



A University of Sussex PhD thesis

Available online via Sussex Research Online:

<http://sro.sussex.ac.uk/>

This thesis is protected by copyright which belongs to the author.

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the Author

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the Author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given

Please visit Sussex Research Online for more information and further details

ICT4D policy for Trinidad and Tobago: Discursive constructions

Kieron K.E. Swift

Thesis submitted for the Degree of Doctor of Philosophy

February 2017

SPRU

University of Sussex

Summary

This thesis uses a contextual case study approach covering the period 1985 to 2011 to examine the construction of Trinidad and Tobago's ICT4D policy as discourse. The guiding theory of method is contextualism as described in Pettigrew (1990), according to whom a contextual analysis can be characterised as: *processual*, by emphasising the evolution of actions embedded in specific contexts (structural and otherwise) over time; *multi-stakeholder*, by recognising the competing viewpoints of reality perceived by actors at different levels; *longitudinal*, by considering both historical and contemporary views of actions and events. Consistent with this approach a framework has been adopted here that views policy as an iterative process involving the generation of texts from events, the translation of texts into narratives, and competition between alternative narratives resulting in institutions, which, in turn, enable and constrain events. This framework facilitates understanding interactions between actors at multiple levels across time.

There are three original contributions to knowledge made in this thesis. Firstly, I have proposed an analytical framework that integrates three separate bodies of literature. The *discursive model of institutionalization* of **Phillips, Lawrence and Hardy (2004)** and the '*policy as discourse*' approach of **Shaw & Greenhalgh (2008)** and **Shaw (2010)** are integrated by way of a bridge, the '*trading zones*' concept of **Galison (1997)** as extended by **Collins, Evans, & Gorman (2007)**. Thereby, I developed a series of analytical constructs that can be used for contextual policy research, especially in developing countries where dominant policy narratives constrain and moderate discursive exchange when those policy narratives - which were originally articulated in advanced economies - are subsequently transferred into developing countries.

Secondly, I have empirically applied the framework to the study of ICT4D policy construction in Trinidad and Tobago, generating new insights in the process. In so doing I critically examined the process of constructing policy as discourse with the aim of identifying ways in which policy could be done differently. A key finding is that the process of discursively transferring previously existing policy narratives into new contexts can result in one of three outcomes: **no change** - if the introduction of policy narratives had no impact whatsoever on institutions (either by creating new ones, or disrupting existing ones); the construction of **policy pidgins** (semi-specific yet incomplete proto-languages that mediate discursive transfer) - when discursive transfer, imitation and assemblage of narratives partially occurs; or the construction of **policy creoles** (full-fledged languages that facilitate not only discursive transfer, but social action) - if the discursive transfer is complemented by translation, editing and social embedding.

Thirdly, I developed a **model of policy creolization** through which the two main factors that influence the emergence of policy pidgins and, eventually, policy creoles (both viewed as particular forms of institutions) in a setting of discursive construction were identified, namely:

- The length of the temporal window over which policy actors have an opportunity to develop ***interactional expertise*** to transfer, imitate and assemble narratives, and eventually to translate, edit and embed those narratives into social actions;
- The degree of intentionality of the discursive action, and subsequently the social action, that policy actors engage in, noting that there are three categories of social action:
 - ***Intentional*** action – which deliberately conveys particular ideas through texts.
 - ***Consequential*** action – which is generated as a by-product of ongoing dialogue among actors during which they may draw on broader narratives.
 - ***Emergent*** action – which arises through discursive contestation and struggle in ways that were not necessarily intended or predicted.

This highlights that both intentionality and time are required to bridge the knowledge gaps present between the different contexts, and even so, that the policy construction process in the new context requires practitioners to develop non-trivial levels of interactional expertise.

This thesis has implications for policy practice on two fronts. Firstly, the framework can be employed to assist policymakers in creating policy creoles through coordination and interaction between external mainstream narratives and alternative narratives, including those that are locally derived. In doing so, policymakers and policy analysts can unpack the conceptual constructions of their subject domain, learn how to engage with new domains (and thereby gain interactional expertise) and uncover the latent power dynamics that are reinforced by lack of critical analysis. Secondly, application of the framework provides a means of assessing institutional dynamics. This is important because of the powerful normative, cognitive and regulative functions institutions play on the development of new institutions, and ultimately on social action.

Acknowledgements

Completing this thesis has been a journey of self-discovery for me, both personally and professionally. It is a journey that has been both extremely difficult and extremely rewarding. As such, I wish to now give thanks where they are due.

Firstly, to My Lord and Saviour, Jesus Christ, who sustained me throughout this process and without whom I could not have completed it.

To my wife, Amelia, who has been, and continues to be steadfast in her support and love, and who sacrificed much while I was engrossed in doing this work. I truly could not have done this without you and I look forward to attempting to repay you for all that you have given me when I most needed it, which I know is an impossible task. To my mother and brother, Allison and Kevon, who round out the inner circle of my support system, and who have both been peerless in their support and encouragement of my capability to get to this point. My mother especially will be relieved that I have reached this milestone and can get on with the rest of my life.

My supervisors, Dr. Piera Morlacchi and Prof. W. Edward Steinmueller, who have both, in different ways, challenged my abilities and extended my capabilities as a researcher. They both exhibited the curious capability of making me feel smarter and better able to proceed after our meetings, which is an excellent quality for a PhD supervisor to have.

All friends and colleagues from SPRU from over the years since I first arrived as a Masters student in 2008. To those of you who got to this point before me, I am thankful to have now joined your ranks. To those of you still in the struggle, keep at it, and please take one small piece of advice that was shared with me, but which I, woefully, did not accept soon enough: finish and submit as quickly as you can! There will always be improvements you can make to your work, but that's what the rest of your career is for.

To all research participants, for their generosity with their time and their insight during my fieldwork trip in 2011 and in all the time since: all colleagues at what was formerly the National ICT Centre under the Ministry of Public Administration; the Trinidad Guardian and Trinidad Express newspapers for allowing me access to their archives.

Any revelatory insight is due to the combined effect of all persons listed here who have so generously shared with me. Any lingering shortcomings of this work are my own.

I dedicate this work to my late godmother, Bernadette Hamlet-Clinton, who was an eternal supporter of mine and who passed away on the eve of submission. You may be gone, but you will never be forgotten.

Contents

List of Figures	viii
List of Tables	ix
Abbreviations and Acronyms	x
1. Introduction	1
2. Literature Review	6
2.1. Policy	7
2.1.1 Policy as comprehensive rationalism	9
2.1.2 Policy as political rationalism	11
2.1.3 Policy as discourse	12
2.1.4 Discussion: discursive policymaking for the modern, interconnected world	14
2.2. Discourse and Institutions	18
2.2.1 The institutional effects of discourse	20
2.2.2 The relevance of institutions for policy as discourse	27
2.3. ICT4D: ICT for Development	29
2.3.1 Dominant development narratives: from “development-as-economic growth” to globalisation	30
2.3.2 Alternative development narratives: from capacitation to post-development .	33
2.3.3 Narratives of ICT for Development	34
2.3.4 Discussion: the perils of manipulating multiple ICT4D knowledge sources	38
2.4. A prospective bridge to close the gap between disparate policy knowledge sources	40
2.5. Chapter Summary	42
3. Theoretical Framework	44
3.1. A Discursive Model of Policy-as-discourse Construction	44
3.2. Research Questions	48
3.3. Chapter Summary	49
4. Methodology and Research Methods	50
4.1. Methodology	50
4.1.1 Contextual case studies	51
4.1.2 Critical discourse analysis	52
4.1.3 Case Selection	55
4.2. Mixed Methods of Data Collection	56
4.2.1 Documents	59

