence entrepreneurs and the EE contributing to the literature on entrepreneurship and digital entrepreneurship. The research is of further importance given that it examines the relationship in a high-income, developing, multi-cultural, twin-island Caribbean country that is attempting to diversify its economy away from a dependence on oil and gas through supporting entrepreneurship. The country has low levels of high-growth entrepreneurship, but relatively good levels of internet access and digital platform usage and the findings provide valuable insight into how high-income does not correlate with high-growth entrepreneurship. Instead, a country's historically embedded social and cultural characteristics can be vital for the development of entrepreneurship and an EE (John and Storr 2018).

The study also provides valuable insight into understanding the growing creative sector in both developing and developed countries. For example, the creative sector is said to account for a significant degree of employment and economic in European countries (Boix-Domènech and Rausell-Köster 2018). The growth of the creative sector has also been aided by the use of digital technology (Tsang 2015). The creative sector is considered necessary for the development of T&T entrepreneurship in the literature and amongst the research participants and so understanding the ways that entrepreneurs can navigate digital platforms to support this, especially given high rates of copying online is important. Additionally, most entrepreneurship in T&T is historically

characterised as informal, and most entrepreneurs are micro-entrepreneurs. Digital platforms are supporting an increase in informal or micro-entrepreneurship in developed countries too (Martin 2016) and so this research provides valuable insights for those studying this phenomenon in developed countries as well.

The research has revealed several factors that influence the interaction between entrepreneurs and digital platforms. The use of digital platforms is heavily influenced by the specificities of the local culture and social norms that a preference face-to-face interaction, even when communication takes place online. Offline social capital (Gedajlovic et al. 2013) was found to be incredibly important for entrepreneurs to make the best use of digital platforms. Some entrepreneurs try to separate their personal and professional interaction; however, this proves to be difficult as some platforms discourage this action or because informal rules of the digital platform, as well as social norms, may require that entrepreneurs provide personal information about themselves to build trust with users.

Additionally, interaction is characterised by high levels of trial and error because the platforms often make changes that entrepreneurs need to adapt to quickly. Interaction, therefore, requires exceptionally high levels of adaptability and creativity for entrepreneurs to achieve their goals. Entrepreneurs must be able to make use of the potential of digital platforms to recombine ideas and information (Yoo et al. 2010) to leverage copying instead of being overcome by it. Distraction also infiltrates digital platform interactions as digital platforms employ tactics to keep entrepreneurs using their platforms. Additionally, psychological manipulation and or deceptive schemes are evident as entrepreneurs continually try to find ways to overcome the lack of control they have over users and digital platforms, to meet their goals. This type of interaction relates to dealing with competition, dealing with new platform rules, or averting the negative outcome of unwanted user behaviour.

Importantly, the study also explains how digital platforms function as actors in the EE as well as how they connect various EE pillars and components and enable the flow of resources from outside of the EE in a highly networked and interrelated way. This understanding of how the rules of digital platforms may influence the ability for digital platforms to be a resource to entrepreneurs addresses gaps in the EE literature. The EE has had an impact on certain components of the EE, like access to supplies or learning but the EE has not impacted on an entrepreneur's ability to source funding or finance, which is vital for other components like sourcing human capital to grow a business. While it appears to have supported access to international networks, these social ties, though helpful, seemed weak, if not backed up by face-

to-face correspondence. Digital platforms appear to have limited impact on access to important local networks needed for the business. Instead, they support entrepreneurs who are already a part of valuable offline networks through their online engagement instead of enabling them to create influential business networks that exist only online. Digital platforms appear to have had limited influence on formal mentoring, but they support communication for informal mentorship with others both locally and overseas and inspire micro-entrepreneurship and new business ventures. The use of digital platforms also helps to overcome barriers erected by actors in the EE which mitigate against the development of a supportive EE locally that encourages competition locally.

Entrepreneurs that use digital platforms often work independently of government, because their interests and needs often do not align with government support and may even conflict. For example, while digital platforms support entrepreneurial activities by helping entrepreneurs to source goods and services from overseas online, they may also inhibit government policy as they can discourage the purchase of goods and services locally and limit tax revenue. The use of digital platforms, therefore, may at once support entrepreneurs and impede government efforts to develop entrepreneurship. Relatedly, the study also evidences how knowledge of local culture provides an opportunity for entrepreneurs to competitively create locally owned digital services. It supports understanding about what entrepreneurs believe is needed from government to better maximise the use of digital platforms and to support an entrepreneur's goal to grow and to expand. These insights are helpful as they can inform policy as far as the relationship between the entrepreneurs and government is concerned, resulting in a better outcome locally for both entrepreneur and government.

The theory and method of TACT proved to be very useful for examining the interactions and relationships between digital platforms and entrepreneurship. Digital platforms afforded entrepreneurs visibility, both locally and internationally. They also afforded accessibility and immediacy simultaneously as well as flexibility, collaboration, and support for learning. The affordances of digital platforms described in the literature are in large part the same for T&T with some affordances common to all digital platforms and some not. Some affordances were evident in some ways across all platforms (visibility, accessibility and immediacy), while other affordances were more evident with some platforms, like social media platforms (flexibility, and collaboration), dependent on how they used it or the aim of the platform. For example, while Uber was not really offering an opportunity to learn, using it provided local entrepreneurs with an opportunity to learn what worked and what did not and therefore create a platform of their own when the Uber service stopped. Communication and spatial affordances can be assumed to

evident for all affordances and only vary by degree. These affordances provide a useful template for other researchers using TACT as a theory and a method.

These affordances are also closely overlapped, intertwined, and coexistent with various constraints that can limit the resourcefulness of a given platform. There are constraints in using digital platforms because their rules and algorithms change rapidly and constantly. Entrepreneurs cannot control this, and therefore, they must be able to manage high levels of risk, unpredictability, and uncertainty with mental discipline and by being adaptable and creative. Furthermore, entrepreneurs have limited control over user interaction on the platform, user interaction that is influenced by both local culture and social norms as well as digital platform rules. Spam, unwanted solicitation and user comments, as well as the potential for communication to be misinterpreted in speedy online correspondence force entrepreneurs to combine online and offline interaction, develop communications skills or employ manipulative tactics to deal with these challenges.

In addition to the challenges related to interaction on the platforms, it is sometimes difficult for some entrepreneurs to actualise affordances of digital platforms because of constraints in the EE, which are cultural, social as well as infrastructural. The EE was found to be highly informal, fragmented, and siloed because of its dependence on family, friend networks and ethnicity. These cultural, social, and infrastructural constraints in the EE can sometimes intertwine to constrain the ability to use digital platforms for entrepreneurship. Cultural constraints are especially evident where customers do not pay for goods sourced locally online but do so for international goods and services.

There is also a cultural preference for face-to-face interaction, which is required to build trust given that social perceptions of crime and corruption locally seem to inhibit local customers from using digital platforms to purchase goods and services online. Such concerns co-exist with a fear that meeting face-to-face may also lead to theft or violence, yet this risky method of payment persists. Consumers, however, are paying for goods and services overseas online, and there is a strong perception that goods and services from overseas were of better quality and less likely to be subject to criminal or corrupt activity. Consumers unwillingness to pay for local goods online may be influencing the unwillingness of financial institutions to significantly invest in the development of e-commerce infrastructure.

Given no one type of digital platform was studied, and local culture and social norms were found to be fundamental determinants for using digital platforms this research also provides useful

insight into how relatively stable cultural and social norms may potentially influence the use of future digital technology in T&T. Such understanding is important given digital technology changes all the time and very quickly, and different types of digital platforms may be used in the future. Future researchers may be examining the influence of very different digital platforms. This research, critically, illustrates the complexities of relationships and interactions between digital platforms, entrepreneurs and their environment and evidence the usefulness of TACT as a theory and a method that could help to understand such complexities.

10.2 Limitations

This research provides useful insight into the use of digital platforms by entrepreneurs. However, because this is an original topic in an emerging area and has a lack of established theoretical analysis, investigation of the topic has been difficult. There are also several research limitations outlined below.

10.2.1 Inability to Verify Stage of Business

While data on annual income and stage of the business was collected from some entrepreneurs, it was difficult to assess to what extent the information is true. Verification was also difficult because of the need to rely on the entrepreneur's memories, which could not usually be verified. Therefore, the stage of business is an estimate based on the data given and on how long they say they have been in business.

10.2.2 Limited Information on Use of Gig-Economy Platforms and Need for more Data on the use of Local Digital Platforms

Except for Uber, there is little information on the use of gig economy platforms in T&T, so there is limited data on how these types of platforms may have influenced entrepreneurship. While entrepreneurs that created local digital platforms are interviewed, there is limited information on the use of locally based digital platforms by entrepreneurs. Most of the data reflected the use of e-commerce platforms (primarily Amazon) and social media platforms, (primarily Facebook and Instagram), as well as the messaging platform WhatsApp, which are all owned by Facebook. YouTube was also extensively used. Therefore, while a variety of platforms are assessed, the findings mainly reflect the use of these types of digital platforms.

10.2.3 More Focus Groups and Location-Based Information

The research hoped to include three focus groups; however, due to time constraints, coupled with a limited response in other regions, two focus groups were organised. The research could have

benefited from having a third group from another area of the country, most notably the capital of T&T, Port of Spain. This data could have provided further insight on the influence of sub-cultures in an EE, which is extremely siloed given that data from the focus group in Tobago and Southern T&T found that location influenced the impact of digital platform use. For example, in Tobago infrastructure issues such as transportation were even more problematic than for the focus group in South T&T. Alternatively, information about the influence of location could have been solicited from the interviewees.

10.2.4 Stakeholder Personal Perceptions

The views of stakeholders, such as educational institutes, government agencies, incubators, financial agencies, the technical community, and business support groups were gathered during the research to better inform opinions on the influence of digital platforms on entrepreneurship. However, except for technical stakeholders and stakeholders who were also entrepreneurs using digital platforms, perspectives were sometimes about the stakeholder's personal experiences with using digital platforms to interact with entrepreneurs rather than the experiences and perceptions of the entrepreneur interaction in a more official capacity. These views, nevertheless, help to illustrate the disconnect between the way entrepreneurs carry out their activities using digital platforms and the programmes used to support entrepreneurs. Stakeholders were also aware that they were being interviewed in their stakeholder capacity.

10.3 Potential for Future Research

It is also important to note that there are several ways this type of research can be developed, and these are outlined below.

10.3.1 The Importance of Offline Networks in Using Digital Platforms

This study shows that digital platforms have provided a way of supporting entrepreneurship in T&T. They have provided new avenues for supporting entrepreneurial endeavours and by doing so have helped individuals to overcome certain constraints in their environment. However, they also appear to have potentially provided more opportunity to those who already have supportive, family or business connections and so research can benefit from linking to the large body of existing research on the importance of social capital in supporting entrepreneurship (Gedajlovic et al. 2013).

10.3.2 Further Research on Gig Economy Platforms and Local Platforms

The study only limitedly garnered information on the use of gig-economy platforms like Uber that was relatively new to the island and was short-lived. Further research could be undertaken to understand how these types of platforms may have influenced entrepreneurship. Given the introduction of a local alternative to Uber (TTRideShare) following the withdrawal of Uber's service, it appears that there are opportunities for the development of these types of services by local entrepreneurs. Further, more research should include perspectives from entrepreneurs that not only create digital platforms but use gig-economy platforms.

10.3.3 Exploration of Family and Funding and Ethnicity Influencing Entrepreneurship

While ethnicity features in research on entrepreneurship in T&T, information on family and ethnicity was not specifically collected, yet both entrepreneurs and stakeholders discussed the influence of family and ethnicity on entrepreneurs. Participants however encompassed individuals of varied ethnic backgrounds and the research did not seem to suggest that it was mainly ethnicity that hindered entrepreneurship, but instead family and network connections, which were often related to ethnicity, which was linked to the availability of funding needed to grow. However, such correlations cannot be made given such data was not collected. Future research would benefit from understanding the influence of different forms of offline network relationships in the context of T&T culture (for example, both ethnic and familial) both locally and internationally. These relationships may influence not only opportunity identification but opportunity exploitation (John and Storr 2018) and entrepreneurial growth. Exploring how these types of social capital (Gedajlovic et al. 2013) are influential in the actualisation of affordances can prove insightful.

10.3.4 Including Online Observation in Qualitative Research

Secondary data collection was a part of the methodology, but there was little relevant data (for example, reports) on the use of digital platforms by entrepreneurs. The secondary data from platforms used by entrepreneurs, however, was useful for verifying information provided by the focus group and interviews. The research could have potentially benefited from the observation of interaction on these platforms. In some cases, entrepreneurs showed this interaction during the interview to further illustrate their points. Given the intertwining of online and offline interaction (for example, live events, or online groups), this observation could benefit future research.

10.3.5 Country Comparisons

This research found that digital platform and entrepreneur relations are closely intertwined with local ways of interacting and offline and online interaction were combined in very seamless or fluid ways. However, while this was found to be so in T&T a small, twin-island economy where face-to-face interaction is preferred, the same may not be true in another country (Miller et al. 2016). Therefore, while the research provides useful insights, there are limits to generalisation of results.

A comparison between T&T and other Caribbean islands or developing countries, monocultural societies, mono-income or other oil and gas dependent countries can allow for the identification of any similarities or differences. Entrepreneurs located in different parts of a country can also be compared. Entrepreneurs in different countries may also use different platforms, some of which are local and so this too provides added insight into digital platforms use which may offer similar or differing affordances, constraints, and outcomes.

10.3.6 Research into EE Informality and Silos

The research finds that the conceptualisation of an EE in T&T differs from the way most of the literature contextualises it. The EE is informal and fragmented based, for example on family, ethnicity, and location, and other networks and some silos may mitigate against the development of an EE. The EE literature would benefit from more research on these types of EEs. More research on this is important for understanding what an EE looks like in various contexts and not just in high-income or high-growth entrepreneurship countries. In these countries, weak EEs may also exist (Spigel 2017). While EE research recognises the existence of these types of EE's they are rarely researched (Isenberg 2016).

10.3.7 International Influences on the EE

The EE was heavily dependent on resources overseas (Malecki 2011). The ease of importing increased with the availability and use of digital platforms and so while digital platforms helped entrepreneurs, they also hindered government efforts to support entrepreneurs selling local goods and services. The EE literature would benefit from further research on how digital platforms are used to find resources has influenced the EE. Research on how these platforms have influenced consumer preferences and in turn influenced the EE will also be insightful.

10.3.8 Insights from Born Global and International Entrepreneurship Research

The entrepreneurship literature fails to consider how entrepreneurship may, at the very start become international, with the help of digital platforms. Future research may benefit from research on international entrepreneurship (Oviatt and McDougall 2005) and born-global firms (Knight and Cavusgil 2004, p. 124). Though born-global research still focuses on high-growth entrepreneurship, it could benefit from research on micro and small enterprises too.

10.3.9 Further Interdisciplinary Research (Marketing, Psychology, and Performativity)

The usefulness of interdisciplinary research for an understanding of entrepreneur and digital platform relations is evident in this study, but it also points to a need to do even more interdisciplinary research to understand these relationships. The importance of data for digital marketing is evident in this research. While this importance may be emphasised in marketing research (Harris et al. 2019), it seems worth exploring this in the context of entrepreneurship too. The use of data for targeted marketing and advertising influences entrepreneur processes and activities and guides behaviour and interaction with customers and other stakeholders, ultimately, impacting outcomes.

Additionally, the use of manipulative techniques and so-called, psychology (Handa et al. 2018) or online performativity (Scott and Orlikowski 2014) was apparent in some entrepreneur responses. The entrepreneurship and information management systems literature limitedly examine how such techniques influence entrepreneur interaction, decisions, and activity (Sussan and Acs 2017; Karahanna et al. 2018). Further research can investigate this phenomenon using psychology or marketing concepts (Harris et al. 2019), which already explore psychological influences in business interaction.

10.3.10 Research on Entrepreneurs Using Digital Platforms in the Creative Sector

The research found that using digital platforms required high levels of creativity to meet objectives. Given the creative sector has been found to be important for entrepreneurship in T&T and increasingly globally (United Nations Conference on Trade and Development 2019), it would be appropriate to examine how creativity manifests itself for entrepreneurs in the creative sector, particularly since copying was found to be such an important issue when using digital platforms. Future research should focus on the extent to which these types of entrepreneurs feel compelled to use digital platforms or are able to maximise the opportunities for creativity these platforms present as well as deal with the challenges that arise from showcasing their creativity too. Further, given varied understandings and critiques of the concept and measurements of the

economic success of the creative sector by governments (Campbell et al. 2018), this type of research would be especially helpful.

10.3.11 Copyright and Replicative Entrepreneurship

Another area that is addressed in academic literature though not usually in the T&T literature relates to how the use of digital platforms influences the effectiveness of copyright (Menard 2016; Ugwu Uchenna 2019). For example, the research found that using these platforms, entrepreneurs could increase the likelihood that they could be copied not just at home but overseas and without recourse. This issue is particularly worrying when those that copy could go to market faster. Investigation of the ways entrepreneurs address these issues when using digital platforms provide much scope for research and can contribute to research on entrepreneur innovation. Additionally, another angle, that of replicative entrepreneurship, also warrants further research. While the literature usually sees this in a local context with the use of digital platforms, replicative entrepreneurship is instead global when digital platforms are considered.

10.3.12 Trust

The research finds that trust was an important factor in entrepreneur decisions about whether to use a platform locally (Ingram Bogusz et al. 2019). These are important issues to consider for the development of infrastructure that supports e-commerce. Factors affecting trust in the use of digital platforms by customers was not only premised on the perception of digital interaction but offline social perceptions. The way trust in social systems interrelates with trust in digital systems has already been researched (Lankton et al. 2015) and can be explored by future researchers. For example, this study found that the use of digital platforms for local payment was in large part due to a lack of trust in social systems.

Individuals were willing to use these services to access overseas goods and services, having perceived them as trustworthy but did not use the same platforms to access goods and services locally. Individuals preferred interacting face-to-face and appreciated the legitimacy and trust that came with such interactions, even when paying in person could be less convenient and or risky. Additionally, perceptions of the influence of corruption on such transaction diminished trust, and this lack of trust then seemed to limit incentives for financial institutions to invest in improving e-commerce facilities.

10.4 Concluding Remarks

This thesis offers insight into digital platform influences on entrepreneurship from a country that is not usually represented in the entrepreneurship and management information systems

literature. The research is important for adding to existing knowledge of the highly apparent influences of digital platforms on entrepreneur behaviour, activity, structures, processes, and ultimately, outcomes. However, there are limitations to digital platform use because of platform rules, which continuously change, as well as culture, social norms, and infrastructure.

While the research is instrumental for understanding digital platform interaction and relationships, there are limits to generalisation. However, given the broad definition of both entrepreneur and digital platform adopted for this research, and the very critical role culture and social norms were found to play in guiding how digital platforms are used for entrepreneurship, this research provides insight into the ways future digital technology may potentially shape as well as be shaped by T&T's cultural and social environment. The use of TACT as a theory and method was important for understanding highly complex relationships between digital platforms, entrepreneurs, and their environment, which manifest and interrelate both offline and online. This study helps us to understand the way digital platforms are used to support and navigate these relationships, not only within an EE but outside of it.

Additionally, the increased potential for copying with digital platform use in a country that has historically had high levels of informal/micro-entrepreneurship provide lessons for developed economies where this type of entrepreneurship is also on the rise. This finding is also important given creativity was essential for finding success using digital platforms and is believed to be very important for entrepreneurship in not only in T&T but globally (United Nations Conference on Trade and Development 2019). It follows that this research provides a timely, relevant, and useful understanding of the role digital platforms play in entrepreneurial endeavours.

This research achieves its ultimate aim of understanding how digital platforms have influenced entrepreneurs in T&T. Using both TACT and the EE concept to guide the research and analysis proved fruitful for understanding entrepreneurial activities. They helped to meet the objective of providing well-informed recommendations to both T&T entrepreneurs that use digital platforms for their entrepreneurship and to the T&T government that seeks to support entrepreneurship in T&T.

Appendix A An Explication of the Affordances Concept

Affordances	Description	Example	Authors
Social	The possibilities for action enabled by social interactions and relationships that are provided by the environment or objects in the environment.	For example, being part of a family may support affordances related to caring for a child, like collaboration.	(Bloomfield et al. 2010) (Schmidt 2007) (Boyle and Cook 2004), (Stendal et al. 2016) (Parchoma 2014) (Majchrzak et al. 2013) (Schrock 2015) (Rietveld et al. 2017) (Bucher and Helmond 2018) (Lankton et al. 2015) (Gaver 1996) (Wellman et al. 2003) (Postigo 2016) (Dong and Wang 2018)
Functional	The possibilities for action for a specific type of subject with a specific goal that can be both enabling and constraining.	For example, a backpack may provide the functional affordance of carrying, it may also constrain the ability to move quickly and unencumbered.	(Hutchby 2001) (Bucher and Helmond 2018) (Hartson 2003)
Relational	The possibilities for action that is	For example, an individual may have	(Hutchby 2001)

Affordances	Description	Example	Authors
	dependent on the extent to which an individual has the ability to exploit what their environment presents them.	access to materials required to make a risotto but cannot do so because they do not have required expertise.	(Markus and Silver 2008) (Seidel et al. 2013) (Leonardi and Barley 2008) (Leonardi 2011) (Zammuto et al. 2007) (Scarantino 2003) (Bucher and Helmond 2018)
Conditional	The possibilities for action that is dependent on the environment and environmental triggers.	For example, a person may want to fly a kite, but they will not be able to fly the kite if there is no wind.	(Scarantino 2003)
Individual	The possibilities for action that require only one person to be enacted.	For example, a person may decide to write a story on their own and so do not need anyone else to realise this goal.	(Leonardi et al. 2013)
Shared	The possibilities for action which many people can enact in similar ways.	For example, everyone in a neighbourhood may recycle their plastic, therefore actualising the shared goal of being sustainable and keeping their neighbourhood clean.	(Leonardi et al. 2013)
Collective	The possibilities for action which require	For example, in a community, there may	(Leonardi et al. 2013)

Affordances	Description	Example	Authors
	many people doing different things to realise a common goal. This can comprise of individual affordances.	be gardeners, rubbish collectors, teachers and others with specific roles that together help the community to sustain itself and thrive.	
Surefire	The possibilities for action that when triggered results in a guaranteed action or outcome.	For example, if you start the engine and press the accelerator in a functioning car it will drive.	(Scarantino 2003)
Probabilistic	The possibilities for action that when triggered does not guarantee any specific action or outcome.	For example, making yourself visible online does not necessarily guarantee you will get more customers.	(Scarantino 2003)
Goal	The possibilities for action that is influenced by the subject's goal or intention.	For example, a car provides the affordance of movement, related to an individual's goal of getting from one place to the next.	(Scarantino 2003)
Happening	The possibilities for action which is not directed by the goal or intention of the subject.	For example, while walking home, a person may run into a friend, preventing the person from achieving that goal, when they end up going for a drink instead.	(Scarantino 2003)

Affordances	Description	Example	Authors
Imagined affordances	The possibilities for action that the subject perceives or expects in relation to what they perceive is presented by the object, their attitudes and expectations. This is juxtaposed with what the designers of an object actually intended.	For example, a mug may be perceived as vase for flowers, though the designers intended for it to be used for drinking.	(Nagy and Neff 2015) (Bucher and Helmond 2018)
Hidden	The possibilities for action that exist even if they are not visible or known to the subject.	For example, a chair can be used for sitting, but it may potentially be used to elevate someone to reach for something, even if that affordance is not perceptible.	(Gaver 1991) (Nagy and Neff 2015) (Thapa and Hatakka 2017)
Perceptible	The possibilities for action that are acknowledged but not necessarily enacted.	For example, an individual may perceive and believe that a shop provides the goods they want, but may not necessarily choose to go there.	(Gaver 1991) (Nagy and Neff 2015) (Thapa and Hatakka 2017)
False	The possibilities for action that may wrongly prompt a user to act when	For example, a cave may signal a place to hide from an animal but actualising that	(Gaver 1991) (Nagy and Neff 2015) (Thapa and Hatakka 2017)

Affordances	Description	Example	Authors
	doing so will not help them reach their goals.	affordance by going into the cave may alert another animal that may cause harm or unintentionally prompt the individual to scream, alerting their presence to the animal on the outside.	
Correct rejection	Where there is no apparent information is available for perceiving an affordance and it is therefore assumed that no possibilities for action exists.	For example, if the individual does not know that planes exist, they do not think that it is possible for humans to fly.	(Gaver 1991) (Nagy and Neff 2015) (Thapa and Hatakka 2017)
Symbolic expressions	The variety of ways that an object can potentially communicate possibilities for action to a specific subject. This may be culturally based.	For example, while a stick might have been crafted for art in one culture, in another it may be perceived as useful for warfare.	(Markus and Silver 2008)
Nested	Affordances that are grouped and exist one inside the other.	For example, a tree consists of branches which consist of leaves.	(Gaver 1991) (McGrenere and Ho 2000)
Sequential	Affordances that when acted upon leads to the	For instance, visual information about a door handle may indicate that	(Gaver 1991)

Affordances	Description	Example	Authors
	perception of a new affordance.	the handle is <i>graspable</i> , while grasping the handle may reveal that it is also <i>turnable</i> (Gaver, 1991)	
Vernacular	The potential for the subject to understand the materiality of the object (technology) from their potential interactions with it. In this case to understand affordances the subject's experience, accounts and context of its use must be prioritised.	For example, you may understand that going into a boat and travelling in the water can take you to another place.	(McVeigh-Schultz and Baym 2015)
Communicative	Potential interaction between subjective perceptions of utility and objective qualities of the technology that alter communicative practices or habits'.	For example ' <i>the push to talk</i> ' using cellular radios with ' <i>the push to talk</i> ' via instant messaging today' (Woodruff and Aoki 2004, p. 409)	(Schrock 2015) (Bucher and Helmond 2018) (Helles 2013)

Appendix B Summary of Technology Affordances

Affordances	Description	Researchers	Feature, Outcome or Affordance?
De-coupling	The potential for endless, seamless and flexible recombinations of digital elements.	(Autio et al. 2017)	Affordance: Though this refers to digital technology it does not describe a feature of digital platforms but instead the potential for many ways of combining digital elements. This could however be extended to non-digital elements too.
Communication	The potential for users to directly communicate with each other.	<p>Communicative (Schrock 2015), (Bucher and Helmond 2018), (Helles 2013)</p> <p>Communication (Karahanna et al. 2018)</p> <p>Connected (Wellman et al. 2003)</p> <p>Interaction (Nardon and Aten 2012)</p> <p>Conversations (Kietzmann et al. 2011)</p> <p>Communication (Davis et al. 2009)</p> <p>Activity support (Junglas et al. 2013)</p>	Affordance: This does not describe a feature or an outcome, instead it describes the potential to communicate.

Affordances	Description	Researchers	Feature, Outcome or Affordance?
		Insight support (Junglas et al. 2013)	
Multimediality	The ability to interact in different ways using one device. For example, through video, voice, images and written word.	Multimediality (Schrock 2015) Multimodal and non-linear (Conole and Dyke 2004)	Affordance: This does not only describe a feature but an action potential for various ways of communicating.
Always connected	The potential to easily connect with anyone or anything at any time.	Always connected (Wellman et al. 2003)	Affordance: This does not only describe a feature or outcome but an action potential for various ways of communicating.
Reflection	The potential for reflection and critique, which comes from discussions with others over potentially longer time-period than would happen face-to-face.	Reflection (Conole and Dyke 2004)	Affordance: This does not only describe an outcome but an action potential for various ways of communicating.
Metavoicing	The potential for engaging in ongoing online knowledge	Metavoicing (Majchrzak et al. 2013)	Affordance: This also references features (for example, the like button). However, it is

Affordances	Description	Researchers	Feature, Outcome or Affordance?
	conversation by adding to existing content/knowledge by reacting online to others' presence, content, and activities. For example, by liking or recommending.	Metavoicing (Karahanna et al. 2018) Metavoicing (Dong and Wang 2018) Social feedback (Fox and Moreland 2015)	relational, if extended could apply beyond digital platform use and may lead to various outcomes
Spatial	The potential for communication and action anywhere and at any time.	Spatial (Autio et al. 2017) Spatial (Xuefei and Joshi 2016) Bandwidth (Fox and McEwan 2017) Broader Bandwidth (Wellman et al. 2003) Virtualisation (Xuefei and Joshi 2016) Globalized Connectivity (Wellman et al. 2003)	Affordance: This describes how users and digital technology interrelate to afford the potential to communicate across time and space. It does not refer to any feature or outcome.
Immediacy	The potential for information to be exchanged at unprecedented speed.	Speed of Change (Conole and Dyke 2004) Automation (Xuefei and Joshi (2016) Synchronicity (Fox and McEwan 2017)	Affordance: This is not a feature as it is applicable to digital platforms in a very broad sense. It is also not necessarily an outcome but a potential action that could lead to multiple outcomes.

Affordances	Description	Researchers	Feature, Outcome or Affordance?
		Immediacy of artefacts (Davis et al. 2009)	
Portability	The potential for mobility of communication.	Wireless Portability (Wellman et al. 2003) Portability (Boyd 2010) Portability (Schrock 2015) Mobility (Davis et al. 2009)	Affordance: This does not only describe a feature but a an action potential for mobility, which exists with or without digital technology.
Trading	Easy transactions for payment and buyer seller communication related to payment and purchasing.	Trading (Dong and Wang 2018) Managing transactions (Sutherland and Jarrahi 2018a)	Feature: Though relational, this references a feature. Though this could relate to multiple outcomes it makes it difficult to generalise across digital platforms or independent of digital technology.
Accessibility	The potential to easily access information and resources.	Information processing (Davis et al. 2009) Networked information access (Halpern and Gibbs 2013) Accessibility (Fox and McEwan 2017)	Affordance: This does not refer to any specific feature or outcome. This affordance is also general and so can be applied in non-digital contexts.

Affordances	Description	Researchers	Feature, Outcome or Affordance?
		<p>Accessibility (Fox and Moreland 2015)</p> <p>Sourcing (Karahanna et al. 2018)</p> <p>Replicability (Boyd 2010)</p>	
Managing transactions	The way a platform manages transactions like transferring goods, information and labour and bookkeeping.	(Sutherland and Jarrahi 2018a)	Feature: This is can be both a feature and an outcome. It is related to features of the digital platform but can also be an outcome of using digital technology.
Diversity	The potential to access varied types of information from many different types of people, places and groups all around the world.	<p>Browsing others' content (Karahanna et al. 2018)</p> <p>Browsing others' content (Halpern and Gibbs 2013)</p> <p>Diversity (Treem and Leonardi 2012)</p> <p>Variability (Leong et al. 2016)</p> <p>Diversity (Conole and Dyke 2004)</p>	Affordance: This does not refer to any specific feature or outcome. It reflects the relationship between the digital platform and the user and outcomes which may vary.
Persistence	Referring to digital content being continually accessible to users.	<p>Persistence (Treem and Leonardi 2012)</p> <p>Persistence (Boyd 2010)</p> <p>Recordability (Tokunaga 2011)</p>	Outcome: This is not an affordance because it does not relate to an action potential. It simply occurs because of using the digital

Affordances	Description	Researchers	Feature, Outcome or Affordance?
		Recordability (Ellison et al. 2015) Persistence (Fox and Moreland 2015) Persistence (Fox and McEwan 2017)	platform. It could also be a feature if the digital platform offers storage as service.
Visibility	The potential to use digital platforms for finding information as well as for making yourself visible or identifiable online.	Visibility (Treem and Leonardi 2012) Visibility (Albu and Etter 2016) Visibility (Fox and Moreland 2015) Visibility (Fox and Warber 2015) Visibility (Vitak and Kim 2014) Visibility (Dong and Wang 2018) Presence (Kietzmann et al. 2011)	Affordance: This is not a feature or an outcome. It emphasises the relationship between the digital platform, user and potential outcomes which may vary. This affordance is also general and so can be applied in non-digital contexts.
Presence Signaling	The potential to indicate one's presence or know if other users are accessible.	Presence Signaling (Karahanna et al. 2018) Availability (Schrock 2015) Connectivity (Fox and Moreland 2015)	Affordance: Though this describes a feature this could also be described as an affordance as it is relational and apply in non-digital contexts.

Affordances	Description	Researchers	Feature, Outcome or Affordance?
Triggered Attending	The potential for individuals to engage when they are alerted. For example through a platform notification.	Triggered Attending (Majchrzak et al. 2013) Triggered attending (Dong and Wang) Presence signaling (Karahanna et al. 2018) Connectivity (Fox and Moreland 2015)	Affordance: Though this describes a feature this could also be described as an affordance as it is relational and applies in non-digital contexts.
Locatability	The potential to find out where someone or something is at any given time.	Locatability (Schrock 2015)	Affordance: Though this describes a feature this could also be described as an affordance as it is relational and applies in non-digital contexts.
Sourcing	The potential to either create a request for resources or help someone source them.	Sourcing (Karahanna et al. 2018) Searchability (Boyd, 2008)	Affordance: This is not a feature or an outcome. It emphasises the relationship between the digital platform the user and potential outcomes which may vary.
Self-presentation	The potential to reveal and present information about one's self.	Self-presentation (Mesgari and Faraj 2012) Self-presentation (Karahanna et al. 2018)	Affordance: This is not related to any one feature or an outcome. It emphasises the relationship between the

Affordances	Description	Researchers	Feature, Outcome or Affordance?
		<p>Presence (Nardon and Aten 2012)</p> <p>Availability (Schrock 2015)</p> <p>Representation support (Junglas et al. 2013)</p> <p>Rendering (Davis et al. 2009)</p> <p>Rendering (Nardon and Aten 2012)</p> <p>Representation support (Junglas et al. 2013)</p> <p>Identity (Kietzmann et al. 2011)</p> <p>Identifiability (Halpern and Gibbs 2013)</p> <p>Presence Signaling (Karahanna et al. 2018)</p> <p>Locatability (Schrock 2015)</p> <p>Identity information (Ellison et al, 2015)</p> <p>Context Support (Junglas et al. 2013)</p>	<p>digital platform the user and potential outcomes which may vary.</p>
Personalisation	The potential for the tailoring preferences and needs	<p>Personalisation (Davis et al. 2009)</p> <p>Personalisation (Wellman et al. 2003)</p>	<p>Affordance: This is not a feature or an outcome. It emphasises the relationship between the digital platform the user</p>

Affordances	Description	Researchers	Feature, Outcome or Affordance?
	individualised interaction.	Personalisation (Fox and McEwan 2017)	and potential outcomes which may vary. This affordance is also general and so can be applied in non-digital contexts.
Competition	The potential to compete with each other, either individually or in groups.	(Karahanna et al. 2018)	Affordance: This is not a feature or an outcome. It emphasises the relationship between the platform the user and potential outcomes which may vary. This affordance is also general and so can be applied in non-digital contexts.
Editability	The ability to edit content or change something.	Editability (Treem and Leonardi 2012) Editability (Vitak and Kim 2014) Editability (Fox and McEwan 2017)	Affordance: This refers to a feature (which different digital platforms offer varying levels of) however it can also refer to an action potential (the potential to change something) rather than only a feature.
Extending reach	The potential for large scale and global reach and visibility.	Extending reach (Sutherland and Jarrahi 2018a) Scalability (Boyd 2010)	Affordance: This is not a feature or an outcome. It emphasises the relationship between the

Affordances	Description	Researchers	Feature, Outcome or Affordance?
		Bandwidth (Wellman et al. 2003) Broadcasting (Mesgari and Faraj 2012)	digital platform the user and potential outcomes which may vary.
Collaboration	The potential to work as a team to collaboratively create content or realise a particular outcome.	Collaboration (Mesgari and Faraj 2012) Collaboration (Karahanna et al. 2018) Team process (Davis et al. 2009) Reviewability (Faraj et al. 2011) Insight support (Junglas et al. 2013) Activity support (Junglas et al. 2013) Network-informed associating (Majchrzak et al. 2013) Network association (Fox and McEwan 2017) Organizational networks (Ellison et al. 2015) Reviewability (Faraj et al. 2011)	Affordance: This is not a feature or an outcome. It emphasises the relationship between the digital platform the user and potential outcomes which may vary. This affordance is also general and so can be applied in non-digital contexts.