4.2.2	In-depth semi-structured interviews	60
4.3.	Data Analysis	66
4.4.	Limitations of the Methodology and Research Methods	69
4.5.	Chapter Summary	69
5.	Contextual Background.....	70
5.1.	Particularities of Trinidad and Tobago.....	70
5.1.1.	Political Economy	70
5.1.2.	People & Society	72
5.1.3.	Smallness & Insularity	74
5.2.	A history of economic development policy and strategy	76
5.3.	Chapter Summary	80
6.	Case Study: 3 cases of discursive construction of ICT4D policy in Trinidad and Tobago....	82
6.1.	<i>Missing Link</i> : catching up via telecommunications liberalization.....	84
6.1.1.	Origins	84
6.1.2.	Contestation.....	91
6.1.3.	Resolution	100
6.1.4.	Sub-case Summary.....	102
6.2.	<i>One Stop Shop</i> : reforming the Public Service through e-government.....	104
6.2.1.	Origins	104
6.2.2.	Contestation.....	110
6.2.3.	Resolution	114
6.2.4.	Sub-case Summary.....	115
6.3.	<i>fastforward</i> : drawing “the blueprint for a knowledge-based society”	117
6.3.1.	Origins	117
6.3.2.	Contestation.....	120
6.3.3.	Resolution	125
6.3.4.	Sub-case Summary.....	133
6.4.	Chapter Summary	134
7.	Interpretive Analysis: Policy creolization as discursive construction of policy creoles and policy pidgins	135
7.1.	Events & Texts.....	135
7.2.	Narratives & Institutions.....	140
7.2.1.	Additional contingent factors	149
7.3.	Interpretation and explanation of the three cases of discursive policy construction	153

7.3.1.	Discursive construction of “liberalizing the telecommunications sector”	155
7.3.2.	Discursive construction of “building an e-government wide area network” ...	157
7.3.3.	Discursive construction of “writing a national ICT4D strategy”	159
7.4.	Towards a Model of Policy Creolization as discursive construction of policy creoles and policy pidgins	160
7.5.	Generalizing the Policy Creolization Model	164
7.6.	Chapter Summary	166
8.	Conclusion	168
8.1.	Contribution to Policy Research Knowledge	168
8.2.	Implications for Policy Practice	169
8.3.	Limitations and Opportunities for Further Research	170
	References	171
	Appendix I – Interview Details	181
	Appendix II – Document Details	184

List of Figures

Figure 1 – Discursive model of the policy construction process (adapted from Philips, Lawrence and Hardy, 2004: 641).....	45
Figure 2 – Dimensions of discourse and discourse analysis (source: Thompson, 2004b: 6)	54
Figure 3 – Temporal windows of sub-cases	82
Figure 4 – Developing countries most vulnerable to telecommunications accounting rate reform, 1995 (source: Braga, Forestier and Stern, 1999)	88
Figure 5 – Article published in the Trinidad Guardian on 20th November, 2001.....	95
Figure 6 – Article published in the Trinidad Guardian on 3rd February, 2002	99
Figure 7 – Article published in the Trinidad Guardian on 8 th August, 2002.....	100
Figure 8 – Mobile & Internet Subscriptions in Trinidad and Tobago (2000-2010) [data source: TATT Annual Market Report 2010, available via https://tatt.org.tt/]	102
Figure 9 – Excerpts from newspaper articles published in the Trinidad Guardian.....	117
Figure 10 – Excerpt from article published in the Trinidad Guardian on 17th May, 2001	125
Figure 11 – BitDepth article published on 17th November 2008	132
Figure 12 – Timeline of events and texts (Telecom Liberalization)	136
Figure 13 – Timeline of events and texts (Backbone).....	136
Figure 14 – Timeline of events and texts (<i>fastforward</i>).....	136
Figure 15 – A model of policy creolization.....	161

List of Tables

Table 1 – Document types collected and used for the analysis.....	59
Table 2 – Interviewee sampling	62
Table 3 – Mechanisms for text entry into localised policy processes.....	138
Table 4 – Frequency of occurrence of text entry mechanism	139
Table 5 – Frequency of occurrence of text entry mechanism, by sub-case	139
Table 6 – Analysis of WTO Reference Paper on Regulatory Principles as main text that constituted the dominant narrative in support of telecom liberalization	142
Table 7 – Analysis of National Electronic Commerce Policy as main text that constituted the dominant narrative in support of e-Government.....	144
Table 8 – Analysis of the National ICT Strategy, fastforward, as the main text that constituted the narrative of knowledge-based society.....	147
Table 9 – Fieldwork schedule.....	181
Table 10 – Interview particulars	181
Table 11 – Documents used for the analysis	184

Abbreviations and Acronyms

ACP	African, Caribbean, and Pacific Group of States
B2B	Business-to-Business
B2C	Business-to-Customer
B2G	Business-to-Government
C&W	Cable & Wireless plc
CANTO	Caribbean Association of National Telecommunication Organisations
CARICOM	Caribbean Community
CARIFORUM	Caribbean Forum
CIVIC	Caribbean ICT Stakeholders Virtual Community
CTB	Central Tenders Board
CTO	Commonwealth Telecommunications Organisation
CTU	Caribbean Telecommunications Union
DEG	Digital-era Governance
DOI	Digital Opportunity Initiative
DNCIO	Deputy National Chief Information Officer
e-Commerce	Electronic Commerce
e-Government	Electronic Government
EPA	Economic Partnership Agreement
eTeCK	Evolving TecKnologies and Enterprise Development Company Limited
FCC	Federal Communications Commission
G2B	Government-to-Business
G2C	Government-to-Customer
G2G	Government-to-Government
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GoRTT	Government of the Republic of Trinidad and Tobago
GWAN	Government Wide Area Network
ICT	Information and Communication Technology
ICT4D	Information and Communication Technology for Development
ICTD	Information and Communication Technology and Development
IDB/IADB	Inter-American Development Bank
IDC	Industrial Development Corporation
IGF	Internet Governance Forum
iGovTT	National Information and Communication Technology Company Limited
IMF	International Monetary Fund
ISOC	Internet Society
ITU	International Telecommunication Union
K4D	Knowledge for development
KM4D	Knowledge management for development
MDGs	Millennium Development Goals
MIF	Multilateral Investment Fund

MPA	Ministry of Public Administration
MPAI	Ministry of Public Administration and Information
MTPF	Medium Term Policy Framework
NALIS	National Library and Information System Authority
NAR	National Alliance for Reconstruction
NCIO	National Chief Information Officer
NECPC	National Electronic Commerce Policy Committee
NICTC	National Information and Communication Technology Centre
NIHERST	National Institute of Higher Education, Research, Science and Technology
NISC	National Information Systems Centre
OAS	Organization of American States
Petrotrin	Petroleum Company of Trinidad and Tobago Limited
PNM	People's National Movement
PRIDCO	Puerto Rican Industrial Development Corporation
RFP	Request for Proposals
SAP	Structural Adjustment Programme
SME	Small and Medium Enterprises
TATT	Telecommunications Authority of Trinidad and Tobago
TSTT	Telecommunications Services of Trinidad and Tobago
TTCS	Trinidad and Tobago Computer Society
UNC	United National Congress
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UWI	University of the West Indies
VAT	Value-Added Tax
WGIG	Working Group on Internet Governance
WSIS	World Summit on the Information Society
WTDC	World Telecommunication Development Conference
WTO	World Trade Organization

1. Introduction

Much has been written during the past thirty years by technologists, futurists, development specialists and other self-styled evangelists who have proclaimed the arrival of a new and heretofore unseen 'information age' in which 'revolutionary' and 'disruptive' electronic digital technologies would allow suitably capable entrepreneurial spirits to usher in a new social order and means of economic production, variously labelled the "information society", "network society" and the "knowledge society"¹ (see, for example: Bell, 1976; Castells, 1996; Friedman, 2006; Webster, 2002; Kleine and Unwin, 2009).

This techno-optimistic outlook has been embraced by governments, particularly those in developing countries, not least because of the implication that failure to 'harness the power' of the new technologies would result in falling even further behind in international rankings of traditional development metrics, such as Gross Domestic Product (GDP) per capita. Between 2005 and 2008 I worked for the government of Trinidad and Tobago (T&T) devising policy instruments to facilitate the use of Information and Communication Technology (ICT) for achieving national development objectives. During that time my interest in the varying conceptualisations held within the policy community was piqued by questions about the exact nature and capabilities of 'ICT', the type and extent of 'development' that a country could or should pursue, and the prospects for technology to affect the rate and direction of development. A key example of these varying conceptualisations is expressed in the term "ICT for Development" or "ICT4D". For the purpose of this thesis these disparate conceptualisations are characterised as being embedded within competing narratives via discourse. The primary research question being addressed here is: ***"How has ICT4D policy been constructed discursively in Trinidad and Tobago?"***

The idea of policy being a construct which emerges from a collection of ideas is the subject of a considerable literature (e.g. Bacchi, 2000; Hajer, 2003; Fischer, 2003) and this will be examined further in Chapter 2. However, the basic notion is that ideas and conceptualisations about the relationship between ICT and development are created as text – through spoken and written communication – in one context and are then distributed, reconstructed, and integrated into the social practice of people in operating environments that are vastly different from the originating context. Further, it is arguable that the prevalent conditions in the recipient contexts

¹ Though often used synonymously, the preference for the latter term is generally accredited to those who espouse a broader, less techno-centric definition of 'information' (Unwin 2009: 22)

are not always well suited for developing and implementing the ideas. Avgerou (2010) has argued that there is a dominant discourse in recent ICT4D literature, specifically that “*ICT and Development [represents] socioeconomic improvements through the transfer and diffusion of ICT and required institutions*” (p. 9). This discourse is largely structured around three prevailing narratives (narratives being taken as a unit of analysis for discourse) that are being played out in world politics: modernization, democratization and globalization. Furthermore, this discourse proceeds from a technologically determinist perspective of the world which asserts that increased investments into ICT infrastructure, and its associated organizational and management systems, produce economic growth via a rise in productivity in the public and private sectors that ultimately results in benefits to the wider populace. This narrative persists and thrives in public policy circles despite limited and contested evidence to support it (Avgerou, 2008).

Alternative narratives that are in competition with this main theme tend to be less techno-centric and put greater emphasis on bottom-up or participatory multi-stakeholder engagement in the determination of public affairs, the enhancement of human capabilities, and the creation of opportunities for people (most often, those who are poor and/or in marginalised communities) to be closely involved in influencing the trajectory of their ‘development’. Such narratives suffer from their own limitations, such as the lack of specification of means by which dominated people groups can engage in collective discussion and limited agreement on a given developmental path, or of a means from transitioning from the current path to an alternative. The solutions proposed in these narratives tend to be too simplistic (e.g. ‘give everyone a laptop and internet connection’) and do not adequately address the intensification of the structural inequalities in ICT usage and access (van Dijk and Hacker, 2003: 324). As a result, such alternative narratives struggle to gain recognition and power (Fischer, 2003), and are therefore marginalised during mainstream political discussion in modern democracies.

This thesis uses a contextual case study approach covering the period 1985 to 2011 to examine the construction of Trinidad and Tobago’s policy on ICT4D as discourse. The guiding theory of method is *contextualism* as described in Pettigrew (1990), according to whom a contextual analysis can be characterised as: *processual*, by emphasising the evolution of actions embedded in specific contexts (structural and otherwise) over time; *multi-stakeholder*, by recognising the

competing viewpoints of reality perceived by actors at different levels; *longitudinal*², by considering both historical and contemporary views of actions and events.

Based on this focus I have adapted a theoretical framework that views policy as an iterative process involving the generation of texts from events, the translation of texts into narratives, and competition between alternative narratives resulting in institutions, which, in turn, enable and constrain events. This framework facilitates understanding interactions between actors at multiple levels across time. The levels of analysis being considered in this framework are: *intra-governmental interactions*; *intra-national interactions*; *extra-national state-focused interactions*; and *extra-national firm-focused interactions*.

Data, in the form of documents and interviews, were collected on site in Trinidad and Tobago in 2011 prior to analysis. The analysis consisted of, firstly, critical discourse analysis or CDA (following Fairclough, 1995 & 2003) of a corpus of policy documents, reports, newspaper articles, official pronouncements, and other textual material. The second major stage of analysis was a qualitative and interpretive study built upon in-depth interviews with over twenty-five individuals engaged in the situated policy narratives examined in this thesis. These participants were considered by their peers to have knowledge of, or some level of influence on the construction of the local policy discourse.

There are three original contributions to knowledge made in this thesis. Firstly, I have proposed an analytical framework that integrates three separate bodies of literature. The *discursive model of institutionalization* of Phillips, Lawrence and Hardy (2004) and the '*policy as discourse*' approach of Shaw & Greenhalgh (2008) and Shaw (2010) are integrated by way of a bridge, the '*trading zones*' concept of Galison (1997) as extended by Collins, Evans, & Gorman (2007). Thereby, I developed a series of analytical constructs that can be used for contextual policy research, especially in developing countries where dominant policy narratives constrain and moderate discursive exchange when those policy narratives - which were originally articulated in advanced economies - are subsequently transferred into developing countries.

² *Longitudinal* is being used here following the definition proposed by Kimberly (1976: 329): "Longitudinal organizational research consists of those techniques, methodologies and activities which permit the observation, description and/or classification of organizational phenomena in such a way that processes can be identified and empirically documented". This definition has been the basis of much processual organizational research, such as Pettigrew (1990). While longitudinal research was originally, and continues to be in some quarters, primarily econometric in nature, it more recently encompasses a range of approaches for examining organizational change processes, such as narrative methods (see Boje, 2001).

Secondly, I have empirically applied the framework to the study of ICT4D policy construction in Trinidad and Tobago, generating new insights in the process. In so doing I critically examined the process of constructing policy as discourse with the aim of identifying ways in which policy could be done differently. The analysis suggests that the process of discursively transferring previously existing policy narratives into new contexts can result in one of three outcomes: **no change** - if the introduction of policy narratives had no impact whatsoever on institutions; the construction of **policy pidgins** when discursive transfer, imitation and assemblage of narratives partially occurs; or the construction of **policy creoles** if the discursive transfer is complemented by translation, editing and social embedding. These terms are unpacked and discussed in Chapter 7.

Thirdly, I developed a model of policy creolization through which the two main factors that influence the emergence of policy pidgins and, eventually, policy creoles (both viewed as particular forms of institutions) in a setting of discursive construction were identified, namely:

- The length of the temporal window over which policy actors have an opportunity to develop ***interactional expertise*** to transfer, imitate and assemble narratives, and eventually to translate, edit and embed those narratives into social actions;
- The degree of intentionality of the discursive action, and subsequently the social action, that policy actors engage in, noting that there are three categories of social action:
 - ***Intentional*** action – which deliberately conveys particular ideas through texts.
 - ***Consequential*** action – which is generated as a by-product of ongoing dialogue among actors during which they may draw on broader narratives.
 - ***Emergent*** action – which arises through discursive contestation and struggle in ways that were not necessarily intended or predicted.

This highlights that both intentionality and time are required to bridge the knowledge gaps present between the different contexts, and even so, that the policy construction process in the new context requires practitioners to develop non-trivial levels of interactional expertise.

This thesis is intended to be relevant to policymakers who attempt to grapple with the complications that arise in policy implementation caused by conflicting narratives that are not critically disaggregated and conceptualized during policy analysis and design. Such conflicting narratives are often exemplifications of contrasting worldviews on development, and the role of technology in the pursuit of it. Failure to disaggregate and conceptualize the narratives in a form that is appropriate for the context, possibly through the creation of policy creoles, leads to inappropriate policy constructions that are ultimately ineffective.