Affordances	Description	Researchers	Feature, Outcome or Affordance?
Sharing	The potential for sharing and distributing content unrelated to one's self to others.	Sharing (Kietzmann et al. 2011) Contribution (Mesgari and Faraj 2012)	Affordance: This is not a feature or an outcome. It emphasises the relationship between the digital platform the user and potential outcomes which may vary. This affordance is also general and so can be applied in non-digital contexts.
Collectivity	Building robust collectivity by encouraging interaction and community building.	Collectivity (Sutherland and Jarrahi 2018a)	Outcome: This is not an affordance for it is the outcome of the actualisation of an affordance (for example collaboration).
Management	The potential to manage a group to achieve a desired outcome.	Group management (Karahanna et al, 2018) Groups (Kietzmann et al. 2011) Team process (Davis et al. 2009) Management (Mesgari and Faraj 2012) Group management (Karahanna et al. 2018)	Affordance: Though this describes a feature this could also be described as an affordance as it is relational and applies in non-digital contexts.

Affordances	Description	Researchers	Feature, Outcome or Affordance?
Generative role-taking	Participating in productive online knowledge conversation which helps to sustain online community.	Generative role-taking (Majchrzak et al. 2013) Interactivity (Davis et al. 2009)	Affordance: This is not a feature or an outcome. It emphasises the relationship between the digital platform the user and potential outcomes which may vary. This could exist independent of the digital platform.
Social presence	Enables new social connections between users.	Social connecting (Dong and Wang 2018) Social presence (Fox and McEwan 2017) Affordances for sociality (Lee et al. 2014) Identity information and relationship formation (Ellison et al. 2015) Reputation (Kietzmann et al. 2011) Social feedback (Fox and Moreland 2015) Association (Fox and Moreland 2015)	Feature: Though relational, this references a feature. Though this could relate to multiple outcomes it makes it difficult to generalise across digital platforms or independent of digital platforms.
Relationship formation	The potential to form relationships with others.	Relationship formation - (Karahanna et al. 2018)	Affordance: This is not a feature or an outcome. It emphasise the relationship between the

Affordances	Description	Researchers	Feature, Outcome or Affordance?
		<p>Relationships (Kietzmann et al. 2011)</p> <p>Association (Treem and Leonardi 2012)</p> <p>Trust building (Sutherland and Jarrahi 2018a)</p> <p>Identity information and relationship formation (Ellison et al. 2015)</p>	digital platform the user and potential outcomes which may vary. This affordance is also general and so can be applied in non-digital contexts.
Match-making	Matching of users across the network based on their attributes.	Match-making (Sutherland and Jarrahi 2018a)	Feature: Though relational, this references a feature. Though this could relate to multiple outcomes it makes it difficult to generalise across digital platforms or independent of digital platforms.
Guidance shopping	Helps buyers by offering personalized service.	Guidance Shopping (Dong and Wang 2018)	Feature: Though relational, this references a feature. Though this could relate to multiple outcomes it makes it difficult to generalise across digital platforms or independent of digital platforms.

Affordances	Description	Researchers	Feature, Outcome or Affordance?
Generating flexibility	The potential to flexibility participate the way the user wants to and when they want to.	Generating flexibility (Sutherland and Jarrahi 2018a) Workplace Flexibility (Xuefei and Joshi 2016) Openness (Leong et al. 2016) Experimentation (Faraj et al. 2011) Recombinability (Faraj et al. 2011)	Affordance: This is not a feature or an outcome. It emphasises the relationship between the digital platform the user and potential outcomes which may vary. This affordance is also general and so can be applied in non-digital contexts.
Information and conversation Control	The ability to control how you interact and what information you provide.	Control (Mesgari and Faraj 2012) Conversation Control (Fox and McEwan 2017) Information Control (Fox and McEwan 2017) Information control (Kuo et al. 2013) Expressive information control (Kuo et al. 2013)	Affordance: While features may allow for control, this is not only a feature or an outcome. It emphasise the relationship between the digital platform the user and potential outcomes which may vary. This affordance is also general and so can be applied in non-digital contexts.

Appendix C Summary of Constraints

Constraints	Description	Researchers
Monopolisation	The potential for monopolisation of specific platforms because of the exploitation of network effects and little interoperability between digital platforms being used.	(Conole and Dyke 2004) (Fox and Moreland 2015)
Being tethered	Feeling pressured to use the digital platform.	(Fox and Moreland 2015)
Information overload	This can also lead to information overload and less critical reflection on the information presented and less sense of self.	(Conole and Dyke 2004)
Surveillance	The potential for having your rights infringed as a result of constantly being tracked, often without your knowledge.	(Conole and Dyke 2004)
Lack of Privacy	The inability to hide yourself and your activities from others.	Privacy (Boyd 2010) Lack of privacy (Vitak and Kim 2014) (Conole and Dyke 2004) (Kuo et al. 2013)

Risk, fragility, uncertainty	The potential for unexpected and disruption at any time that can have a tremendous impact on an individual's or organisation's success.	(Conole and Dyke 2004)
Lack of control	Inability to control or manage information and activity on the platform of yourself or of others.	<p>Lack of control Gerardine and Poole (1994)</p> <p>Lack of control (Sutherland and Jarrahi 2018a)</p> <p>(Lack of) Information control (Fox and Moreland 2015)</p> <p>(Kuo et al. 2013)</p> <p>(Lack of) Conversation Control (Fox and Moreland 2015)</p> <p>Managing inappropriate or annoying content (Fox and Moreland 2015)</p> <p>Speed of change (Conole and Dyke 2004)</p> <p>Lack of control (Fox and Moreland 2015)</p> <p>(Kuo et al. 2013)</p>
Inability to identify authenticity	Inability to select the best information/resources and access to authenticity of information.	(Conole and Dyke 2004)
Copying	Increase in duplication of content with no knowledge of its origin.	(Conole and Dyke 2004)

Context collapse	Complications arising from the inability to present the appropriate context associated with oneself for a particular interaction in the digital space mingle.	(Fox and McEwan 2017) (Boyd 2010) (Marwick and Boyd 2014) (Ellison and Vitak 2015)
Incorrect matching	Algorithms not providing the information content and interaction you need.	(Sutherland and Jarrahi 2018b)
Relationship tension	interactions occurring offline may carry onto digital platforms and interactions happening on a digital platform may transfer offline. This could exacerbate existing offline conflict and create new sources of conflict.	(Fox and Moreland 2015)
Social comparison and jealousy	Individuals engage in various manners of social comparison, which often result in feelings of jealousy or dissatisfaction.	(Fox and Moreland 2015)
Replicating inequalities	Platforms replicating inequalities that already existed in the non-digital world.	(Boyd 2010) (Conole and Dyke 2004)
Invisible audiences	Inability to know who you are interacting with and respond appropriately, which is exacerbated by the existence of many types of unknown audiences.	(Boyd 2010)

Appendix C

Blurred public and private boundaries constraints	Lack of control and difficulty to distinguish between public and private spaces. This can also lead to activities and practices that you want to be private becoming public.	(Boyd 2010)
Fragmentation	Increased personalisation can result in increased fragmentation of networks, though it can also encourage coalitions between the like-minded.	(Wellman et al. 2003)

Appendix D Pilot Interview Questions

- 1. Age**
 - 18 - 25
 - 26 - 35
 - 36 - 45
 - 46 - 55
 - 56 - 65
 - 65 and above
- 2. Gender**
 - Male
 - Female
- 3.** Are you employed?
- 4.** What websites do you use to offer goods and services?
- 5.** What was your motivation for using these websites?
- 6.** Has using these websites provided the experiences, benefits and outcomes you expected? What were these?
- 7.** What are the most useful features of these websites and which are not?
- 8.** Have you adapted use of these websites for your needs and if so how?
- 9.** Are there any government policies or features of your neighbourhood, city or community that affect your ability to use these websites? If so what are they?
- 10.** Do you believe that use of such platforms can in the long term have a negative impact on value to you? Why?
- 11.** Does your use of these websites have any relation to any offerings of goods and services offline? If so how?

Appendix E Ergos Submission Questionnaire

Project Information	
P1	Project title An explanation of the relationship between digital platforms and Individual entrepreneurship in Trinidad and Tobago (Amendment 2)
P2	In what capacity are you submitting this research? University Student (postgraduate research)
P3	Is this research externally funded? Yes
P3.1	Who is the funding body? EPSRC
P4	Will you (or any other member of the research team) travel outside the UK to conduct this study? Please select 'YES' if: <ul style="list-style-type: none"> You or a member of the research team will be physically travelling abroad You reside abroad and are conducting the research in your home country You are returning to your home country (other than the UK) to conduct your research N.B. Use of online data collection tools is not classified as travelling. Yes
P4.1	Please list all the countries where the research will be taking place Current Countries: <ul style="list-style-type: none"> Trinidad And Tobago
P5	Does the project involve collaborators from outside the University of Southampton? No
P6	What date do you expect this study to start? 1st May 2018
P7	What date do you expect this study to end? 26th March 2020
P8	Is this application linked to a previous or another current ERGO submission? Please select no if this is only an amendment to a previous submission Yes
P8.1	Related submission information 27232 - Related to my PhD - This ERGOS submission follows a pilot study done for my thesis upgrade.
P9	Are there any conflicts of interest you need to declare relevant to this research? No
P10	Does this research involve low and/or middle income countries? No

Filter Questions	
F1	Will your study involve human participants? This is the primary collection of data from human participants. Human participation includes: <ul style="list-style-type: none"> trials and experiments involving people conducting interviews or focus groups interaction with users of online environment e.g. Forums asking people to complete a questionnaire or survey (both in person or via the Internet, and within the University or on other premises) observation of people Please note, literature reviews and systematic reviews (clinical) do not require an ERGO submission. If your project is either of these please select 'No'. Yes
F2	Will your study involve the analysis of secondary data, previously collected from human participants? This includes the re-use of any data previously collected for research or clinical data. It also includes any data already available in a public source e.g. social media. Please note, literature reviews and systematic reviews (clinical) do not require an ERGO submission. If your project is either of these please select 'No'. Yes
F3	Will your study involve human biological material? This includes any relevant or non-relevant human tissue or biological material less than 100 years old No
F4	Will your study involve animals (dead or alive, including animal tissue or products)? No
F5	Will your research involve tangible cultural heritage as defined in the University's Ethics Policy on Cultural Heritage? According to the University's Policy tangible cultural heritage comprises: <ul style="list-style-type: none"> Movable cultural heritage, including artefacts and other archaeological materials of cultural value, works of art, and artefacts of historic importance such as rare books and manuscripts. Immovable cultural heritage including archaeological sites, heritage structures, and cultural landscapes both urban and rural. Human remains more than 100 years old. This includes both land-based and underwater cultural heritage. <i>Nothing selected</i>

Appendix E

Human Participants											
H1	Is your project a survey or questionnaire only? This includes online or paper surveys and questionnaires. No										
H2	Does your project involve only audit or service evaluation within the NHS? No										
H3	Please estimate the numbers of participants taking part in the study <table border="1"> <thead> <tr> <th></th> <th>Participants (not recruited through the NHS)</th> <th>NHS patients (if applicable)</th> </tr> </thead> <tbody> <tr> <td>Minors (Under 18 years old)</td> <td>0</td> <td>0</td> </tr> <tr> <td>Adults (18 years old and over)</td> <td>0</td> <td>0</td> </tr> </tbody> </table>			Participants (not recruited through the NHS)	NHS patients (if applicable)	Minors (Under 18 years old)	0	0	Adults (18 years old and over)	0	0
	Participants (not recruited through the NHS)	NHS patients (if applicable)									
Minors (Under 18 years old)	0	0									
Adults (18 years old and over)	0	0									
H4	Does this research involve direct contact or interaction with any vulnerable individuals? This includes individuals who: <ul style="list-style-type: none"> are under 18 years old; are homeless or living in sheltered accommodation; are otherwise vulnerable adults such as frail older people or the infirm, those with depression or other mental health issues; do NOT have the capacity to give consent in accordance with the Mental Capacity Act 2005; do not have (or do not appear to have) the capacity to give free and informed consent for any reason (including under the influence of drugs or alcohol, being coerced, confused etc.) No										
H5	Does this study involve any of the following? <ul style="list-style-type: none"> Inducing anxiety, stress or other harmful psychological states on a momentary basis Inducing physical discomfort and/or pain beyond which that the participant may routinely encounter in their everyday life; Exposing the participants to visual, auditory or other stimuli beyond that which would normally be experienced in everyday life; Altering the participant's normal patterns of sleeping, eating or drinking No										
H6	Does this study involve any of the following? <ul style="list-style-type: none"> Collecting special category data (under GDPR and Data Protection Act 2018) <ul style="list-style-type: none"> These include data regarding: race; ethnic origin; politics; religion; trade union membership; genetics; biometrics (where used for ID purposes); health; sex life; or sexual orientation Eliciting information from participants that could render them liable to criminal proceedings (e.g. drug abuse or child abuse) No										
H7	Does this study involve deception, inducement or covert surveillance? No										
H8	Does the study involve invasive techniques? No										
H9	Does this research involve ingesting food, drink or other products (including gases, vitamins or nutritional supplements) which exceed normal recommended consumption levels or outside any market authorisations? No										
H10	Will your study involve trialling an Investigational Medicinal Product, Medical Device or use a Human Challenge Model? If your research involves the development or testing of any component, device or app that has a planned health or medical application please select yes. This includes research involving existing CE marked devices. No										

Insorship Questions	
H11	Are any UK regulatory body approvals required to conduct this research? UK regulatory approvals are usually required for studies taking place within specific institutions such as the NHS, Department of Health owned Social Care settings, the Prison and Probations services or the Ministry of Defence. This includes all studies submitted to a body via IRAS including NRES/NHS REC, HRA (including studies involving NHS staff only), HMPPS (formerly NOMS), MHRA and non-IRAS submissions such as MoDREC. No

Secondary Data	
S1	Was your data originally collected from NHS patients, staff or service users? No
S5	Will you be using only fully anonymous data? This should be anonymised by someone independent of the research team and be anonymous upon receipt. If you are receiving linked anonymous data, the data should be provided without the key or code. No
S8	Will you be processing any special category data? This includes data regarding: race; ethnic origin; politics; religion; trade union membership; genetics; biometrics (where used for ID purposes); health; sex life; or sexual orientation No
S9	Are appropriate consents in place for secondary or unspecified future uses? No
S9.1	Please provide details of the consent in place or explain how you intend to gain retrospective consent if appropriate On the government website which can potentially be one source of information it says 'Generally, materials presented on this website are in the public domain and may be reproduced without permission' http://www.mpac.gov.tt/node/301 The consent form asks for permission to use data on the webpages on specific platforms that are used by the entrepreneur.

Appendix F Ergos Application Form



ERGO application form – Ethics form

All mandatory fields are marked (M*). Applications without mandatory fields completed are likely to be rejected by reviewers. Other fields are marked "If applicable". Help text is provided, where appropriate, in *italics* after each question.

1. APPLICANT DETAILS

1.1 (M*) Applicant name:	Keisha Taylor
1.2 Supervisor (If applicable):	Dr. David Baxter Prof. Peter Sunley
1.3 Other researchers/collaborators (If applicable): <i>Name, address, email, telephone</i>	

2. STUDY DETAILS

2.1 (M*) Title of study:	An explanation of the relationship between digital platforms and individual entrepreneurship in Trinidad and Tobago
2.2 (M*) Type of study (<i>e.g. Undergraduate, Doctorate, Masters, Staff</i>):	Please Select Doctorate
2.3 I) (M*) Proposed data collection start date:	1 May 2018
2.3 II) (M*) Proposed data collection end date:	30 December 2019

2.4 (M*) What are the aims and objectives of this study?
<p>Research Aim</p> <p>The aim of this research is to explain the relationship between digital platforms and individual entrepreneurship in Trinidad and Tobago.</p> <p>Objectives</p> <ol style="list-style-type: none"> 1. To utilise Technology Affordances and Constraints Theory (TACT) for qualitative explanation of the relationship between digital platforms (including Facebook, Instagram, Amazon and gig-economy platforms) and individual entrepreneurship in Trinidad and Tobago. 2. To create a model defining digital platform and entrepreneurial ecosystem

components, affordances, constraints and their relationships.

3. To proffer policy recommendations to the Trinidad and Tobago government and governments of other similar economies that seek to develop entrepreneurship based on the assessment of the relationship.

2.5 (M*) Background to study (a *brief* rationale for conducting the study. This involves providing a brief discussion of the past literature relevant to the project):

There is a gap in entrepreneurship research on the impact of digital platforms, such as social media, messaging, e-commerce and on-demand platforms and the entrepreneurship process, though such platforms are increasingly being used for entrepreneurship. Research institutes and governments also do not cover this in much of their policy recommendations (Sussan and Acs, 2017) though the institutions that entrepreneurs rely on are increasingly being digitised. Research and policies usually consider the digital ecosystem and the entrepreneurial ecosystem as distinct (Sussan and Acs, 2017). The Global Entrepreneurship Monitor (GEM) for example, has conducted entrepreneurship research on over 100 countries, the most extensive global research on entrepreneurship. It has also significantly influenced academic research and government policy (Bosma, 2013). GEM studies provide the primary source of research on entrepreneurship in Trinidad and Tobago, yet the use of digital platforms is omitted from its analysis. Despite high levels of internet access high smartphone and platform, particularly Facebook usage little research has been done on the use of digital platforms by individuals for entrepreneurship in Trinidad and Tobago (Vuytsteke and Fraser 2011, Mohammed and Tejay 2017). Using Technology Affordances and Constraints Theory, which has been employed by researchers of Management Information Systems (Leonardi, 2011b; Majchrzak and Markus, 2013; Majchrzak et al., 2016) and reviews research on the platform-based economy (Van Dijck, 2013; Evans and Schmalensee, 2016; Evans and Gawer, 2016; Evans, 2017) to provide a frame of reference to study the relationship between digital platforms and entrepreneurship. It does so by adopting a multi-method inductive approach for a case study of Trinidad and Tobago. the 5 stages of entrepreneurship (Autio et al., 2017) employed by the Global Entrepreneurship Monitor will be integrated in this analysis. Additionally, the concept of an Entrepreneurial Ecosystem (EE) 'a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship' (Stam and Spigel, 2016, p. 1765) which considers country context (Stam and Spigel, 2016; Alvedalen and Boschma, 2017) corresponds well with the GEM approach to studying entrepreneurs. The definition of entrepreneurship adopted is adapted from that used by Global Entrepreneurship Monitor (GEM) and refers only to individual entrepreneurship. It is therefore defined as 'any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual' (Reynolds et al., 1999, p. 3).

2.6 (M*) Key research question (Specify hypothesis if applicable):

and Tobago?

- Have digital platforms diminished face-to-face contact by entrepreneurs?
- Have digital platforms impacted the capabilities and skills needed to pursue individual entrepreneurship in Trinidad and Tobago? If so in what ways?
- Have digital platforms influenced or changed the nature of entrepreneurial ecosystems in Trinidad and Tobago? If so in what ways?
- Have digital platforms influenced the entrepreneurship process as recognised by the Global Entrepreneurship Monitor?

2.7 (M*) Study design (Give a brief outline of basic study design)

Outline what approach is being used, why certain methods have been chosen.

A multi-method qualitative inductive approach will be utilised for the thesis. Individual entrepreneurs that use digital platforms, including social media, ecommerce and on-demand platforms will be research participants. This method will allow for incremental understanding of the relationship between digital platforms and individual entrepreneurship in Trinidad and Tobago. It will examine entrepreneurship at different stages of development. This will include coding and analysis of interviews, focus groups, and the use of secondary data. Questions may be adapted. Methods will be designed based on identified propositions that emerged following a review of the literature.

Interviews

40 in-depth semi-structured interviews (number will be based on when saturation is reached) which will be incrementally done based on results. Interviews will be conducted with individual entrepreneurs that use digital platforms as well as government officials and other stakeholders that work to support entrepreneurship in Trinidad and Tobago. This approach is being utilised to provide for in-depth understanding of how the relationship between digital platforms and individual entrepreneurship. It will allow for clarification on answers to questions posed, which is not possible with surveys.

Focus Group

The use of 3 focus groups, each in a different area of the country will enable group interaction and provide valuable varied information that can arise in a group setting. An additional focus group (4th one) will consist of individuals in government and other organisations that are working to support entrepreneurship in Trinidad and Tobago

The focus group session will begin with generic conversation and end in a similar manner. It will be informally facilitated to encourage discussion and free flow of thoughts. If necessary based on the results of the focus group, individuals may be asked for follow up interviews as required using a theoretical sampling approach.

Secondary data

Secondary data will be gathered through online research and requests for information from relevant organisations where available. Where permission by entrepreneurs and administrators is granted the web pages of the platforms used by

individual entrepreneurs will be reviewed to allow for triangulation of data as required for a more complete and in-depth assessment. Organisational reports in relation to platforms usage by goods and services providers or government reports may also be used.

3. SAMPLE AND SETTING

3.1 (M*) How are participants to be approached? Give details of what you will do if recruitment is insufficient. If participants will be accessed through a third party (e.g. children accessed via a school, employees accessed via a specific organisation) state if you have permission to contact them and upload any letters of agreement to your submission in ERGO or provide the name and contact details of the person granting you permission to access the sample (to check that permission has been granted).

Participants will be approached via email or telephone where such contact details have been provided. The consent form and participant information sheet will also be provided before-hand and will be given to relevant institutions (See attached).

Personal networks will also be utilised by using snowball sampling for recruitment.

I will become a member of groups on web platforms identified such as Facebook that are being utilised to offer goods and services and ask members if they can participate as an interviewee or focus group member in the study.

I will randomly approach individuals who own or operate micro and small businesses in Trinidad and Tobago and ask them if they have ever offered or continue to offer their goods and/or services via web platforms. If they say that they have I will ask them if they would like to participate in the study as an interviewee or a focus group member.

I will email representatives of groups or organisation asking for permission to contact their members for participation (See letter attached)

If recruitment is insufficient a local company that helps researchers to convene focus groups and identify interviewee participants will be utilised.

3.2 (M*) Who are the proposed sample and where are they from (e.g. fellow students, club members)? How many participants do you intend to recruit? List inclusion/exclusion criteria if applicable. NB The University does not condone the use of 'blanket emails' for contacting potential participants (i.e. fellow staff and/or students).

It is usually advised to ensure groups of students/staff have given prior permission to be contacted in this way, or to use of a third party to pass on these requests. This is because there is a potential to take advantage of the access to 'group emails' and the relationship with colleagues and subordinates; we therefore generally do not support this method of approach.

If this is the only way to access a chosen cohort, a reasonable compromise is to obtain explicit approval from the Faculty Ethics Committee (FEC) and also from a senior member of the Faculty in case of complaint.

The sample will be of Trinidad and Tobago residents who engage in individual entrepreneurship at all stages of the entrepreneurship process. Members of platforms or online groups that enable such activity will be engaged. The sample will consist of entrepreneurs that use digital platforms at various stages of the entrepreneurship process.

To help identify individuals I will become a member of groups on identified web platforms such as Facebook or web platforms more broadly to ask members if they are willing to participate in interviews and focus groups.

Institutions like community groups, government departments that aid entrepreneurship, universities and internet based technology companies will be approached to assist with gaining participants and provide some quality assurance. Such stakeholders will also be interviewed and will form one of the focus groups. There will also be some snowball sampling to identify users.

Each focus group will consist of 6 individuals that provide goods and services via social media, ecommerce and on-demand platforms.

3.3 (M*) Describe the relationship between researcher and sample (Describe any relationship e.g. teacher, friend, boss, clinician, etc.)

There is no relationship

3.4 (M*) Describe how you will ensure that fully informed consent is being given. You must specify how participants will be told what to expect by participating in your research. For example, will participants be given a participant information sheet before being asked to provide their consent? Upload copies of the participant information sheet and consent form to your submission in ERGO.

A participant information sheet and consent form will be sent and signed before participation. See attached. In addition, a debriefing form will be sent at the end of the study (See attached).

3.5 (M*) Describe the plans that you have for feeding back the findings of the study to participants. You must specify how participants will be informed of your research questions and/or hypotheses. For example, will participants be given a debriefing form at the end of your study? Upload a copy of the debriefing form to your submission in ERGO.

A debriefing form will be sent to each participant following their participation.

individual entrepreneurs will be reviewed to allow for triangulation of data as required for a more complete and in-depth assessment. Organisational reports in relation to platforms usage by goods and services providers or government reports may also be used.

3. SAMPLE AND SETTING

3.1 (M*) How are participants to be approached? Give details of what you will do if recruitment is insufficient. If participants will be accessed through a third party (e.g. children accessed via a school, employees accessed via a specific organisation) state if you have permission to contact them and upload any letters of agreement to your submission in ERGO or provide the name and contact details of the person granting you permission to access the sample (to check that permission has been granted).

Participants will be approached via email or telephone where such contact details have been provided. The consent form and participant information sheet will also be provided before-hand and will be given to relevant institutions (See attached).

Personal networks will also be utilised by using snowball sampling for recruitment.

I will become a member of groups on web platforms identified such as Facebook that are being utilised to offer goods and services and ask members if they can participate as an interviewee or focus group member in the study.

I will randomly approach individuals who own or operate micro and small businesses in Trinidad and Tobago and ask them if they have ever offered or continue to offer their goods and/or services via web platforms. If they say that they have I will ask them if they would like to participate in the study as an interviewee or a focus group member.

I will email representatives of groups or organisation asking for permission to contact their members for participation (See letter attached)

If recruitment is insufficient a local company that helps researchers to convene focus groups and identify interviewee participants will be utilised.

3.2 (M*) Who are the proposed sample and where are they from (e.g. fellow students, club members)? How many participants do you intend to recruit? List inclusion/exclusion criteria if applicable. NB The University does not condone the use of 'blanket emails' for contacting potential participants (i.e. fellow staff and/or students).

It is usually advised to ensure groups of students/staff have given prior permission to be contacted in this way, or to use of a third party to pass on these requests. This is because there is a potential to take advantage of the access to 'group emails' and the relationship with colleagues and subordinates; we therefore generally do not support this method of approach.

5.3 Explain how you will care for any participants in 'special groups' (i.e. those in a dependent relationship, vulnerable or lacking in mental capacity) (if applicable)?

N/A

5.4 Please give details of any payments or incentives being used to recruit participants (if applicable)?

Food and drinks will be provided. I will offer to do a talk about web science to organisations that offer to assist with recruiting participants.

5.5 i) (M*) How will participant anonymity and/or data anonymity be maintained (if applicable)?

Two definitions of anonymity exist:

i) Unlinked anonymity - Complete anonymity can only be promised if questionnaires or other requests for information are not targeted to, or received from, individuals using their name or address or any other identifiable characteristics. For example if questionnaires are sent out with no possible identifiers when returned, or if they are picked up by respondents in a public place, then anonymity can be claimed. Research methods using interviews cannot usually claim anonymity - unless using telephone interviews when participants dial in.

ii) Linked anonymity - Using this method, complete anonymity cannot be promised because participants can be identified; their data may be coded so that participants are not identified by researchers, but the information provided to participants should indicate that they could be linked to their data.

Linked Anonymity will be used for interviews and focus groups and secondary data analysis and observation. Names, email addresses, age and gender and any other identifiable data will be removed at the start of data processing/coding using NVIVO. Only the minimum personal data needed to fulfil the research objective will be kept in accordance with the law and university policy to achieve the purpose of the study. Only my supervisors will be able to access the data if necessary for the research. I will ask organisations that provide any secondary data to anonymise it before handing it over and if they are unable to do so I will through coding anonymise any identifiable information before analysis. As part of the university requirements the key for the anonymised data will be held on the university server and will only be able to be accessed with the university's permission and on request.

5.5 ii) (M*) How will participant confidentiality be maintained (if applicable)?

Confidentiality is defined as the non-disclosure of research information except to another authorised person. Confidential information can be shared with those who are already party to it, and may also be disclosed where the person providing the information provides explicit consent.

Confidentiality of the data will be maintained by only sharing it with supervisors if needed. It will not be shared with other parties unless explicit consent is granted by the participants.

5.6 (M*) How will personal data and study results be stored securely during and

after the study? Researchers should be aware of, and compliant with, the Data Protection policy of the University (for more information see www.southampton.ac.uk/info/dppolicy.pdf). You must be able to demonstrate this in respect of handling, storage and retention of data (e.g. you must specify that personal identifiable data, such as consent forms, will be separate from other data and that the data will either be stored as an encrypted file and/or stored in a locked filing cabinet).

The data will be stored as an encrypted file and in a locked drawer. It will be stored in a CSV format which provides the possibility for data to be read by multiple types of software. Consent forms will be stored independently of research data to protect personal privacy. Data including metadata (documentation) will be provided to allow for reuse of data while protecting privacy. This data will be held by the university and backed up regularly. Any non-digital data will be destroyed upon completion of the research.

5.7 (M*) Who will have access to these data?

Only myself

N.B. – Before you upload this document to your ERGO submission remember to:

1. Complete ALL mandatory sections in this form
2. Upload any letters of agreement referred to in question 3.1 to your ERGO submission
3. Upload copies of your participant information sheet, consent form and debriefing form referred to in questions 3.4 and 3.5 to your ERGO submission
4. Upload any interview schedules and copies of questionnaires referred to in question 4.1

4. RESEARCH PROCEDURES, INTERVENTIONS AND MEASUREMENTS

4.1 (M*) Give a brief account of the procedure as experienced by the participant. Make clear who does what, how many times and in what order. Make clear the role of all assistants and collaborators. Make clear total demands made on participants, including time and travel. You must also describe the content of your questionnaire/interview questions and EXPLICITLY state if you are using existing measures. If you are using existing measures, please provide the full academic reference as to where the measures can be found. Upload any copies of questionnaires and interview schedules to your submission in ERGO.

Interviews

Interviews will be conducted both face to face in Trinidad and Tobago at mutually agreed places such as offices, university buildings or cafes. Computer assisted interviewing will also take place through the use of Skype or WhatsApp. Requests will be made for all interviews to be recorded. Interviews will last between 30 to 45 minutes.

Focus Groups

3 focus groups will be convened in Trinidad and Tobago. This will last for no more than 1 ½ hours. A 4th focus group will be convened with individuals working with government and other stakeholder supporting entrepreneurship. Participants will be sent information on the location, the format and agenda of the meeting. Questions will be asked to stimulate discussion and permission will be requested to video record the session. Notes will be taken.

Observation

The interviewees that are entrepreneurs will be asked where appropriate for permission to view the content of their web pages being used on the digital platform for entrepreneurship. Only correspondence for the past 6 months will be reviewed. All information gathered will be anonymised. Nothing will be requested from the entrepreneur, except where it is a close group. In this case membership will be requested for the duration of data collection.

5. STUDY MANAGEMENT

5.1 (M*) State any potential for psychological or physical discomfort and/or distress?

No specific potential for psychological or physical discomfort.

5.2 Explain how you intend to alleviate any psychological or physical discomfort and/or distress that may arise? (if applicable)

Participants will help select the venue for interviews and they will be reassured that every effort will be made to keep their data confidential.

If this is the only way to access a chosen cohort, a reasonable compromise is to obtain explicit approval from the Faculty Ethics Committee (FEC) and also from a senior member of the Faculty in case of complaint.

The sample will be of Trinidad and Tobago residents who engage in individual entrepreneurship at all stages of the entrepreneurship process. Members of platforms or online groups that enable such activity will be engaged. The sample will consist of entrepreneurs that use digital platforms at various stages of the entrepreneurship process. |

To help identify individuals I will become a member of groups on identified web platforms such as Facebook or web platforms more broadly to ask members if they are willing to participate in interviews and focus groups.

Institutions like community groups, government departments that aid entrepreneurship, universities and internet based technology companies will be approached to assist with gaining participants and provide some quality assurance. Such stakeholders will also be interviewed and will form one of the focus groups. There will also be some snowball sampling to identify users.

Each focus group will consist of 6 individuals that provide goods and services via social media, ecommerce and on-demand platforms.

3.3 (M*) Describe the relationship between researcher and sample (Describe any relationship e.g. teacher, friend, boss, clinician, etc.)

There is no relationship

3.4 (M*) Describe how you will ensure that fully informed consent is being given. You must specify how participants will be told what to expect by participating in your research. For example, will participants be given a participant information sheet before being asked to provide their consent? Upload copies of the participant information sheet and consent form to your submission in ERGO.

A participant information sheet and consent form will be sent and signed before participation. See attached. In addition, a debriefing form will be sent at the end of the study (See attached).

3.5 (M*) Describe the plans that you have for feeding back the findings of the study to participants. You must specify how participants will be informed of your research questions and/or hypotheses. For example, will participants be given a debriefing form at the end of your study? Upload a copy of the debriefing form to your submission in ERGO.

A debriefing form will be sent to each participant following their participation.

Appendix G Ergos Risk Assessment

University of Southampton Management School Risk Review

Please Tick (☐) one:

Undergraduate ☐ Postgraduate (Taught) ☐ MPhil/PhD X Staff ☐

Degree programme/Certificate (if applicable): PHD WEB SCIENCE

Your Name:	Kelsha Taylor	Univ of Soton Email:	kctg14@soton.ac.uk
Supervisor (if applicable)	Dr. David Baxter Professor Peter Sunley		
Other researchers/ collaborators (if applicable):			

Title of Study: An explanation of the relationship between digital platforms and individual entrepreneurship in Trinidad and Tobago

Expected start date (and duration) of data collection: 1 May 2018 – 30 April 2019

Part 1: Who does your research involve?

Does your research involve any of the following?	YES (Please tick below)	NO
1. Interviews/ Focus Groups	x	
2. Questionnaires/Surveys		x
3. Physical Observation/ Factory Visits		x

If you have answered 'NO' to all of the above then your research does not need any further risk assessment.