The rest of this thesis is organised as follows: Chapter 2 presents a review of the literature on the three main theoretical constructs underpinning this work - policy, discourse and ICT4D, and concludes with a bridge that connects the three – the concept of trading zones. In Chapter 3 the research questions are presented and the literature is synthesized into a theoretical framework that integrates the three constructs, and that will then be used as a lens for the later analysis. The methodology and research methods are presented in Chapter 4. Since understanding the context of the policy environment is a critical step towards interpreting the mechanisms of policy construction through discourse, in Chapter 5 I discuss the specific historical, cultural and political situated factors that characterise Trinidad and Tobago and impact on its policy making processes. In Chapter 6 I present a case study in the form of a descriptive and analytical, contextual case study of 3 cases of discursive construction of ICT4D policy in Trinidad and Tobago as the country attempted to find its place in the global information society. Chapter 7 subsequently provides an in-depth interpretive analysis to develop and refine the contributions of this thesis and ensure that those findings are generalizable beyond the case study under examination here. Finally, in Chapter 8 I frame the theoretical and methodological contributions of this research, highlight pointed implications of this research for policy practice, discuss the limitations of the present study and suggest directions for future research.

2. Literature Review

Within this chapter I examine both 'ICT' and 'development' as complex and contested concepts. As a result, it is important to engage in research to understand both the discursive processes by which policy about these concepts is constructed, and the constraints and enabling factors of those processes. Such research is of vital importance for the wider project of exposing and deconstructing untenable policy positions about ICT4D, which ultimately lead to ill-conceived programmes of activity.

The primary research question of this dissertation spans three areas of literature, which therefore become the major constructs of this work that are brought together through the mechanism of discourse. These constructs are policy, ICT, and development – with the last two having been integrated into a topic of great academic and political interest - ICT4D - particularly within the last thirty years³.

By focusing on the mechanisms by which policy emerges, is reproduced through discursive practice, is made sense of through the collective action of stakeholders, and is finally integrated into social practice through taken-for-granted rules, norms and standards (i.e. "institutions"), I am giving the analysis a *processual* orientation, that is, one that emphasises the interaction of actions embedded in specific contexts over a period of time (Pettigrew, 1990).

The next section will present a survey of the policy studies literature that illustrates the major frameworks used to explain the policy process, culminating in a review of policy-as-discourse. Following this, in Section 2.2 I address the mechanisms through which discourse creates, sustains and disrupts institutions. Section 2.3 then offers a discussion of the major debates behind the contested concepts of "development" and "ICT", focusing particularly on relationships between the two as encompassed in the term "*ICT4D*" and related terminology. Finally, Section 2.4 offers a prospective mechanism for facilitating coordination and interaction between disparate policy knowledge sources, as the foundation for an interpretation of the findings in Chapter 7.

³ Of the top 3 ICT4D journals, one was founded in 1986 (*Information Technology for Development*), one in 2000 (*The Electronic Journal of Information Systems in Developing Countries*) and one in 2003 (*Information Technologies & International Development*)

2.1. Policy

This section presents a review of the major theoretical perspectives on the policy process that are present in the field of policy studies.

The term 'policy' has been traditionally understood as a linear, deliberate and purposeful transformation of public desires into public goods and services (e.g. Easton, 1965). Modern policy scholars, however, have interpreted policy as the outcome of deliberation and argumentation under circumstances in which the state is no longer the central character (see, for example, Hajer, 2003). On one end of the spectrum is American policy scientist Thomas Dye's pithy elaboration "*Public policy is whatever governments choose to do or not to do*" (Dye, 2008).

On the other, proponents of public policy generated through argumentation, competition and collaboration among a range of actors would suggest:

"[A] 'policy' then is a set of shifting, diverse, and contradictory responses to a spectrum of political interests." – (Edelman, 1988: 16 as quoted in Bacchi, 2000: 48)

For this thesis I take a broad view of policy that encompasses a complex translation of public demands (informed as they are by social, ideological and political values) into tangible social action. In this view policy is not the exclusive province of government actors.

To clarify the use of terminology, for this review I follow Fischer (2003) in adopting the following distinctions between the terms 'policy studies', 'policy analysis' and 'policy research'.

"The term 'policy studies' ... designate[s] the general field of inquiry. The term 'policy analysis' designates the application of a range of decision-oriented methodologies usually assumed under policy studies, cost-benefit analysis being an example. And 'policy research' is employed ... to refer to the primary activity of scholars engaged in policy studies." – (Fischer, 2003: 1, footnote 1)

As such, the policy studies literature is centred on understanding the various approaches to policy analysis. Classical policy analysis approaches date back to the post-WWII era, becoming defined firstly in the US but with later seminal contributions from European authors (John, 1998). Lasswell, Lerner & Fisher (1951) is a touchstone entry in the literature. Here, policy analysis (referred to as 'the policy sciences' by the authors) was conceptualised as a multi-method, problem-oriented means of transforming information on a given issue into a form that facilitated objective decision-making. An increasingly technology-centric way of life, combined with a modernist confidence in the ability of expert technocratic élites to discern 'the best answer' to a range of increasingly complex questions of social choice, contributed to the rationalist underpinning of classical policy analysis. Since the end of the Second World War the

gulf between the respective abilities of governments and the publics they governed to contribute effectively to policy making has widened. As a means of addressing the resultant paradoxes that arose from the public's decreasing voice in policy processes, the application of objective, scientifically sound methodologies by technocratic élites acting on behalf of the general public was seen to be the most desirable resolution. The main idea of this form of policy analysis was to avoid getting lost in a bureaucratic maze of localized power and influence (Hajer, 2003; Fischer, 2003). According to critics (e.g. Jenkins-Smith & Sabatier, 1993) what these early approaches lacked in explanatory potential was an appreciation of the fragmented structure of modern democratic governments, and the effect of that structure on implementation. Experience showed that hierarchical organisation with delineated procedural rules and norms encouraged the hoarding of knowledge within silos. This created power struggles between different arms and departments of governments, so that a given policy issue would suffer serious distortion or even non-implementation as it traversed the political landscape between legislation and the provision of public goods and services. This effect gave rise to the public administration tradition within policy studies. Stillman (2005) gives good coverage of this tradition in the US context, while Rhodes (1997) offers the British perspective. Public administration considered the effect on the policy process of the bureaucratic structures and institutions⁴, around which governments in advanced industrial polities were based.

Each of the classic traditions of policy analysis developed along different trajectories, with policy science approaches emphasising the decision making aspect of policy, while the public administration side focused more on implementation and evaluation. Both sides developed empirical analyses based on US, British or European political systems. It is arguable, therefore, that policy research conducted in advanced, liberal, democratic states has overlooked the particularities of policy making in small developing countries, especially since developing countries are often constrained by global-spanning conditions established by the advanced countries. Despite the divergent emphases on decision-making and implementation, Bacchi (2000) proposes that for the most part policy studies literature (including the public administration tradition) can be placed into one of three categories, based on its conception of the nature of policy: *comprehensive rationalism*, *political rationalism* and *discourse*. The discourse approach is the most recent turn of the three and the only one that explicitly sets out to expose the invisible structure imposed on policy making in developing countries by powerful collective actors such as international organisations, development funding agencies,

⁴ Again, 'institutions' here means "rules, norms and standards"

multinational corporations and developed-country governments. I will next address these three categories in turn.

2.1.1 Policy as comprehensive rationalism

Within the comprehensive rationalist perspective, policy is standard and constant, and although localised to different issue domains, such as health or education, its underlying principles are thought to be generalizable and therefore subject to rational, scientific analysis. Under this view the policy process consists of an ordered sequence of events, including, but not limited to: problem definition, selection of a solution from a range of options, policy formulation, implementation and evaluation. The social problem under analysis is characterised as being primarily technical in nature and solving it occurs in a climate of consensual policy actors. The theoretical underpinnings of a comprehensive rationalist approach are positivism and economic rationalism. Policy studies that maintain this inclination are judged by their predictive abilities. Those studies share an empiricist methodology that can generally be referred to as 'quantitative'.