If you answered 'YES' to any question then please continue on the next page

Part 2: Description of the Intended empirical research:

Population to be targeted (e.g. list the organisation(s) where you will solicit participation from employees and specify the number of people you intend to recruit):	<p>Up to 40 Interviews (based on when saturation is reached).</p> <p>3 Focus groups - Each focus group will consist of 6 individuals that provide goods and services via different types of web platforms, which will include local and international platforms.</p> <p>The sample will be of Trinidad and Tobago residents who engage in individual entrepreneurship. Members of platforms or online groups that enable such activity will be targeted.</p> <p>I will become a member of groups on web platforms such as Facebook or web platforms found to be relevant in the course of the study that enable offering of goods and services by individuals to contact potential participants for interviews and focus groups.</p> <p>Institutions like community groups, government departments, that aid entrepreneurship, universities and internet based technology companies will be approached to assist with recruitment.</p> <p>Where permission is given by the entrepreneurs and their administrators correspondence on the web pages of the individual entrepreneur's businesses will be observed for the last 6 months to allow for triangulation. This will include observation of text, images and videos. The data will be anonymised.</p> <p>There will also be some snowball sampling to identify platforms and users.</p>			
Nature of survey method (e.g. questionnaire, interview, etc.):	<p><i>In-Depth Semi structured Interview</i></p> <p><i>3 focus groups</i></p>			
Method of data collection (please tick all relevant boxes)	Face-to-face <input checked="" type="checkbox"/>	Telephone <input checked="" type="checkbox"/>	Email/Web <input checked="" type="checkbox"/>	Post <input type="checkbox"/>
Location, including full postal address(es) and telephone numbers. (List on a separate sheet if necessary)	<p><i>Place of residence while in Trinidad and Tobago: (Anonymised)</i></p> <p><i>Location of focus groups and interviews will be mutually agreed by participants and suggested places will include cafés, university buildings or offices.</i></p>			
Time of day that research will be taking place:	<p><i>Between 7 am and 10 pm</i></p>			

Part 3a: Risk Assessment: Travel

Risk/Hazard (Please add any)	(Tick one box in each)	Assessment of Risk (tick one box below in)	If Medium or high, what can you do to reduce the risks?
---------------------------------	------------------------	---	---

Part 3b: Risk assessment: Empirical Research

Risk/Hazard (Please add any further risks/hazards to which you might be exposed in the spare rows below)		Assessment of Risk (tick one box below)			If Medium or high, what can you do to reduce the risks?
		Low x	Medium	High	
The location of your research: Street Office Factory Other (please describe)	(Tick one box below) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> To be mutually agreed on by participants. Suggested places will include cafés, university buildings or offices				
If you have ticked 'Factory', give details of what is manufactured there:					
Time of research if outside standard office hours:	Start time: 5 pm End time: 10 pm Also - 7 am - 9 am				

<i>further risks/hazards to which you might be exposed through travel in the spare rows below)</i>	<i>row below)</i>		<i>each row)</i>			<i>(append details on a separate sheet as necessary)</i>
			Low	Medium	High	
				x		
Travelling within the UK	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>				
Travelling outside the UK but to home country	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>				Please see attached risk assessment approved by the Business School
Travelling outside the UK but not to home country	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>				
Mode of Travel to reach address(es) listed above:	Plane, family transport. Location will be provided to a family member before and after each interview.					

You must notify either a colleague, friend, housemate or your supervisor of your actual date and time of travel. Ensure that you let them know the exact address where you have gone to and let them know when you have returned.

Appendix H Participant Information Sheet (Interviews and Focus Groups)



Participant Information Sheet

Study Title: An explanation of the relationship between digital platforms and individual entrepreneurship in Trinidad and Tobago

Researcher: Keisha Taylor

Ethics number: 40861

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to sign a consent form.

I am a doctoral researcher at the University of Southampton conducting research to qualify for the fulfilment of a PhD in Web Science.

The aim of my research is to investigate the relationship between digital platforms and individual entrepreneurship in Trinidad and Tobago. I would like to understand how the internet can be used to provide value to users. This will also contribute to more informed policy decisions.

The research is sponsored by the The Engineering and Physical Sciences Research Council (EPSRC) in the United Kingdom.

Why have I been chosen?

You have been chosen because you are resident in Trinidad and Tobago and you are an individual that utilises digital platforms for entrepreneurship

What will happen to me if I take part?

Interviews

We will arrange a mutually agreed time and a suitable place to conduct an interview that will last 30-45 minutes. If it is not possible to meet face-to-face the interview will take place online via Skype or WhatsApp video. I will appreciate your consent to tape record the interview so I can later transcribe it for analysis.

Focus group

You will take part in a focus group at a mutually agreed time and location with 5 other participants. This will last for 1 – 1 1/2 hour. I will appreciate your consent to video record the session (for face-to-face group) or tape-record it (for online group).

Observation

With your agreement the content for the last 6 months on the pages that you utilise on digital platforms to support your entrepreneurship will be reviewed to support this research.

Are there any benefits in my taking part?

Your participation in this study is critically important. You will contribute to understanding how digital platforms are impacting individual entrepreneurship in Trinidad and Tobago, which can inform better policy and also contribute to research in the Caribbean and in countries with similar characteristics.

Are there any risks involved?

There is no risk except sacrificing your valuable time to conduct the interview or/and participate in the focus group.

Will my participation be confidential?

[3 April 2018] [2]



All data collected from you will be completely anonymised and the data will be stored according to the Data Protection Act/University Policy. Data from you will not be disclosed to any other person other than the researcher and the supervisory team. Data will be coded and kept on a password protected computer and the University of Southampton's secure server.

What happens if I change my mind?

If you changed your mind and you are no longer interested to be part of the study, you have the right to withdraw at any time without your legal being affected.

What happens if something goes wrong?

In the unlikely case of concern or complaint you may wish to contact the Head of Research Governance, University of Southampton,
rginfo@soton.ac.uk +44 (0) 2380 595058

Where can I get more information?

If you have any questions after reading this information sheet, you may contact me at any time at kct1g14@soton.ac.uk

Appendix I Sample Letter to Company

Dear,

My name is Keisha Taylor and I am a third year doctoral researcher, pursuing a PhD in Web Science at the University of Southampton. My thesis is investigating the use of digital platforms for individual entrepreneurship.

I am interested in interviewing you or/and other members of your group or institutions in person or online because you are resident in Trinidad and Tobago digital platforms for various entrepreneurial activity. These can include

- E-commerce sites (e.g. Amazon, Ebay, Etsy)
- Social media sites (e.g. Facebook, Instagram, Twitter etc)
- On-demand platforms (e.g. Fivver, Freelancer, Airbnb, Uber)
- Digital platforms for payment (e.g. PayPal) or for funding (Kickstarter)

Local digital platforms are also included. I am also interested in the participation of you or other members of your group or institution in a focus group of such individuals.

Having over 15 years' work experience in relevant areas I believe that participation in my study could provide you and your institution with excellent strategic foresight on this important issue. If you would like, I can also offer to do a talk on a web science related topic for your group/institution. In addition, from the summary of my final report which you will receive you will be assisting the wider Trinidad and Tobago and Caribbean community in gaining insights into better understanding how the web is being used and can be better used to realise socioeconomic value. I would like to conduct these activities between 1 May 2018 and 30 October 2018 either online, or any location suitable to you. I expect to complete the write up of the thesis by 30 March 2020. If you have any questions or wish to participate please contact me by email: X and mobile: X. I hope you will be interested in participating in the study. All responses and participation will be confidential. I would like to thank you for your time and look forward to a response.

Sincerely,

Keisha Taylor

Doctoral Researcher

University of Southampton

Web Science Centre for Doctoral Training

Appendix J Sample Letter to Organisations/Institutions

Dear,

My name is Keisha Taylor and I am a third-year doctoral researcher, pursuing a PhD in Web Science at the University of Southampton. My thesis is investigating the use of digital platforms for individual entrepreneurship. I am interested in interviewing you in person or online or your participation in a focus group because your (organisation/government department/group/institution) supports entrepreneurship in Trinidad and Tobago. I am also interested in interviewing entrepreneurs that you support or their participation in focus groups that I am organising. I am interested in entrepreneurs that are resident in Trinidad and Tobago and use one or more of the following for various entrepreneurial activity.

- E-commerce sites (e.g. Amazon, Ebay, Etsy)
- Social media sites (e.g. Facebook, Instagram, Twitter etc) and other social platforms like YouTube
- On-demand platforms (e.g. Fivver, Freelancer, Airbnb, Uber)
- Digital platforms for payment (e.g. Paypal) or for funding (Kickstarter)

Local digital platforms are also included. Having over 15 years' work experience in relevant areas I believe that participation in my study could provide you and your institution with excellent strategic foresight on this important issue. If you would like, I can also offer to do a talk on a web science related topic for your group/institution. In addition, from the summary of my final report which you will receive you will be assisting the wider Trinidad and Tobago and Caribbean community in gaining insights into better understanding how the web is being used and can be better used to realise socioeconomic value. I would like to conduct these activities between 1 May 2018 and 30 October 2018 either online, or any location suitable to you. I expect to complete the write up of the thesis by 30 March 2020. If you have any questions or wish to participate please contact me by email: X and mobile: X. I hope you will be interested in participating in the study. All responses and participation will be confidential. I would like to thank you for your time and look forward to a response.

Sincerely,

Keisha Taylor

Doctoral Researcher, University of Southampton

Web Science Centre for Doctoral Training

Appendix K Participant Information Sheet (Stakeholders)



Participant Information Sheet

Study Title: An explanation of the relationship between digital platforms and individual entrepreneurship in Trinidad and Tobago

Researcher: Keisha Taylor

Ethics number: 40861

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to sign a consent form.

I am a doctoral researcher at the University of Southampton conducting research to qualify for the fulfilment of a PhD in Web Science.

The aim of my research is to investigate the relationship between digital platforms and individual entrepreneurship in Trinidad and Tobago. I would like to understand how the internet can be used to provide value to users. This will also contribute to more informed policy decisions.

The research is sponsored by the The Engineering and Physical Sciences Research Council (EPSRC) in the United Kingdom.

Why have I been chosen?

You have been chosen because you work for a government department or other organisational or institutional stakeholder that supports entrepreneurship in Trinidad and Tobago

What will happen to me if I take part?

Interviews

We will arrange a mutually agreed time and a suitable place to conduct an interview that will last 30-45 minutes. If it is not possible to meet face-to-face the interview will take place online via Skype or Whatsapp. I will appreciate your consent to audip record the interview so I can later transcribe it for analysis.

AND/OR

Focus group

You will take part in a focus group at a mutually agreed time and location with other participants. This will last for 1 – 1 1/2 hour. I will appreciate your consent to video or audio record the session (for face-to-face group) or audio-record it (for online group).

Are there any benefits in my taking part?

Your participation in this study is critically important. You will contribute to understanding how digital platforms are impacting individual entrepreneurship in Trinidad and Tobago, which can inform better policy and also contribute to research in the Caribbean and in countries with similar characteristics.

Are there any risks involved?

There is no risk except sacrificing your valuable time to conduct the interview or/and participate in the focus group.

Will my participation be confidential?

All data collected from you will be completely anonymised and the data will be stored according to the Data Protection Act/University Policy. Data from you will not be disclosed to any other person other than the researcher and the supervisory team.

[12 April 2018] [1]

Appendix L Consent Form (Entrepreneur Interviews)



CONSENT FORM INTERVIEW (1)

Study title: An exploration of the relationship between digital platforms and individual entrepreneurship

Researcher name: Keisha Taylor

Ethics reference: 40861

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet (3 April 2018/2 of participant information sheet) and have had the opportunity to ask questions about the study.

☐

I agree to take part in this research project and agree for my data to be used for the purpose of this study

☐

I understand my participation is voluntary and I may withdraw at any time without my legal rights being affected

☐

I am happy for the interview to be audio recorded.

☐

Data Protection

I understand that information collected about me during my participation in this study will be stored on a password protected computer and secure University of Southampton servers and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Name of participant (print name).....

Signature of participant.....

Date.....

[3 April 2018] [2]

Appendix M Consent Form (Stakeholder Interviews)



CONSENT FORM INTERVIEW (1)

Study title: An exploration of the relationship between digital platforms and individual entrepreneurship

Researcher name: Keisha Taylor

Ethics reference: 40861

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet (12 April 2018/1 of participant information sheet) and have had the opportunity to ask questions about the study.

☐

I agree to take part in this research project and agree for my data to be used for the purpose of this study

☐

I understand my participation is voluntary and I may withdraw at any time without my legal rights being affected

☐

I am happy for the interview to be audio recorded.

☐

Data Protection

I understand that information collected about me during my participation in this study will be stored on a password protected computer and secure University of Southampton servers and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Name of participant (print name).....

Signature of participant.....

Date.....

[12 April 2018] [1]

Appendix N Consent Form Focus Groups



CONSENT FORM FOCUS GROUP (1)

Study title: An explanation of the relationship between digital platforms and individual entrepreneurship in Trinidad and Tobago

Researcher name: Keisha Taylor

Ethics reference: 40861

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet (3 April 2018/2 of participant information sheet) and have had the opportunity to ask questions about the study.

☐

I agree to take part in this research project and agree for my data to be used for the purpose of this study

☐

I understand my participation is voluntary and I may withdraw at any time without my legal rights being affected

☐

I am happy for the participation in the focus group to be audio or video recorded.

☐

Data Protection

I understand that information collected about me during my participation in this study will be stored on a password protected computer and secure University of Southampton servers and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Name of participant (print name).....

Signature of participant.....

Date.....

[3 April 2018] [2]

Appendix O Interview Guide (Entrepreneurs)

Age

- ☐ 18 - 25
- ☐ 26 – 35
- ☐ 36 - 45
- ☐ 46 - 55
- ☐ 56 - 65
- ☐ 65 and above

Gender

- ☐ Male
- ☐ Female
- ☐ Other

Highest level of formal education?

Are you a full-time entrepreneur – self-employed or are you also in employment?

What stage of entrepreneurship are you at for your business/es? 1) Opportunity identification 2) setting up the business (0-3 months) (3) new business (3 months to 4 years) (4) established business (over 4 years in business) 4) discontinuing business and or helping another or starting a new one?

Number of Employees

- ☐ None – do you use interns?
- ☐ Micro: 1-5 employees
- ☐ Small: 6-15 employees
- ☐ Medium: 16-50 employees

What goods and services do you provide?

Have you used digital platforms for any of the following and if so in what way?

- Finding opportunities

Appendix O

- Setting, up or running your business (e.g. finding suppliers, payments, accounting, recruitment, training, etc.)
- Growing or maintaining your business (e.g. advertising)
- Discontinuing your business, helping another business or/and starting a new one
- Taking orders

Having used these sites have they provided the experiences, benefits and outcomes you expected? What were these? Which ones do you consider most useful and why?

Have you adapted use of these websites for your needs and if so how?

Does the use of these platforms conflict with the goals you have for your business?

Are there any specific skills you think that are needed to be able to use these platforms successfully? Do you think you have those skills?

Were you using any of these technologies or similar IT before you became an entrepreneur?

Have you had any surprising or unintended, events, experiences or outcomes from using these sites?

Do you believe that use of such platforms can have a negative impact on value to you or to Trinidad and Tobago? If so why?

Do you think that Trinidad and Tobago and its institutions are supportive of your entrepreneurship and do they provide necessary resources? (education/training, policy, finance and funding, infrastructure?)

Have you ever experienced copying?

How does using the digital platforms compare to just searching or using the wider web – google search?

Do you pay for advertising or any other service on these platforms?

Is it possible to be successful locally without international connections?

Do you have plans to expand?

Can you say what are your annual sales?

Appendix P Interview Guide (Stakeholders)

1. Age

- ☐ 18 - 25
- ☐ 26 - 35
- ☐ 36 - 45
- ☐ 46 - 55
- ☐ 56 - 65
- ☐ 65 and above

2. Gender

- ☐ Male
- ☐ Female
- ☐ Other

3. What organisation and related department do you work in (in relation to entrepreneurship support)

4. What skills or capacities do you believe entrepreneurs require today? – any specific digital skills?

5. How supportive do you believe the following entrepreneurship infrastructure/related institutions to be?

- Cultural
- Financial
- Training/Education
- Available Domestic and Foreign markets
- Human capital – skills
- Government & regulatory framework/policies
- Support systems – e.g. incubators, mentors
- Infrastructure – physical and technology

6. To what extent do you believe these elements of the entrepreneurial ecosystem are lacking?

Appendix P

7. To what extent do you believe these varying elements of the entrepreneurial ecosystem work together?
8. How many entrepreneurs use your resources annually and which ones are most popular?
9. Do you monitor success of the entrepreneurs that you support? If so how?
10. How do you believe entrepreneurs are using digital platforms in Trinidad and Tobago?
11. Do you think that the use of digital platforms has supported entrepreneurship and by extension helped to develop the local economy?
12. Do you believe that availability and use of international digital platforms is impacting on the development of local alternatives?
13. Are there roles that digital platforms provide for entrepreneurs that was previously provided by you or other institutions (e.g. government, financial institutions, skills, training etc)?
14. How do you think digital platforms can help facilitate payments and what role do you think you can play in this?
15. Do you use digital platforms to support various entrepreneurial activities? If so, which activities and how do you do this?
16. Do digital platforms influence consumer purchasing habits and if so in what way does this influence entrepreneurship?
17. What role do you think digital platforms should play (if any) in the future development of entrepreneurship in Trinidad and Tobago?

Appendix Q Focus Group Guide

The Focus group guide incorporated the same information from the interview (and stakeholder where interviewees are both entrepreneur and stakeholders)

Age, employment status, gender, type of business, stage of business, types of goods and services sold, income level and number of employees

Where and when the interviews will take place: TBC

Introduction

Introduce myself to the focus group participant

State reason for research as outlined in participant information sheet

Topics

- Types of platforms used and initiatives engaged in
- Experiences, events and action that result from use
- Motivations
- Benefits
- Negative or unintended consequences
- Outcomes
- Preferences
- Perceptions
- Impact of web platform design
- Impact of entrepreneur and wider society and ecosystem

Questions and activities

In a circle everyone introduces each other by saying - What goods and services they provide?

What website have you/do you use for your business? (e.g. e-commerce sites, social media platforms and on-demand platforms, payment platforms crowdfunding etc.