The defining example of a comprehensive rationalist approach would be the stages model (Jones, 1977). Politicians in the US during the 1950s/60s envisioned the use of established social science tools as the most efficient means of achieving social goals. The clear delineation between different categories of activities ('stages') of the policy process meant that rationalist methods could be used to guide decision-making at each stage. Relatively little emphasis was placed on putting those decisions into practice (John, 2003). During policy analysis this conception is useful as a first approximation for identifying the major policy-making sites and major activities. This is because those stages tend to exist, in one form or another, in most contexts owing to the longstanding popularity of this model.

The comprehensive rationalist approach has been heavily criticised as an actual model for policy analysis, however, owing to its implication of a 'linear model' of policy, complete with perfect search capabilities and purely rational decision making on the part of government actors (see, for example, the reference to this approach by Jenkins-Smith and Sabatier (1993) as the 'stages heuristic'). As intimated above, another major limitation of a comprehensive rationalist approach is the impression it carries of a single-minded monolithic government carrying out unified or consensus decisions. Much empirical evidence has shown instead a reality of separate autonomous tribes within the public sector jostling for control of resources (e.g. Heclo, 1978). Such messiness often precludes the identification of a clear path between the expression of social values and preferences in legislation, and what the public actually receives by way of

goods and services. Another criticism of these approaches is their lack of appreciation of contextual values or knowledge. Policy is portrayed to be largely comparable across situations in disparate sites. When transferred to the context of a developing country such an approach is seen to be an attempt to further Western hegemony, with a predisposition to ‘getting the job done’, even (and often) at the risk of silencing or not recognising indigenous sources of knowledge (Keeley and Scoones, 1999). The comprehensive rational view has survived as a normative model and ‘dignified myth’ (Hill, 1997) that resonates with policy-makers and, is often implicitly embedded within the assumptions of many analysts (Allison, 1969).

More recently, ‘new public management’ (NPM) (Hood, 1991, 1995) has been established as an extension of the comprehensive rationalist approach that seeks to address some of its implementation and principal agent issues. Specifically, NPM introduced the idea of ‘service level agreements’ and other explicit contracts between representatives of those providing and receiving government services respectively. Such agreements could be monitored with respect to specific indicators of outcome and performance, thereby ‘grounding’ policies that aim to deliver the services.

NPM represents a reconceptualization of the classic approach to policy that attempts to recognise or acknowledge the discontinuities and shortcomings that arise under the comprehensive rationalist approach and to address these problems by improving the interface between policy formulation and implementation with an explicit understanding that improvement is likely to require iteration and feedback (and is thus not strictly a linear process).

Nonetheless, critics (such as Dunleavy, Margetts, Bastow, & Tinkler, 2006) suggest that the wave of NPM within public sector reform has already passed in “leading-edge” countries that have been public administration pioneers. Instead, they claim, a range of ICT-focused digitization changes are ushering in “*digital-era governance (DEG)*” which involves the integration of processes that “*directly reverse NPM changes and many others which are at a tangent to NPM priorities and orientations*” (pg. 488). Some of the components of a DEG approach that Dunleavy and his co-authors argue are at odds with NPM include: joined-up governance and reengineering back office functions (under the rubric of “reintegration”); client-based reorganization and one-stop provision (under the rubric of “needs-based holism”); and, electronic service delivery and moving toward open-book government (under the rubric of “digitization processes”). Examples of some of the above have been noted during the conduct of this research and are chronicled in the case study in Chapter 6.

I will now present the political rationalist perspective, which integrated the effects of group and network interactions into the comprehensive rationalist perspective.

2.1.2 Policy as political rationalism

The term 'political' is used here in the sense of "*behaviour that is outside one's formal role, yet taken to attempt to influence the distribution of advantages*", thus recognising the pluralist nature of modern democratic activity (Barber, 2004). From this perspective policy is seen as unstable and emergent. It arises out of a diverse and constrained process characterised by problematic implementation in a conflictive climate. Here, the perceptions and interests of individual and collective actors take priority in defining and supporting certain policy issues in preference to others. The political rationalist view is considered more pragmatic than comprehensive rationalist approaches, because it takes into account the messiness of the administration of policy. That is to say, political rationalism attempts to grapple with the bureaucratic mechanisms that underpin all the activities ranging from the generation of policy ideas on the one hand, all the way to the actual implementation of those ideas in practice on the other. Proponents of political rationalism are said to be interested in bringing citizens back into decision-making. Political rationalism still encompasses a positivist theoretical leaning, but also introduces pluralism and some interpretivism. Research in this category may employ both 'quantitative' and 'qualitative' methods (see, for example Yates, Gulati and Tawileh, 2010).

Policy literature in the political rationalist vein was initially advanced in response to the comprehensive rationalist model by highlighting the long-term stability of government bureaucracies and their resistance to policy innovations. Governments were said to be 'muddling through' (Lindblom, 1959), thus resulting, on average, in decisions that were only incrementally different from previous policies and programmes.

Two other theoretical frameworks have advanced the integration of politics into policy studies: Kingdon's (1984) *policy streams and windows* framework and the *advocacy coalition framework* of Jenkins-Smith and Sabatier (1993). Kingdon's framework (updated in Kingdon, 1995) was built on the *garbage can* model of Cohen *et al.* (1972). He argued that a government (fashioned on the US federal government) is an "organized anarchy" in which three nominally separate streams of processes (problems, policy proposals - i.e. potential solutions to the problems - and politics) are present. Only when a "policy window" of opportunity opens as a result of major

shifts in the political landscape does a policy entrepreneur have the opportunity to couple two or more of the streams and achieve policy change.

In their advocacy coalition framework, Jenkins-Smith and Sabatier (1993) argued that coalitions are formed around core beliefs shared by groups of actors with similar interests within a policy subsystem. Through extensive lobbying routines, opposing coalitions then battle for dominance with the successful coalition establishing the mainstream policy system.

Finally, though they offer different perspectives of the effects of group politics on policy determination, later notable contributions that can be similarly categorised as politically rationalist include the work on elites (Dye and Zeigler, 2003); and, groups and networks (Heclo, 1978; Marsh and Rhodes, 1992; Richardson, 2000).

Political rationalism can be commended for paying adequate attention to the political behaviour involved in policy making and therefore putting a pragmatic emphasis - that was argued to be lacking in comprehensive rationalism - on connecting problems in the policy life cycle to solutions. However, a deficiency of political rationalism identified by social constructionists is that the political rationalist view portrays the policy analyst as a neutral, impartial observer who is capable of standing outside the socially constructed space of policy-making (Bacchi, 2000). From a social constructionist perspective, this position is untenable, since any entity to be investigated (e.g. a policy process or institution) is given meaning through a process of sense-making that takes place individually within the minds of analysts, and communally via social interaction. This sense-making involves constructing, distributing, interpreting and reconstructing discursive events⁵ (Fairclough, 1992) that give meaning to the social world. Therefore, each analyst (and any other social actor), as a member of some group within a social environment cannot stand apart from the construction of those entities being investigated in order to assess in an independent manner the effect of the values and preferences of others.

The next sub-section takes a look at a discursive approach to policy analysis which is purported to allow for the processual analysis of policy process mechanisms.

2.1.3 Policy as discourse

Policy-as-discourse is a third perspective within the literature that portrays policy as a dialogical process in which social problems and solutions do not simply exist in the abstract but are socially

⁵ See section 4.1.3 for an explanation of discursive events

constructed through argumentation and discourse (DeLeon, 1998; Fischer, 2003; Hajer, 2003; Majone, 1989). Since discourse forms the basis of this perspective an examination of the use of language becomes crucial for explaining interactions between the actors involved in creating policy. Discourse is realised at three levels: i) it is expressed through direct interaction between the actors involved; ii) it is captured in policy documents, manifestos, news articles, and other textual artefacts; and iii) it resides in the social rules and institutions of those who participate in it. Discursive approaches have a theoretical basis in post-positivism, and their objective is *explanation* of social processes as opposed to *prediction*.

While political rationalist policy analysis approaches have been well established in the literature, discursive policy analysis has not been similarly well-received in the mainstream. This is partly attributable to the preference among policymakers (a large and vocal audience for policy analysis) for generalised, linear accounts of the relationship between specific actions and results. Like political rationalism, discursive approaches are concerned with opening up the participation in public decision-making to a wider audience. However, unlike political rationalism, a discursive approach seeks to lay bare the assumptions on which even problem conceptualisations are based, thereby addressing different types of research questions than can be examined from a rational perspective.

There is recent growing evidence in theoretical and empirical literature of the use of discursive approaches to policy analysis wherein the role of language (as a means of conveying ideas and social values through discourse) is examined in the construction of policy issues and in the process by which policy is produced (see, for example Carter, 2007 and Skelcher, Mathur, & Smith, 2005). Building on Bacchi (2000), Shaw (2010) is representative of this trend and proposes the application of *policy-as-discourse* to analyse the development of primary care research policy in the UK health sector on the basis of the ability of a discursive approach to “*reach the parts [of policy explanations] that other theories and methods can’t reach*” (pg. 196). The “other theories and methods” to which Shaw (2010) refers are what Fischer (2003) terms the “*empiricist/neopositivist approach*” to policy analysis, which I have discussed above as comprehensive rationalism. Comprehensive rationalism and political rationalism approaches are two sides of the empiricist/neopositivist coin.

Methodologically speaking, given the main objectives of this research, as outlined in Chapter 1, and the foregoing categorisation of policy studies approaches, it follows that my research approach must identify explicitly the assumptions on which it rests and not take any part of the policy process being examined as “given”. The prominent policy models in existence were

developed with certain inherent assumptions and ideologies. Consequently, it would appear that in the context of this study, a methodology that rests too heavily on either comprehensive or political rationalism is not best suited to explaining the underlying mechanisms through which systems of meaning are constructed, and subsequently reinforced through repeated action and institutionalization. The subsequent discussion probes this issue further.

2.1.4 Discussion: discursive policymaking for the modern, interconnected world

Since the mid-twentieth century, policy-making in increasingly technology-centric societies has required policy-makers to rely more heavily on expert advice in the decision-making process. Discourse adherents argue that this dynamic has exacerbated the inequality of societal power relations (see, for example, Fairclough, 1995 and Fischer, 2003). As a result, they argue, discourse alters the dynamic of public engagement on societal issues by: i) allowing some things to be said and not others; ii) favouring some people to speak over others; and iii) attributing legitimacy to certain modes of communication more than others. As a consequence of the distributed, multi-stakeholder environment of modern public policymaking, it is more difficult for the general public to discern the actors who wield the power to influence discourse and the means by which they wield such power. Following Fairclough (1995) I interpret power in terms of the asymmetrical capacities of actors to control discourse in given sociocultural contexts. This power is defined as the ability of actors to “*sustain particular discursive practices with particular ideological investments in dominance of other alternative (including oppositional) practices*” (p. 1), and may be enacted by a range of methods including persuasion, deceit and manipulation (Van Dijk, 2001: 302)

In his exposition of the environmental policy discourse Hajer (1995) offers a discourse coalition framework in response to the popular advocacy coalition framework (ACF) of Sabatier (1988) (as extended in Sabatier & Jenkins-Smith, 1993). Although both approaches purport to explain policy change generally, Hajer’s approach is one that frames policy coalitions as discursive phenomena. In proposing his framework, Hajer offers a critique of the ACF that Fischer (2003: 100–109) has distilled in terms of three problems.

Firstly, advocacy coalitions are said to be structured in terms of relatively unified groups with a commonly shared set of beliefs. However, because the ACF is essentially positivist in nature and seeks to offer universally applicable empirical generalizations, it cannot cope with variations of beliefs *within* a given coalition, preferring instead to excise such differences and offload the

source of variation into ‘black boxes’ that are put outside the realm of the analysis. Instead of specific policy belief systems which constrain or enable the actions of their adherents, (Hajer, 1995: 102) argues that “narrative storylines” *“that symbolically condense the facts and values basic to a belief system”* hold coalitions together. This is because most coalition members, with the exception of technocratic experts, do not possess sufficient factual/scientific knowledge of any issue with which to evaluate their belief system or any other. Interacting with these storylines therefore involves constant interpretation of events and actions within specific real social contexts. Hajer asserts that adherence to a given policy belief system is arrived at and sustained mainly via processes of socialization (specifically discursive reproduction or ‘repetition’) and emotional responses to critical life events, rather than through the generation of knowledge about the belief systems via individual first-hand empirical examination of the underlying facts. This process persists for long periods of time in the face of arrival of new “facts” that may threaten to invalidate the storylines, since those facts are always interpreted by coalition actors who can choose to deny or ignore the facts if they do not fit their interpretive schema.

Secondly, advocacy coalitions within the ACF are composed of individuals who collaborate via *“a non-trivial degree of coordinated activity”* (Sabatier, 1988: 139) to pursue their political goals in specific ways. This characterisation necessitates physical proximity between all actors and intentionality born from a shared purpose to account for policy change. However, by characterising policy coalitions instead as discursive phenomena Hajer explains that such coalitions can be reproduced and transformed over time and dispersed over large geographic distance without members ever sharing physical contact or coordinating their political activities. This accounts for the way in which actors in countries that are far apart are able to convey and reproduce a discursive understanding of technical issues, such as ICT4D.

Finally, the ACF conceptualizes policy problems and solutions as relatively well-defined and static, and so focuses instead on identifying and explaining the operation of the coalitions as they evaluate policy solutions and pursue specific goals. By taking a discursive-analytic view, however, Hajer argues that coalitions struggle interactively to define and redefine problems and solutions, as well as their orientations to each, via discourse. In this view ‘problems’ do not exist in the abstract awaiting solutions – they are both created by the actors (including researchers) who are trying to apprehend them (c.f. Bacchi, 2000). *Problematization* thus becomes the focus of this type of policy analysis rather than problems and their solutions. The major problem he identifies with the ACF view is that actors are portrayed as having clearly defined value preferences that remain static over time. In practice such stability is not observed, as actors

(especially politicians) sometimes take very different positions on issues under different circumstances (Morgenthau et al., 2005). Hajer argues that such contradictions arise due to the political nature of policy, wherein actors offer particular narratives that compel others to respond in ways that they might not normally have responded in a different time and place. In Hajer's view, these contradictions, which are omitted from examination with the ACF, are important indicators of the start of policy change.

In later work Hajer (2003) avers that for headline issues such as environmental regulation (and ostensibly ICT4D) in the contemporary world, major institutional changes have occurred such that policy making now takes place in an 'institutional void'. He makes a distinction between the policy environment within 'classical modernism' and the present age. In the former, public decisions were made within the bounds of specific polities, driven by formal actors according to well-defined institutional arrangements. In the present age the complexity of social problems means that political action now takes place in an 'institutional void' where "*there are no generally accepted rules and norms according to which policy making and politics is to be conducted*" (Hajer, 2003: 175). This void gives rise to 'new political spaces' wherein "*consumer organizations...NGOs...and non-political actors*" play a more pronounced role in creating the policy discourse⁶. The polity is no longer the central site of activity. This is an apt description in the context of applying ICT to the pursuit of development goals, which is a globally dispersed set of activities.

From the discussion above, it should be clear that owing to their top-down hierarchical orientation, positivist approaches are decried by post-positivists due to the former's tendencies away from 'pure' democracy since the layman's perspective is diminished in favour of that of the expert. While political rationalist approaches sought to remedy this by including the impact of politics in their explanation of public decision-making and implementation, they have been criticised for their failure to recognise policy as a socially constructed entity, and therefore recognise the role of analysts in policy construction (Bacchi, 2000). In the search for a policy analytical approach that can deal with dispersed discussion and decision-making spaces, and which addresses the impact of non-publicly appointed actors, the final alternative is a discursive/interpretive approach. However, it is necessary to first apprehend the shortcomings of such an approach.

⁶ See Hardy and Maguire (2010) for a case study of institutional and organisational change via discursive "field-configuring events" in the context of reframing the insecticide DDT from "evil threat" to "necessary evil". Herein multiple political spaces were identified.