1. Have you used digital platforms for any of the following and if so in what way?

- Finding opportunities
- Setting up your business (e.g. finding suppliers, payments, accounting, recruitment, training, etc.)

Appendix Q

- Growing or maintaining your business (e.g. advertising)
- Discontinuing your business, helping another business or/and starting a new one
- Taking orders

2. Having used these sites have they provided the experiences, benefits and outcomes you expected? What were these? Which ones do you consider most useful and why?

3. Have you adapted use of these websites for your needs and if so how?

4. Does the use of these platforms conflict with the goals you have for your business?

5. Are there any specific skills you think that are needed to be able to use these platforms successfully? Do you think you have those skills?

6. Have you had any surprising or unintended, events, experiences or outcomes from using these sites.

7. Have you ever experienced copying?

8. How does using the digital platforms compare to just searching or using the wider web – google search?

9. Do you pay for advertising or any other service on these platforms?

10. Is it possible to be successful locally without international connections

11. Do you believe that use of such platforms can have a negative impact on value to you or to Trinidad and Tobago? If so why?

12. Do you think that Trinidad and Tobago and its institutions are supportive of your entrepreneurship and do they provide necessary resources?

Close

Is there anything you want to discuss that hasn't been spoken about?

What do you think is the most important point we discussed?

Let respondents know a debriefing and a report will be sent and thank them for their time.

Appendix R Debriefing Sheet

Study Title: An explanation of the relationship between digital platforms and Individual entrepreneurship in Trinidad and Tobago

Researcher: Keisha Taylor

Ethics number: 40861

Thank you so much for participating in this study. Your participation was very valuable. I know that you are very busy and I very much appreciate the time you devoted to participating in this study. There was some information about the study that could not be discussed with you prior to the study, because doing so probably would have impacted your actions and thus skewed the study results. This form explains these things to you now.

I am conducting a study to answer the following questions:

- a. How have digital platforms influenced individual entrepreneurship in Trinidad and Tobago?
- b. a. How are digital platforms used in interactions between entrepreneurs, customers and stakeholders?
- c. b. Have digital platforms played a role in changing the entrepreneurial ecosystem in Trinidad and Tobago?
- d. c. What affordances and constraints exist for entrepreneurs in Trinidad and Tobago in the context of digital platform use?

No deception of participants was utilised during this study. I hope this clarifies the purpose of the research, and the reason why I could not tell you all of the details about the study prior to your participation. If you would like more information about the research, you may be interested in the following:

- Nambisan S, Wright M and Feldman M (2019) The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Research Policy* 48(8)
- John A and Storr VH (2018) Kirznerian and Schumpeterian entrepreneurship in Trinidad and Tobago. *Journal of Enterprising Communities: People and Places in the Global Economy* 12(5): 582-610
- Global Entrepreneurship Monitor, Trinidad and Tobago 2011- 2014 Reports
<http://www.gemconsortium.org/country-profile/115>

Appendix R

It is very important that you do not discuss what took place during the interview/focus group until the study is complete. My efforts will be greatly compromised if participants come into this study knowing what it is about and how the ideas are being tested. Once again results of this study will not include your name or any other identifying characteristics.

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Head of Research Governance, University of Southampton, rgoinfo@soton.ac.uk +44 (0) 2380 595058

Appendix S Methodological Guidelines Supported by Examples of the Use of Critical Realism Ontologies by TACT Researchers

Informed by Methodological Principles of Critical Realism (Wynn and Williams 2012)

Methodological guidelines adopted	Examples of the use of TACT based methods for Information Systems research
<p><u>Identify and explain interaction in relation to goal and outcome</u></p> <ul style="list-style-type: none"> Identify and explain the interaction between digital platforms and entrepreneurs Identify and explain the outcome such interaction has had on the entrepreneur. Note the events that led to the outcome and the events that followed the outcome. For example, an outcome can be gained new skills and the various cognitive, material and social occurrences and that helped to inform the realisation of that goal. 	<ul style="list-style-type: none"> Volkoff and Strong (2013) Abstracted events that occurred with the implementation of an enterprise system (ES) in two manufacturing organizations. Strong and Volkoff (2010) Gave a detailed analysis of observed misfits to understanding the concept of fit and of the ES artefact itself. Ingram et al. (2014) Looked at any events related to the use of crowdfunding platforms in comparison with traditional funding sources. Leong et al. (2016) Looked at the outcomes of the use of the Alibaba platform for business in a rural Chinese village and the extent to which it empowered users. Majchrzak et al. (2013) Looked at the outcomes of the use of social media platforms for sharing knowledge communally Leidner et al. (2018) Looked at how enterprise social media facilitate employee socialisation.
<p><u>Reflection</u></p> <ul style="list-style-type: none"> Though examining the information coded for 1) Used in Interaction, 2) EE in T&T and 3) Impact of Digital platforms on EE, elaborate on 	<ul style="list-style-type: none"> Volkoff and Strong (2013) Identified how affordances and constraints coexisted and how they were actualized in the specific cases. Ingram et al. (2014) Identified and made inferences about affordances based on examination of the institutional context and the features of crowdfunding platforms. Leong et al. (2016) Identified the affordances, constraints

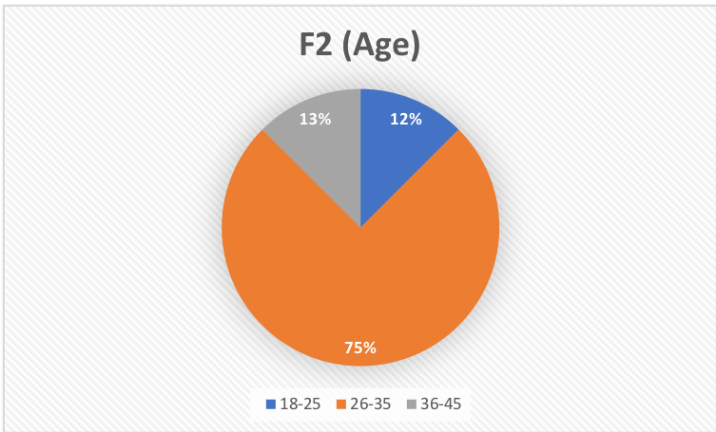
Methodological guidelines adopted	Examples of the use of TACT based methods for Information Systems research
<p>generic and affordances and constraints bearing in mind the synthesis of affordances and constraints conducted following the literature review. This is coded in 4) Affordances and 5) Constraints.</p> <ul style="list-style-type: none"> • The research questions help to improve theoretical sensitivity and understand the events, mechanisms affordances and constraints in more depth. • When an affordance or constraint is identified this facilitates the examination of the context within which it came about potentially leading to other affordances and constraints being identified. A proposed affordance and constraint is therefore only a potential explanation until the end of data collection and after repeated analysis. • This creative process requires some inference about the affordances and constraints underlying the relationship between digital platforms and entrepreneurs. 	<p>and unintended consequences of the use of the Alibaba platform.</p> <ul style="list-style-type: none"> • Majchrzak et al. (2013) Reflected on platform and environment influences on the use of social media for gaining knowledge. • Leidner et al. (2018) emphasises the need to carefully distinguish between affordances, use and outcomes in analysis.

Methodological guidelines adopted	Examples of the use of TACT based methods for Information Systems research
<ul style="list-style-type: none"> Multiple explanations that are grounded in the data are identified. 	
<p><u>Corroboration of evidence</u></p> <ul style="list-style-type: none"> The circumstance under which a particular affordance was perceived or actualised is again examined. For example, this is done through interview clarification, review of focus group and secondary platform data where relevant, high order coding and further comparison of responses. Ensure that the affordances and constraints finally proposed provided the best explanations. This entailed comparing each affordance and constraint Explain any findings that diverge from the literature. 	<ul style="list-style-type: none"> Volkoff and Strong (2013) Examined strands of interacting affordances to identify generic and specific affordances. Strong and Volkoff (2010) Compared outcomes with several existing frameworks to identify the most relevant misfits. Ingram et al. (2014) Identified the most relevant affordances and constraints in relation to the use of crowdfunding in Sweden. Leong et al. (2016) Identified the most relevant affordances and constraints of the use of the Alibaba platform in the context of the wider ecosystem. Majchrzak et al. (2013) Identified four affordances of the use of social media for communal knowledge sharing based on the data and resulting constraints. Leidner et al. (2018) Identified four generative mechanisms which also help to support new hire socialisation decision and the development of TACT research.
<p><u>Triangulation</u></p> <ul style="list-style-type: none"> Multiple data types (in-depth semi-structured interviews, different types of secondary data, focus groups). Interviews with (entrepreneurs (part-time and full-time) and individuals from organisations that support 	<ul style="list-style-type: none"> Volkoff and Strong (2013) Analysed two case studies using intensive observation and interviews. Both cases involved researching several sites or groups within a single organization Strong and Volkoff (2010) Conducted observations, interviews, and informal conversations. Did site comparisons and used multiple investigators. Ingram et al. (2014) Used two theories technology affordance and institutional logic, case study, interviews.

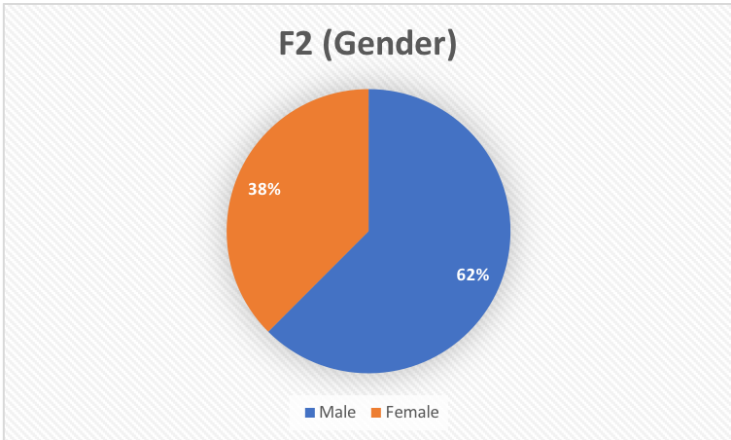
Methodological guidelines adopted	Examples of the use of TACT based methods for Information Systems research
<p>entrepreneurs and two focus groups in different parts of the country.</p> <ul style="list-style-type: none"> • Varied types of platforms (social media, e-commerce, etc.). • Analysis – (Thematic coding). • Theories/concepts (EE and TACT). 	<ul style="list-style-type: none"> • Leong et al. (2016) Used two approaches, ICT-enabled developments and community driven development, case study (studied two villages), interviews, archival data, focus groups. • Leidner et al. (2018) - organizational socialization research and technology affordance perspective, one in-depth case study, 8 years data collection, interviews with various groups, observation, secondary data and focus groups.

**Appendix T Focus Group 2 (Age, Gender, Income and
Number of Employees)**

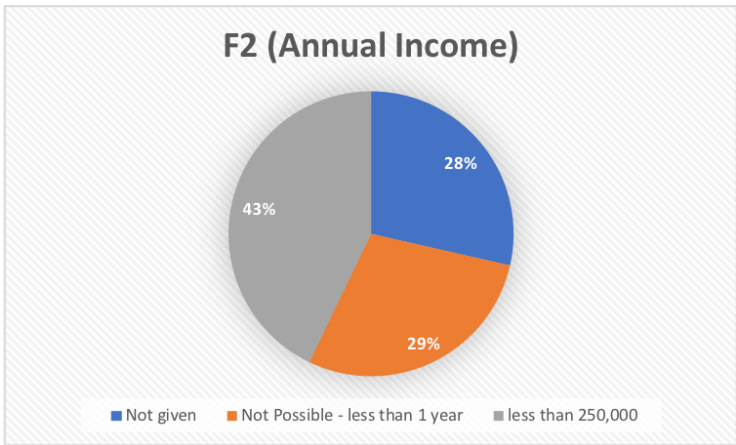
T.1 Focus Group 2: Age



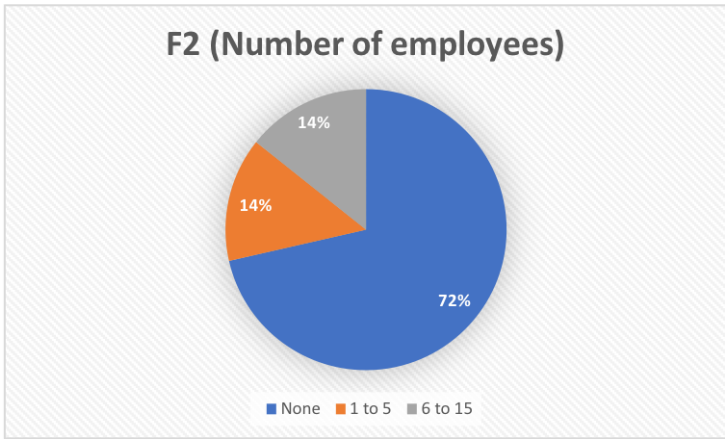
T.2 Focus Group 2: Gender



T.3 Focus Group 2: Annual Income



T.4 Focus Group 2: Number of Employees



Appendix U Digital Platforms Used by Entrepreneurs in the Study

Note: This is an estimate based on entrepreneur (interview and focus groups) responses and a review of websites and digital platforms

Type of Digital Platform	Name Digital Platform	Number of businesses	Web Address
Social Media	Facebook	44	Facebook.com
Social Media	Instagram	42	Instagram.com
Messaging	WhatsApp	40	WhatsApp.com
Social Media	YouTube	35	YouTube.com
e-Commerce	Amazon	17	Amazon.com
Payment	PayPal	17	PayPal.com
Social Media	Twitter	15	Twitter.com
Messaging	Skype	7	Skype.com
MOOC	FutureLearn	6	FutureLearn.com
Gig-Economy	Uber	4	Uber.com
Gig-Economy	TT Ride Share	3	TTRideshare.com
e-Commerce	Shopify	3	Shopify.com
e-Commerce	Etsy	3	Etsy.com
Social Media	Snapchat	2	Snapchat.com
e-Commerce	Alibaba	2	Alibaba.com
Payment	WiPay	2	Wipaytoday.com

Appendix U

Social Media	LinkedIn	2	LinkedIn.com
Social Media	Pinterest	1	Pinterest.com
Social Media	Vero	1	Vero.com
Social Media	Periscope	1	Periscope.com
Social Media	Tumblr	1	Tumblr.com
e-Commerce	AliExpress	1	AliExpress.com
e-Commerce	D' market movers	1	Dmarketmovers.com
e-Commerce	Things TT	1	Things-tt.com
Gig-Economy	Houzz	1	Houzz
MOOC	Lynda.com	1	Lynda.com
MOOC	eDx	1	eDx.org
MOOC	Coursera	1	Coursera.com
MOOC	Udemy	1	Udemy.com
MOOC	Skillshare	1	Skillshare.com
Music	SoundCloud	1	SoundCloud.com
Music	Spotify	1	Spotify.com
Accommodation	Hotels.com	1	Hotels.com
Accommodation	Booking.com	1	Booking.com
Travel	Expedia	1	Expedia.com
Travel	Travelocity	1	Travelocity
Events/ticketing	Eventbrite	1	Eventbrite.com

Appendix V Coding Structure: Research Question 1 (RQ1) – Entrepreneur Interaction Using Digital Platforms

Code	Description (notes)	Files	References
Entrepreneur Interaction Using Digital Platforms		0	0
Balancing Personal and Private information, relationships and spaces	This is a recurring theme, evidenced by platforms moving from just personal/social use to having both personal and business platforms. Individuals either combine their personal and professional profiles or distinguish between the two. This may depend on the type of business they are in (for example, if it is fashion or in the creative industry). The persona of the person online however may not necessarily match the personal persona and may introduce conflict into relationships.	35	96
Intermingling of Online and Offline Interaction	While marketing is done online and entrepreneurs communicate online, they often use other means of communication such as phone calls and face-to-face communication to verify information and build trust in online interaction.	36	112
<ul style="list-style-type: none"> Different Interaction Based on Age Demographics 	Young people are more willing to interact online for business than older people and so if entrepreneurs want to reach this demographic as well they need to communicate both online and offline.	25	50

Code	Description (notes)	Files	References
<ul style="list-style-type: none"> Mixing Face-to-Face with Digital 	<p>While some entrepreneurs use digital platforms interacting face-to-face when doing business locally and this is because of culture.</p> <p>Entrepreneurs see the benefit of this and so learning to balance the two in a convenient way is important. Hybrid interaction is also evident.</p>	50	158
Mirroring Culture	<p>This is an interesting theme, because a lot of the interaction reflects the local culture. The way people interact and mix face-to-face and online, for personal reasons and for business also reflect this. Facebook groups also allow for the sale of good and services which compete with businesses.</p> <p>This is also seen in the way users interact online, for example talking about a product, even when not interested in purchasing the product.</p>	32	112
Psychological Manipulation and Distraction	<p>This theme references how entrepreneurs explain the way they believe they psychologically influence their customers and play on their emotions. It also references how entrepreneurs also fall prey to this type manipulation when interacting, for example through distractions.</p>	14	31
Trial and Error	<p>Several entrepreneurs believed that use of the platform was based on trial and error because things changed all the time. Social media entrepreneurs reported they did not know everything because of the continuous algorithm and platform changes and rules and so they are all learning as they go.</p>	16	32
<ul style="list-style-type: none"> Adaptability 	<p>Users need high levels of adaptability because platforms change all the time with no given</p>	14	33

Code	Description (notes)	Files	References
	notice. Some said they needed to adapt their business plans.		
<ul style="list-style-type: none"> Creativity 	There are so many businesses competing online locally and especially internationally that entrepreneurs must find creative ways to stand out from the crowd. Entrepreneurs need to find creative ways to use the platform in a manner that best suits them which may not always be what the platform prompts.	14	30
Trickery	Entrepreneurs and users engage in deceptive practices to gain the attention of users and avoid negative outcome from interactions (like comments and spam). When interacting online the entrepreneur must be able to make sense of this, to avoid being tricked as well.	14	48