Discursive approaches have been criticised by traditional policy scholars on the grounds that the analysis produced from applying them is relative, and contingent on the particularities of the case being studied (Sabatier, 1991). Consequently, discursive analyses are argued to lack generalizability.

At a theoretical level, Bacchi (2000) has commented that due to the unsystematic use of the term 'discourse' by analysts, with some focusing on the *use* of discourse, while others elaborate its *effects*, the power of discourse as an explanatory mechanism has been diminished. There are three main theoretical problems she identifies within the literature on policy-as-discourse that concern the concepts of power, ideology and subjectivity.

Firstly, Bacchi decries an over-emphasis in the literature on asymmetry in power relationships, characterised by a focus on 'the effects of discourse' on those without power by those 'holding' power. This, she suggests, then skews analysis to consider a bleak dichotomy between the actors that 'hold' power (often, the technical experts in either public or private sectors) as the shapers/creators of discourse and the power-less who become mere conscripts within the discourse, bound to follow the institutional routines set for them.

To avoid this problem, some policy-as-discourse analysts have proposed discourses as *"conceptual schema attached to specific historical, institutional and cultural contexts, making it clear that no agent is completely free to construct or reconstruct them"* (Bosso, 1994: 52). While this diminishes the emphasis on asymmetry of agents that give rise to the initial problem, Bacchi suggests that it creates a second problem: indistinct use of 'ideology' as a focal device to link 'interests' and 'forms of consciousness'. Since no specific actor or actor group can be identified as having predominant influence over discourse, the 'enemy role' falls to the purveyors of ideologies, which encompass particular interests. Actors are therefore portrayed passively as subjects who become proponents of particular ideologies through processes of socialization. According to Bacchi this problem is exacerbated by the use of multiple conceptualisations of 'ideology' in the policy literature.

The third problem can be considered the 'subjectification' of the peripheral actors in policy problem scenarios as victims ("needy" or "disadvantaged", for example), which thereby reinforces their disempowered status. By so doing, Bacchi argues, policy researchers leave the power to define "need" or "disadvantage" in the hands of those designing policy, which undermines the revolutionary orientation and potential of policy-as-discourse to change the status quo.

To overcome all three of these problems Bacchi recommends more theorizing of the “space for challenge” provided by a focus on discourse. Discourse, in her view, is powerful but its power cannot be fully realised without correcting the theoretical imbalances described above. To address this shortcoming, the next section will investigate the role of discourse in the institutionalization (standardization of rules, norms and standards) in a policy field.

Section 2.1 has presented a review of policy analysis literature, using Bacchi’s (2000) three-part categorisation, *comprehensive rationalism*, *political rationalism* and *policy-as-discourse*, based around the orientation of each of the categories to different ontologies of policy. I have shown that a policy-as-discourse approach offers the most promise for conceptualising policy construction processes in modern societies, owing to its ability to take account of the existence of dispersed public decision-making spaces and the increasing roles of non-formal, non-elected actors in translating and interpreting the systems of meaning on which narratives in those spaces are based. Common problems concerning the theorisation of policy-as-discourse have also been examined, and the responses to those problems that have been designed into the theoretical framework of this dissertation are presented in Chapter 3. We now move on to review the relationship between discourse and institutions.

2.2. Discourse and Institutions

The study of discourse is generally concerned with “*how the socially produced ideas and objects that comprise organizations, institutions, and the social world in general are created and maintained through the relationships among discourse, text, and action*” (Phillips et al., 2004: 636). Discourse can be considered an interactive process of representing and conveying ideas about actions, objects and practices. As such, discourse analysis starts from the position that all such ideas are “*socially meaningful and that these meanings are shaped by the social and political struggles in specific historical periods*” (Fischer, 2003: 73). As a result, the objective of discourse analysis is to demonstrate the process of social construction of the ideas, and to explain the implications of those ideas for social organisation and interaction. Because this perspective incorporates the notion of agency (in this case, that under certain circumstances policy actors purposefully convey ideas to other actors, often across geographical regions, over extended periods of time, and for different reasons) a focus on discourse in the analysis of policy making complements and extends other approaches that primarily emphasise structural constraints such as historical path-dependence, cultural appropriateness or material interest-based choice, as I will discuss later in this section.

Although discourse is concerned with the transmission of ideas, the concept of 'idea', however, is diffuse and difficult to define. In fact, within the policy, politics and international relations literature there have been myriad approaches to explaining ideas. According to Schmidt (2008: 306) ideas have been variously portrayed as:

- switches for interests, road maps, or focal points (Goldstein and Keohane, 1993);
- strategic constructions (Jabko, 2006);
- strategic weapons in the battle for control (Blyth, 2002);
- narratives that shape understandings of events (Roe, 1994);
- frames of reference (Jobert, 1989; Surel, 2000);
- collective memories (Rothstein, 2005);
- national traditions (Katzenstein, 1996).

As it relates to the policy and political action literature, Schmidt (2008) argues that ideas are characterised at three “levels of generality”, namely: policies, programs, and philosophies.

Policies are the direct currency of policy makers and politicians. They represent ideas as “solutions” to social “problems” that are constructed at the more abstract social level of programs. Programs are the basic assumptions underpinning policies.

Programs define: (1) the issues to be characterised as problems (as opposed to those which are framed as ‘accidental’ elements of the environment, and hence are not amenable to human intervention - see Stone, 1989); (2) the range of possible solutions that will be considered (and thus, excludes those options that are not given consideration); (3) the goals of the action to be undertaken; and, (4) the criteria for determining success. Programs act as links between the specificity of policies and the generality of public philosophies.

Philosophies, also known as “public sentiments” (Campbell, 2004) or the “deep core” (Sabatier & Jenkins-Smith, 1993), are even more abstract and basic than programs, and at such a level of generality are difficult to detect, much less define, but can be considered the worldviews held by large collectives of people (insofar as such worldviews can be homogeneous across the multiple people groups that make up a society). Philosophies organize the fundamental values and principles of society. A citizenry's philosophies are not often subject to public discussion or modification, except during periods of major crises which prompt cognitive re-evaluation.

To be clear, there has also been disagreement over the precise definition of the term “discourse”. However, broadly speaking the term can be used to refer to both:

(1) “[T]he **ideas** represented in the discourse (which may come in a variety of forms as well as content)”;

(2) “[T]he **interactive processes** by which ideas are conveyed (which may be carried by different agents in different spheres)” (Schmidt, 2008: 309) emphasis added

For clarity of the subsequent discussion and theoretical framework, I will use the term “narratives” to refer to meaning (1) and “discourse” to refer to meaning (2) only.

For the purposes of this research ‘discourse’ is a more useful analytical lens than ‘ideas’ because the term ‘ideas’ connotes elements that only exist inside people's heads that are not subject to direct examination by external agents. Admittedly, as an analytical lens, discourse is itself a construction of the social scientists that examine it, and is therefore still somewhat abstract. However, discourse can be represented tangibly in the form of texts (see discussion below) which can be examined.

Schmidt suggests that the term “discourse” carries a negative connotation to modern social scientists because of its early invocation as a reductionist mechanism by literary critics and postmodern philosophers who were criticised (not always accurately) for viewing all of social life as the result of the interplay of words. However, viewing discourse as an interactive semantic process for representing, conveying and interpreting ideas gives opportunity for productive investigation of the effect of language (as the vehicle of ideas) on action via the creation of institutions. As a result, this section will focus on those approaches that are concerned with the effect of discourse on action, i.e. the space where the linguistic focus of discourse theory intersects with the focus on power dynamics that is characteristic of critical theory.