Appendix W Coding Structure: Research Question 2 (RQ2) EE in T&T

Code	Description	Files	References
EE in T&T		0	0
Culture	This relates to descriptions of the local culture. For example, online payment is being constrained because of lack of trust and high levels of crime and corruption. Additionally, the EE is fragmented, and based on family, ethnicity and participation in offline business. Digital platforms have had limited influence of these cultural influences.	42	125
<ul style="list-style-type: none"> Diaspora Networks 	Several entrepreneurs from the T&T diaspora or the Caribbean returned to T&T with the intention of starting their business. They believed it was a suitable place for entrepreneurship even though they indicated constraints. Digital platforms also helped them to do so as it was believed they could work anywhere.	11	13
<ul style="list-style-type: none"> Ethnicity 	Ethnicity is an important factor in the EE as well, which reflects the multicultural nature of the country. Digital platforms did not appear to influence this.	11	23
<ul style="list-style-type: none"> Family Support 	Family provides the support necessary for entrepreneurship where it is not available. This was therefore important not only for encouraging the start of entrepreneurship but especially for its continued growth. Digital platforms did not appear to influence this.	23	29

Code	Description	Files	References
<ul style="list-style-type: none"> Male Dominance 	A few female entrepreneurs pointed to male dominance in business and the inability to be part of those important networks. Digital platforms did not appear to influence this.	4	7
<ul style="list-style-type: none"> Networks 	Local networks are very important for business, especially those that grow. Digital platforms did not appear to significantly influence this as the use of digital platforms instead seemed to strengthen these offline networks.	21	47
Economic Environment	This is dominated by large businesses, which for some is seen as not supporting entrepreneurs but instead trying to hinder entrepreneurship. It is also dominated by oil and gas and so other types of entrepreneurship particularly in food and arts is not as prioritised, though entrepreneurs believe that it should be. Digital platforms did not appear to have much influence though some entrepreneurs believed that social media encouraged certain types of businesses like entertainment, which reflected cultural preferences. There is limited foreign exchange in the country.	28	74
<ul style="list-style-type: none"> Domination of Large Businesses 	Large businesses are perceived to be protectionist and networks are perceived to be important to getting ahead and succeeding in business. It seems as if individuals are encouraged to engage in corrupt behaviour the more successful they become.	8	19
<ul style="list-style-type: none"> Import vs Export 	There is economic prioritisation of importing instead of exporting, and digital platform use seems to continue to support this.	33	71

Code	Description	Files	References
<ul style="list-style-type: none"> Local Manufacturing 	There is little manufacturing and the use of digital platforms to purchase goods from overseas seemed to discourage the development of manufacturing.	14	17
<ul style="list-style-type: none"> Taxation 	The tax on the purchase of online goods from overseas did not seem to affect entrepreneurs because it was still cheaper to buy from overseas even with the tax. Also, stakeholders believe that some micro-entrepreneurs do not pay taxes, and that this might account for the unwillingness to use payment platforms. However customer unwillingness instead of tax avoidance, seemed to be the main reason for most entrepreneurs. The use of digital platforms had limited impact on taxation.	8	12
Ecosystem Interaction	The ecosystem does not seem to work together, instead there seems to be several ecosystems at play even in a small country. While entrepreneurs are collaborating online there is also resistance to working together and in many respects fierce competitions. Some entrepreneurs have had negative experiences which make them wary of collaborative efforts. The use of digital platforms did not appear to influence this. However, there appears to be a fragmented local EE and then an online EE that is global and sometimes interconnected but also operates independently of the T&T EE.	24	65
Education-Training and Human Capital	It was believed that there was a highly-educated population, but it was believed that especially at the primary school and high school level entrepreneurial thinking was not encouraged and	26	40

Code	Description	Files	References
	so this affected the development of entrepreneurship. It was believed that if your family was in business then you would be more likely to consider this as a career choice. Training at the higher education level was however thought to be helpful. Digital platforms were thought to have little influence on this. Entrepreneurs believed there was human capital available but this was also linked to availability of funding to be able to pay for it.		
Finance/Funding	This is one the biggest obstacles to entrepreneurs and individuals and is usually overcome through family support. The use of digital platforms did not appear to influence this.	42	96
<ul style="list-style-type: none"> Government Funding 	The government does provide funding for micro and small businesses but there is limited funding for those who want to grow further. The use of digital platforms did not appear to influence this.	16	22
Government Regulation and Infrastructure	Government regulation did appear to support entrepreneurs, particularly micro-entrepreneurs, but may be problematic as they start to grow. Infrastructure needed to be developed (shipping/transport/e-commerce).	17	35
<ul style="list-style-type: none"> Government Policy - Support - Processes 	Government policy is seen as changing but still inadequate for helping entrepreneurs to grow.	40	104
<ul style="list-style-type: none"> Payment 	Local payment infrastructure is still insufficient and presents problems for entrepreneurs. The use of digital platforms has had limited influence on its development.	39	77

Code	Description	Files	References
<ul style="list-style-type: none"> Shipping - Transport 	The Skybox companies that have been set up help entrepreneurs get goods from overseas but there is significant problems with exporting. It is very expensive to ship overseas and the local TTPost services is cheaper but unreliable. This impacts on the ability to do business overseas, or even locally (traffic is also a problem).	30	64
<ul style="list-style-type: none"> Technology Environment 	Internet access is comparatively good, though rural areas may face more problems. There are plans for further investment in technology services. It is also believed that this could be further developed. The use of e-commerce platforms seems to support the development of the technology environment but has thus far had a limited effect on its development as more still needs to be done to develop e-commerce locally.	19	45
<ul style="list-style-type: none"> <ul style="list-style-type: none"> Local Platforms 	There are efforts to create local platforms, which reflect local needs but international platforms still dominate and are used locally. International digital platforms are influencing the development local platforms and for the local market, so there is an influence on innovation.	25	69
Mentorship/Incubators	There is formal mentorship and incubators exist. However, informal mentoring seems to be the norm. There is an unwillingness to offer mentorship locally via formal programmes for free. International mentorship appears to be successful. Incubators are new and it was said that entrepreneurs need more help when they leave the Incubators.	24	49

Code	Description	Files	References
National-International Markets (Expansion)	Most entrepreneurs interviewed plan to expand their business, locally or regionally. It was believed that digital platforms did open up new markets for goods and services, though there were some limits, particularly locally and for some age groups and payment and shipping problems influenced the ability to use digital platforms to access them.	34	52

Appendix X Coding Structure: Research Question 2 (RQ2) - Influence of Digital Platforms on EE

Codes	Description	Files	References
Influence of Digital Platforms on EE		0	0
Copying	Entrepreneurs are copied a lot locally and internationally. They are also aware that platforms can encourage them to copy to. This is something that needs to be managed when using platforms. This arose a lot and so I added a question about this in the interview guide and focus group guide. This also seems to introduce new ideas around the concept of replicative entrepreneurship in an international online marketplace.	32	78
Customer Data and Targeted Advertising	Many entrepreneurs using these platforms prioritise getting data about customers and visitors to market their business and gain and keep customers.	35	90
Micro-Entrepreneurship and New Business Ventures	Digital platforms have encouraged micro-entrepreneurship, which reflect traditional entrepreneurship (for example, through buy and sell Facebook groups). In some case they supported entrepreneurial innovation in the EE by encouraging new digital services, and products and a move away from reselling to innovation.	13	21
Online Learning	Platforms have become a primary way for entrepreneurs to develop new skills in the EE. This includes MOOCs, the 'University of YouTube' and online groups.	31	66

Codes	Description	Files	References
Supplies Intermediary	Digital platforms (social media and e-commerce platforms) have become essential for gaining access to supplies. This competes on price with local offerings and many entrepreneurs are rely on these platforms to help them source the goods they need from outside of the country. This therefore shapes the EE making it heavily dependent on these platforms.	34	76

Appendix Y Coding Structure: Research Question 3 (RQ3) – Affordances

Codes	Description	Files	References
Affordances		0	0
Accessibility and Immediacy	The reason these platforms have proved useful is because entrepreneurs can easily gain quick access to information and resources. This is also because they are convenient as they facilitate very quick responses when individuals cannot meet face-to-face, for example for meetings, or to get data needed to make business decisions quickly.	44	133
Collaboration	Digital platforms supports collaboration, though this seems to usually be amongst those who already have a relationship offline. However, it tends to be more supportive of online collaboration with individuals overseas, who the entrepreneurs sometimes never meet. This also illustrates the importance of collaboration with other stakeholders like customers and other entrepreneurs for an entrepreneur to reach their goal (e.g. sales, learning) so that entrepreneurship using digital platforms relies on other digital users.	25	59
Flexibility	Entrepreneurs are able to adapt platforms in different ways, though this is more for social media platforms than other platforms. Flexibility is also evident as entrepreneurs when using digital platforms can communicate anywhere at any time or even engage in more than one activity at the same time, when corresponding with customers and business partners.	23	42

Codes	Description	Files	References
Local and International Visibility	<p>Visibility helped entrepreneurs to find customers that may not have otherwise known they existed. It also increased visibility internationally, resulting in partnerships/interactions with others overseas.</p> <p>Positive outcomes from visibility was both intended and unintended. Digital platforms are seen as levelling the playing field for entrepreneurs who believe they are more likely to have reach customers because of this visibility.</p>	47	156
Supporting Learning	<p>Varied digital platforms were invaluable for improving the skills and expertise of entrepreneurs. This included learning from the information provided by e-commerce platforms, learning through participation in online groups related to their industry and groups formed with customers (closed and opened). They also learnt through watching videos on YouTube as well as learning from Massive Online Open Courses (MOOCs) given by universities on specialised subjects related to their industry or business management.</p>	34	68
<ul style="list-style-type: none"> • Data Supporting Learning 	<p>Data provided from using digital platforms are important for entrepreneurs, particularly for learning about existing and potential markets so they could improve their offerings and increase the effectiveness of marketing.</p>	15	32

Appendix Z Coding Structure: Research Question 3 (RQ3): Constraints

Codes	Description	Files	References
Constraints		0	0
Constraints in the EE		0	0
Criminal and Corrupt Activity	Crime and corruption is seen by some entrepreneurs as negatively affecting entrepreneurship. This can also be expanded to issues regarding payment. A lack of trust influences customer unwillingness to pay online locally, even though locals perceive the risk from exchanging money face-to-face as also high.	13	26
Inability to Ship and Transport	This is a significant constraint. The use of platforms limits sale of local products as individuals also find it difficult to compete because of costs, or speed of delivery. This holds true when there is demand for their products overseas.	28	57
Not Buying Local Things Online	Local customers are paying for goods online, but only for goods from overseas. This is facilitated by the use of Skybox companies. This is true across all demographics, though especially so for older individuals. However, this means that purchasing locally requires more face-to-face interaction, which reflects local culture, but also a lack of trust in paying online locally.	13	27

Codes	Description	Files	References
<ul style="list-style-type: none"> Need for Local Promotion of T&T 	<p>Foreign goods and services are seen as more valuable, or cost effective even though entrepreneurs do believe there is a local market for local goods and services. They generally believe that not enough is being done to promote products and services in the country. It is also believed that more should be done to promote T&T as a place of business and creativity as this could better support entrepreneur in using digital platforms for their business.</p>	26	59
<ul style="list-style-type: none"> Older Customers Not Using Digital Platforms 	<p>Older demographics are less likely to use digital platforms. Some entrepreneurs believed the ones they use (but not always) tend to be Facebook or WhatsApp. This presented problems when trying to use these digital platforms for interaction with these customers.</p>	24	44
Online payment limitations	<p>This is a major issue. It reflects local issues on levels of crime, corruption and trust which also seem to influence investment in payment infrastructure which would support its use. There is no centralised identification and verification process for TT bank accounts and interviewees believed that banks were unwilling to support this because they did not want to lose control over their customers. Stakeholders say the cost of using payment platforms is prohibitive for some businesses, competing in the international market. Money received using PayPal for example go to their credit card and then need to be deposited to their bank account and this could take a while</p>	37	78

Codes	Description	Files	References
	<p>However, several entrepreneurs offer this facility on their website and would prefer if customers paid online, and many believed that customers were just not willing for cultural and trust issues to pay online. Some entrepreneurs have lived overseas and so are able to have international bank accounts which help them overcome payment constraints. Someone without a US account would have to use a TT Visa credit card. There are local payment platforms like WiPay which only a few entrepreneurs indicated they used, but they reported it was helpful.</p>		
Training/Expertise Required	<p>While entrepreneurs particularly in the early stages do not believe they need any skills to start using a digital platform, there is a need for some additional specialist skills as they grow, so that businesses don't make very costly mistakes. This however requires money and may not always be seen as a worthwhile investment, especially given the trial and error nature of using digital platforms. It is also believed that sometimes using digital platforms may encourage some entrepreneurs not to learn about their industry and about business management, which could negatively affect their development and growth.</p>	22	34
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	<p>This relates to four issues. Risk, fragility and uncertainty is inherent in using platforms that always change, the lack of features or services tailored to T&T. Some features are not available locally. For example, you can't</p>	30	94

Codes	Description	Files	References
	<p>advertise on Snapchat, you can't use TT\$ or one entrepreneur said they had to list country USA instead of T&T when using a platform. Also the unexpected changes are often more expensive and impact on business. They also require a lot of time to master before another change occurs and change is ongoing. Entrepreneurs are uncertain about if the data provided to them is always accurate or if paying for ads, which they are always encouraged to do would have the desired outcome. Additionally, online security was believed to be an issue.</p>		
<ul style="list-style-type: none"> • Lack of Control (Platforms) 	<p>Entrepreneurs believed digital platforms limited their control of certain elements of business. In some cases, entrepreneurs that reported using digital platforms did not negatively affect their business, started talking about lack of control later on in the interview, undermining what they initially said. Many examples of control, related to platforms changing all the time with no warning requiring continued adaptations. In some cases, entrepreneurs lost all their information or were unsure of how to respond to a change, and this can have major impact on business.</p>	27	83
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Algorithms Continuously Changing 	<p>Several entrepreneurs reported that continually changing algorithms negatively affected them. Not only did they have to work out how best to respond so that using the platform did not negatively affect their business, but the platform usually encouraged</p>	15	32

Codes	Description	Files	References
	them to invest more money into using the platform.		
<ul style="list-style-type: none"> • Lack of Control (Users) 	<p>Reviews/comments are very important but cannot always be managed and could potentially negatively affect the business. Individuals leaving reviews are not always people who use the product or the service and people comments are not necessarily related to what is on offer. This also relates to spam and bots which entrepreneurs also need to manage or unwanted communication and solicitations by other entrepreneurs. Inappropriate user behaviour could also potentially cause an entrepreneur's page to be shut down.</p>	18	44
<ul style="list-style-type: none"> ○ Lack of Control (Copying) 	<p>There are very high levels of copying online. Nearly all of the entrepreneurs interviewed have been victim to this and they believe there is limited recourse when this happens both locally and internationally. Some also admit that they copy as well. In some cases entrepreneurs select to not use platforms specifically for their business interests to avoid doing what others do. Replicative entrepreneurship is widespread.</p>	33	79
Time Consuming (Information Overload)	<p>While entrepreneurs believe using digital platforms saves time, they also believe it is time-consuming. The platforms and its users also distract them from their business goals. They must also be able to manage being bombarded with information from various individuals seeking their business, spam, or</p>	21	43

Appendix Z

Codes	Description	Files	References
	users asking for information already made publicly available.		

Appendix AA Matrix Query (Entrepreneur Interaction Using Digital Platforms, Affordances and Constraints)

Trickery	3
Creativity	2
Adaptability	4
Trial & Error	1
Psychological Manipulation/Distracton	0
Mirroring Culture	11
Mixing Face-to-Face & Digital Interaction	24
Different Interaction Based on Age Demographic	5
Intermingling of Online & Offline Interaction	40
Balancing Personal and Professional Information, Relationships & Spaces	4
Time Consuming (Info Overload)	5
Lack of Control (Copying)	0
Lack of Control (Users)	3
Algorithms Continuously Changing	3
Lack of Control (Platforms)	2
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	6
Training/Expertise Required	2
Online Payment Limitations	7
Older Customers Not Using Digital Platforms	4
Need for Local Promotion of T&T	0
Not Buying Local Things Online	4
Inability to Ship & Transport	4
Criminal & Corrupt Activity	2
Data Supporting Learning	3
Supporting Learning	3
Local & International Visibility	23
Flexibility	9
Collaboration	2
Accessibility & Immediacy	153
Accessibility & Immediacy	Accessibility & Immediacy

Trickery	1	0
Creativity	0	2
Adaptability	3	7
Trial & Error	0	1
Psychological Manipulation/Distraction	1	0
Mirroring Culture	6	4
Mixing Face-to-Face & Digital Interaction	8	4
Different Interaction Based on Age Demographic	1	1
Intermingling of Online & Offline Interaction	5	3
Balancing Personal and Professional Information, Relationships & Spaces	4	0
Time Consuming (Info Overload)	1	2
Lack of Control (Copying)	0	1
Lack of Control (Users)	0	0
Algorithms Continuously Changing	0	2
Lack of Control (Platforms)	2	4
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	6	5
Training/Expertise Required	1	0
Online Payment Limitations	0	0
Older Customers Not Using Digital Platforms	1	1
Need for Local Promotion of T&T	1	0
Not Buying Local Things Online	0	0
Inability to Ship & Transport	0	0
Criminal & Corrupt Activity	0	0
Data Supporting Learning	0	3
Supporting Learning	7	5
Local & International Visibility	9	7
Flexibility	1	42
Collaboration	59	1
Accessibility & Immediacy	2	9
	Collaboration	Flexibility

Appendix AA

Trickery	2	1
Creativity	4	4
Adaptability	5	0
Trial & Error	1	3
Psychological Manipulation/Distraction	2	0
Mirroring Culture	7	1
Mixing Face-to-Face & Digital Interaction	12	3
Different Interaction Based on Age Demographic	1	2
Intermingling of Online & Offline Interaction	10	3
Balancing Personal and Professional Information, Relationships & Spaces	5	2
Time Consuming (Info Overload)	8	0
Lack of Control (Copying)	3	2
Lack of Control (Users)	6	0
Algorithms Continuously Changing	2	0
Lack of Control (Platforms)	1	3
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	9	0
Training/Expertise Required	0	1
Online Payment Limitations	2	0
Older Customers Not Using Digital Platforms	1	2
Need for Local Promotion of T&T	7	0
Not Buying Local Things Online	1	0
Inability to Ship & Transport	0	0
Criminal & Corrupt Activity	0	0
Data Supporting Learning	5	1
Supporting Learning	3	68
Local & International Visibility	156	3
Flexibility	7	5
Collaboration	9	7
Accessibility & Immediacy	23	3
	Local & International Visibility	Supporting Learning

Trickery	1	2
Creativity	1	0
Adaptability	0	0
Trial & Error	1	0
Psychological Manipulation/Distraction	1	0
Mirroring Culture	8	1
Mixing Face-to-Face & Digital Interaction	1	0
Different Interaction Based on Age Demographic	2	0
Intermingling of Online & Offline Interaction	4	1
Balancing Personal and Professional Information, Relationships & Spaces	0	1
Time Consuming (Info Overload)	1	0
Lack of Control (Copying)	0	1
Lack of Control (Users)	0	1
Algorithms Continuously Changing	0	0
Lack of Control (Platforms)	3	0
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	2	1
Training/Expertise Required	1	0
Online Payment Limitations	0	3
Older Customers Not Using Digital Platforms	1	0
Need for Local Promotion of T&T	0	0
Not Buying Local Things Online	1	1
Inability to Ship & Transport	0	1
Criminal & Corrupt Activity	0	26
Data Supporting Learning	32	0
Supporting Learning	1	0
Local & International Visibility	5	0
Flexibility	3	0
Collaboration	0	0
Accessibility & Immediacy	3	2
	Data Supporting Learning	Criminal & Corrupt Activity

Appendix AA

Trickery	0	1
Creativity	0	0
Adaptability	0	0
Trial & Error	0	0
Psychological Manipulation/Distraction	0	0
Mirroring Culture	1	5
Mixing Face-to-Face & Digital Interaction	3	1
Different Interaction Based on Age Demographic	0	0
Intermingling of Online & Offline Interaction	4	5
Balancing Personal and Professional Information, Relationships & Spaces	0	0
Time Consuming (Info Overload)	0	0
Lack of Control (Copying)	0	2
Lack of Control (Users)	0	0
Algorithms Continuously Changing	0	0
Lack of Control (Platforms)	0	0
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	0	0
Training/Expertise Required	0	1
Online Payment Limitations	3	2
Older Customers Not Using Digital Platforms	0	0
Need for Local Promotion of T&T	1	0
Not Buying Local Things Online	4	27
Inability to Ship & Transport	57	4
Criminal & Corrupt Activity	1	1
Data Supporting Learning	0	1
Supporting Learning	0	0
Local & International Visibility	0	1
Flexibility	0	0
Collaboration	0	0
Accessibility & Immediacy	4	4
	Inability to Ship & Transport	Not Buying Local Things Online

Trickery	0
Creativity	1
Adaptability	1
Trial & Error	0
Psychological Manipulation/Distraction	0
Mirroring Culture	12
Mixing Face-to-Face & Digital Interaction	2
Different Interaction Based on Age Demographic	0
Intermingling of Online & Offline Interaction	0
Balancing Personal and Professional Information, Relationships & Spaces	0
Time Consuming (Info Overload)	0
Lack of Control (Copying)	0
Lack of Control (Users)	2
Algorithms Continuously Changing	0
Lack of Control (Platforms)	0
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	2
Training/Expertise Required	0
Online Payment Limitations	1
Older Customers Not Using Digital Platforms	0
Need for Local Promotion of T&T	59
Not Buying Local Things Online	1
Inability to Ship & Transport	0
Criminal & Corrupt Activity	1
Data Supporting Learning	0
Supporting Learning	0
Local & International Visibility	7
Flexibility	0
Collaboration	0
Accessibility & Immediacy	0
	Need for Local Promotion of T&T

Appendix AA

Trickery	1	1
Creativity	1	0
Adaptability	2	0
Trial & Error	1	0
Psychological Manipulation/Distraction	1	0
Mirroring Culture	6	9
Mixing Face-to-Face & Digital Interaction	6	12
Different Interaction Based on Age Demographic	47	2
Intermingling of Online & Offline Interaction	10	14
Balancing Personal and Professional Information, Relationships & Spaces	0	0
Time Consuming (Info Overload)	1	0
Lack of Control (Copying)	0	0
Lack of Control (Users)	0	0
Algorithms Continuously Changing	3	0
Lack of Control (Platforms)	3	3
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	2	4
Training/Expertise Required	1	2
Online Payment Limitations	2	78
Older Customers Not Using Digital Platforms	44	2
Need for Local Promotion of T&T	0	1
Not Buying Local Things Online	0	2
Inability to Ship & Transport	0	3
Criminal & Corrupt Activity	0	3
Data Supporting Learning	1	0
Supporting Learning	2	0
Local & International Visibility	1	2
Flexibility	1	0
Collaboration	1	0
Accessibility & Immediacy	4	7
	Older Customers Not Using Digital Platforms	Online Payment Limitations

Trickery	0
Creativity	0
Adaptability	4
Trial & Error	4
Psychological Manipulation/Distraction	0
Mirroring Culture	1
Mixing Face-to-Face & Digital Interaction	1
Different Interaction Based on Age Demographic	0
Intermingling of Online & Offline Interaction	3
Balancing Personal and Professional Information, Relationships & Spaces	0
Time Consuming (Info Overload)	0
Lack of Control (Copying)	0
Lack of Control (Users)	0
Algorithms Continuously Changing	1
Lack of Control (Platforms)	2
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	2
Training/Expertise Required	34
Online Payment Limitations	2
Older Customers Not Using Digital Platforms	1
Need for Local Promotion of T&T	0
Not Buying Local Things Online	1
Inability to Ship & Transport	0
Criminal & Corrupt Activity	0
Data Supporting Learning	1
Supporting Learning	1
Local & International Visibility	0
Flexibility	0
Collaboration	1
Accessibility & Immediacy	2
	Training/ Expertise Required

Appendix AA

Trickery	17	5
Creativity	2	3
Adaptability	13	8
Trial & Error	9	6
Psychological Manipulation/Distraction	0	10
Mirroring Culture	6	3
Mixing Face-to-Face & Digital Interaction	10	1
Different Interaction Based on Age Demographic	2	3
Intermingling of Online & Offline Interaction	3	1
Balancing Personal and Professional Information, Relationships & Spaces	3	7
Time Consuming (Info Overload)	3	10
Lack of Control (Copying)	0	3
Lack of Control (Users)	3	6
Algorithms Continuously Changing	11	10
Lack of Control (Platforms)	14	83
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	94	16
Training/Expertise Required	2	2
Online Payment Limitations	4	3
Older Customers Not Using Digital Platforms	2	3
Need for Local Promotion of T&T	2	0
Not Buying Local Things Online	0	0
Inability to Ship & Transport	0	0
Criminal & Corrupt Activity	1	0
Data Supporting Learning	2	3
Supporting Learning	0	3
Local & International Visibility	9	1
Flexibility	5	4
Collaboration	6	2
Accessibility & Immediacy	6	2
	Constraints in Using Digital Platforms (Risk Fragility, Uncertainty)	Lack of Control (Platforms)

Trickery	1	3
Creativity	0	1
Adaptability	4	1
Trial & Error	5	0
Psychological Manipulation/Distraction	3	0
Mirroring Culture	4	10
Mixing Face-to-Face & Digital Interaction	0	1
Different Interaction Based on Age Demographic	0	0
Intermingling of Online & Offline Interaction	0	0
Balancing Personal and Professional Information, Relationships & Spaces	2	2
Time Consuming (Info Overload)	3	5
Lack of Control (Copying)	0	2
Lack of Control (Users)	0	44
Algorithms Continuously Changing	32	0
Lack of Control (Platforms)	10	6
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	11	3
Training/Expertise Required	1	0
Online Payment Limitations	0	0
Older Customers Not Using Digital Platforms	3	0
Need for Local Promotion of T&T	0	2
Not Buying Local Things Online	0	0
Inability to Ship & Transport	0	0
Criminal & Corrupt Activity	0	1
Data Supporting Learning	0	0
Supporting Learning	0	0
Local & International Visibility	2	6
Flexibility	2	0
Collaboration	0	0
Accessibility & Immediacy	3	3
	Algorithms Continuously Changing	Lack of Control (Users)

Appendix AA

Trickery	2	3
Creativity	2	3
Adaptability	1	2
Trial & Error	0	1
Psychological Manipulation/Distraction	1	14
Mirroring Culture	1	2
Mixing Face-to-Face & Digital Interaction	1	0
Different Interaction Based on Age Demographic	1	0
Intermingling of Online & Offline Interaction	0	1
Balancing Personal and Professional Information, Relationships & Spaces	1	3
Time Consuming (Info Overload)	0	43
Lack of Control (Copying)	79	0
Lack of Control (Users)	2	5
Algorithms Continuously Changing	0	3
Lack of Control (Platforms)	3	7
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	0	4
Training/Expertise Required	0	0
Online Payment Limitations	0	0
Older Customers Not Using Digital Platforms	0	1
Need for Local Promotion of T&T	0	0
Not Buying Local Things Online	2	0
Inability to Ship & Transport	0	0
Criminal & Corrupt Activity	1	0
Data Supporting Learning	0	1
Supporting Learning	2	0
Local & International Visibility	3	8
Flexibility	1	2
Collaboration	0	1
Accessibility & Immediacy	0	5
	Lack of Control (Copying)	Time Consuming (Info Overload)

Trickery	2
Creativity	2
Adaptability	0
Trial & Error	0
Psychological Manipulation/Distraction	12
Mirroring Culture	8
Mixing Face-to-Face & Digital Interaction	24
Different Interaction Based on Age Demographic	0
Intermingling of Online & Offline Interaction	5
Balancing Personal and Professional Information, Relationships & Spaces	96
Time Consuming (Info Overload)	3
Lack of Control (Copying)	1
Lack of Control (Users)	2
Algorithms Continuously Changing	2
Lack of Control (Platforms)	7
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	3
Training/Expertise Required	0
Online Payment Limitations	0
Older Customers Not Using Digital Platforms	0
Need for Local Promotion of T&T	0
Not Buying Local Things Online	0
Inability to Ship & Transport	0
Criminal & Corrupt Activity	1
Data Supporting Learning	0
Supporting Learning	2
Local & International Visibility	5
Flexibility	0
Collaboration	4
Accessibility & Immediacy	4
	Balancing Personal and Professional Information, Relationships and Spaces

Appendix AA

Trickery	1
Creativity	1
Adaptability	0
Trial & Error	0
Psychological Manipulation/Distraction	0
Mirroring Culture	27
Mixing Face-to-Face & Digital Interaction	25
Different Interaction Based on Age Demographic	10
Intermingling of Online & Offline Interaction	112
Balancing Personal and Professional Information, Relationships & Spaces	5
Time Consuming (Info Overload)	1
Lack of Control (Copying)	0
Lack of Control (Users)	0
Algorithms Continuously Changing	0
Lack of Control (Platforms)	1
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	3
Training/Expertise Required	3
Online Payment Limitations	14
Older Customers Not Using Digital Platforms	10
Need for Local Promotion of T&T	0
Not Buying Local Things Online	5
Inability to Ship & Transport	4
Criminal & Corrupt Activity	1
Data Supporting Learning	4
Supporting Learning	3
Local & International Visibility	10
Flexibility	3
Collaboration	5
Accessibility & Immediacy	40
Intermingling of Online & Offline Interaction	

Trickery	1
Creativity	1
Adaptability	2
Trial & Error	1
Psychological Manipulation/Distraction	1
Mirroring Culture	7
Mixing Face-to-Face & Digital Interaction	7
Different Interaction Based on Age Demographic	50
Intermingling of Online & Offline Interaction	10
Balancing Personal and Professional Information, Relationships & Spaces	0
Time Consuming (Info Overload)	1
Lack of Control (Copying)	0
Lack of Control (Users)	0
Algorithms Continuously Changing	3
Lack of Control (Platforms)	3
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	2
Training/Expertise Required	0
Online Payment Limitations	2
Older Customers Not Using Digital Platforms	47
Need for Local Promotion of T&T	0
Not Buying Local Things Online	0
Inability to Ship & Transport	0
Criminal & Corrupt Activity	0
Data Supporting Learning	2
Supporting Learning	2
Local & International Visibility	1
Flexibility	1
Collaboration	1
Accessibility & Immediacy	5
	Different Interaction Based on Age Demographic

Appendix AA

Trickery	8	10
Creativity	3	3
Adaptability	1	3
Trial & Error	1	0
Psychological Manipulation/Distraction	1	1
Mirroring Culture	22	112
Mixing Face-to-Face & Digital Interaction	158	22
Different Interaction Based on Age Demographic	7	7
Intermingling of Online & Offline Interaction	25	27
Balancing Personal and Professional Information, Relationships & Spaces	24	8
Time Consuming (Info Overload)	0	2
Lack of Control (Copying)	1	1
Lack of Control (Users)	1	10
Algorithms Continuously Changing	0	4
Lack of Control (Platforms)	1	3
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	10	6
Training/Expertise Required	1	1
Online Payment Limitations	12	9
Older Customers Not Using Digital Platforms	6	6
Need for Local Promotion of T&T	2	12
Not Buying Local Things Online	1	5
Inability to Ship & Transport	3	1
Criminal & Corrupt Activity	0	1
Data Supporting Learning	1	8
Supporting Learning	3	1
Local & International Visibility	12	7
Flexibility	4	4
Collaboration	8	6
Accessibility & Immediacy	24	11
	Mixing Face-to-Face & Digital Interaction	Mirroring Culture

Trickery	3	2
Creativity	0	3
Adaptability	0	4
Trial & Error	0	32
Psychological Manipulation/Distracton	31	0
Mirroring Culture	1	0
Mixing Face-to-Face & Digital Interaction	1	1
Different Interaction Based on Age Demographic	1	1
Intermingling of Online & Offline Interaction	0	0
Balancing Personal and Professional Information, Relationships & Spaces	12	0
Time Consuming (Info Overload)	14	1
Lack of Control (Copying)	1	0
Lack of Control (Users)	0	0
Algorithms Continuously Changing	3	5
Lack of Control (Platforms)	10	6
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	0	9
Training/Expertise Required	0	4
Online Payment Limitations	0	0
Older Customers Not Using Digital Platforms	1	1
Need for Local Promotion of T&T	0	0
Not Buying Local Things Online	0	0
Inability to Ship & Transport	0	0
Criminal & Corrupt Activity	1	0
Data Supporting Learning	1	1
Supporting Learning	0	3
Local & International Visibility	2	1
Flexibility	0	1
Collaboration	1	0
Accessibility & Immediacy	0	1
	Psychological Manipulation and Distracton	Trial & Error

Appendix AA

Trickery	2	1	48
Creativity	5	30	1
Adaptability	33	5	2
Trial & Error	4	3	2
Psychological Manipulation/Distraction	0	0	3
Mirroring Culture	3	3	10
Mixing Face-to-Face & Digital Interaction	1	3	8
Different Interaction Based on Age Demographic	2	1	1
Intermingling of Online & Offline Interaction	0	1	1
Balancing Personal and Professional Information, Relationships & Spaces	0	2	2
Time Consuming (Info Overload)	2	3	3
Lack of Control (Copying)	1	2	2
Lack of Control (Users)	1	1	3
Algorithms Continuously Changing	4	0	1
Lack of Control (Platforms)	8	3	5
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	13	2	17
Training/Expertise Required	4	0	0
Online Payment Limitations	0	0	1
Older Customers Not Using Digital Platforms	2	1	1
Need for Local Promotion of T&T	1	1	0
Not Buying Local Things Online	0	0	1
Inability to Ship & Transport	0	0	0
Criminal & Corrupt Activity	0	0	2
Data Supporting Learning	0	1	1
Supporting Learning	0	4	1
Local & International Visibility	5	4	2
Flexibility	7	2	0
Collaboration	3	0	1
Accessibility & Immediacy	4	2	3
	Adaptability	Creativity	Trickery

Trickery	122
Creativity	75
Adaptability	105
Trial & Error	76
Psychological Manipulation/Distraction	83
Mirroring Culture	291
Mixing Face-to-Face & Digital Interaction	340
Different Interaction Based on Age Demographic	150
Intermingling of Online & Offline Interaction	288
Balancing Personal and Professional Information, Relationships & Spaces	183
Time Consuming (Info Overload)	109
Lack of Control (Copying)	103
Lack of Control (Users)	90
Algorithms Continuously Changing	86
Lack of Control (Platforms)	198
Constraints in Using Digital Platforms (Risk, Fragility, Uncertainty)	229
Training/Expertise Required	61
Online Payment Limitations	145
Older Customers Not Using Digital Platforms	141
Need for Local Promotion of T&T	89
Not Buying Local Things Online	55
Inability to Ship & Transport	78
Criminal & Corrupt Activity	41
Data Supporting Learning	72
Supporting Learning	114
Local & International Visibility	292
Flexibility	104
Collaboration	119
Accessibility & Immediacy	329
Total	

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