2.2.1 The institutional effects of discourse

As introduced above, discourse arises through the production, dissemination and consumption of “texts”. Texts are instantiations of language in a particular meaning context and can take many forms in organizational settings. That is to say, texts are not simply random collocations of words but adhere to some defined internal structure, can be related in some way to other existing texts and are interpreted in reference to a system of meaning shared between text producers and their audience. With respect to the discourse analysis literature, there are various understandings of “text”, some of which are very loosely bounded. For example, “[t]ext ... [refers to] any kind of symbolic expression requiring a physical medium and permitting of permanent storage” (Taylor and Van Every, 1993: 109). Also, “[t]exts ... may take a variety of forms,

including written documents, verbal reports, artwork, spoken words, pictures, symbols, buildings, and other artifacts" (Phillips et al., 2004: 636).

Texts are used by political actors in the framing of "causal stories" (Stone, 1989: 282). Causal stories are composed by political actors so as to recast "difficulties" or "issues" in the public sphere into "problems" by attributing "cause, blame, and responsibility" to other actors, and thereby legitimizing government intervention in some form as remedial action. Three core elements are found within a causal story (Hardy and Maguire, 2010: 1372):

1. coherent identities - by attributing human behaviour as the source of some undesirable condition rather than accident, fate or nature, political actors seek to establish a "burden of reform"
2. a desired end point or ultimate goal - these are set in reference to existing problems that are defined via *"active manipulation of images of conditions by competing political actors"* (Stone, 1989: 282)
3. enabling forces that contribute to movement toward that end point - here, any objects that can be brought in to assist in movement toward the desired goals (such as new computer technology) are appropriated via texts in ways that associate them favourably with the stories' protagonists.

This discussion draws attention to the issue of power within a discursive policy making modality. Power is exercised in the production and dissemination of texts, which therefore exerts an effect on the consumption of texts, and moderates the flow of ideas and the expression of perspectives. Discourse is thus important not just because of its effect on the dynamics of texts, but because it can affect action - in terms of the success or failure of policies, and by extension, the initiation (or not) of specific activities arising from those policies – ultimately to the benefit of certain interested parties.

Discourse affects action through the production of institutions (in the broad sense of rules, norms and standards for behaviour) that govern how the ideas embedded in narratives are adopted and adapted into actual practice.

Phillips, Lawrence and Hardy (2004: 644–645) propose that three main factors affect the likelihood of discourse (as exemplified in narratives) successfully producing institutions, which include:

- **The internal structure of the narrative:** *"[Narratives] that are more coherent and structured present a more unified view of some aspect of social reality, which becomes*

reified and taken for granted. The more reified and taken for granted the social construction, the more difficult or costly it is to enact behaviors not consistent with it, either because it is difficult to conceive of and enact alternatives or because proscribed/prescribed behavior can be defined and connected more clearly to clear, strong sanctions/rewards.” (ibid, pp. 644-645)

- **The level of support from other, highly legitimate narratives:** *“A [narrative] that is consistent with and supported by other, broader [narratives] will produce more powerful institutions because their self-regulating mechanisms will reinforce each other. Conversely, the existence of competing [narratives] will reduce the likelihood a [narrative] will produce institutions.” (ibid)*
- **The level of competition from other contradictory narratives:** *“[T]he existence of competing [narratives] will tend to undermine the power of institutions stemming from the focal [narrative], because they provide actors with alternative institutions and consequently lower the costs associated with nonadoption of any particular institution.” (ibid)*

In short, as long as a narrative is structured so that it aligns to notions that are taken as “given” by the organizational actors who encounter or manipulate that narrative, and as long as it builds upon other well established narratives, and as long as it doesn’t suffer from competition from other plausible explanations (that are also well-established), it is more likely to be accepted and lead to the creation of an institution.

In the view of these authors, institutions are “shared definitions of reality” which arise as people interact. Following Berger and Luckmann (1966), Phillips, Lawrence and Hardy (2004) suggest that these shared definitions of reality develop through linguistic processes. This means that they view institutions as *“constructed primarily through the production of texts, rather than directly through actions”* (pg. 638). Additionally, they suggest that *“[i]nstitutionalization does not occur through the simple imitation of an action by immediate observers but, rather, through the creation of supporting texts that range from conversational descriptions among coworkers and colleagues to more elaborate and widely distributed texts such as manuals, books, and magazine articles”* (pg. 640). The value of this approach is that it considers the resilience of texts to be able to survive in a range of different local settings, without the necessity of close interaction between the inhabitants of those settings. In so doing, they distance their work from traditional studies of institutionalization in which institutions are defined in terms of patterns of action.

This positioning then establishes **discourse analysis** as their choice of methodological approach to investigate institutionalization. By taking this approach, relationships are drawn out among texts, narratives, institutions and actions, with the *sine qua non* of the resulting model being the

conditions under which institutionalization is most probable (as highlighted on the previous page).

Phillips, Lawrence and Hardy (2004) follow Palmer, Jennings and Zhou (1993) in ascribing the role of texts in institutionalization to three types of "isomorphic pressures", namely:

- a) normative pressures - 'particular text[s] ... influence the institutionalization of [specific norms]'
- b) mimetic pressures - '[specific organizational actors] learn about their organizations as well as other organizations through particular texts - org charts, reports, conversations, stories, etc.'
- c) coercive pressures - '[dominant organizations] use texts (such as org charts, reports, accounts and stories) to exert pressure on partners to adopt [specific norms] because doing so reduced cognitive and economic costs'

Their model of institutionalization claims to offer three improvements over other approaches (pp. 635-636):

1. Identification of *"the microprocesses whereby individual actors affect the discursive realm through the production of texts, as well as the processes through which discourses provide the socially constituted, self-regulating mechanisms that enact institutions and shape individual behavior."*
2. *"[H]ighlight[ing] an alternative understanding of social construction to that of Berger and Luckmann (1966) that is better able to explain the production of the types of institutions that feature in most institutional research."*
3. A method for connecting *"the sophisticated techniques developed in discourse analysis for analyzing the social dynamics of language and meaning"* with *"empirical studies of how institutionalization processes actually occur."* Thus, they claim to show how *"discourse analysis connects with institutional theory"* and how *"institutional theory can benefit from a linguistic perspective"*.

Assessing these claims requires an understanding of the terminology the authors use. In the model a *"discourse"* is taken, after Parker (1992), to mean a *"structured collection of meaningful texts"* (pg. 636), which is analogous to *"narrative"* as I have defined it in the introduction to Section 2.2.

A narrative, therefore, imbues structure and meaning on a collection of texts. In so doing, Phillips, Lawrence and Hardy suggest, discourse (the process) is used to legitimise particular

forms of conduct, expression and understanding of a given issue (by framing these social norms in particular narratives), while illegitimizing alternative forms that do not conform to the dominant structure. Further, while they may have very real effects, narratives themselves are intangible and can *"only be explored by examining the texts that constitute them"* (p. 636). Such examination is referred to as discourse analysis: *"the systematic study of texts - including their production, dissemination, and consumption - in order to explore the relationship between discourse and social reality"* (p. 636). Analysis of this type involves in-depth examination of the full range of processes concerning texts, including their linkages to other texts, and the meaning that is derived through interpretation from such linkages by way of *"socially produced ideas and objects that comprise organizations, institutions, and the social world in general"* (p. 636). In their conceptualisation, the relationship among narrative, text and action is *"mutually constitutive"*, that is: *"the meanings of [narratives] are shared and social, emanating out of actors' actions in producing texts; at the same time, discourse gives meaning to these actions, thereby constituting the social world"* (p. 636).

Previous studies that utilised discourse analysis to understand the social production of ideas and objects in organizational settings include: Alvesson & Kärreman (2000); Grant et al (1998); Hardy & Phillips (1999); Morgan & Sturdy (2000); Mumby & Clair (1997); Phillips & Hardy (1997); Putnam & Fairhurst (2001).

However, as (Schmidt, 2008: 312) argues, narratives need not be true, coherent or consistent to be successful. They may actually consist of lies or "spin" in attempts to obfuscate the actions or motivations of political actors. Generally speaking, according to social theorists such as Bourdieu, Foucault and Gramsci when language is used in this way it becomes a mechanism for exercising power and domination by societal elites.

In relation to this issue, Bourdieu's concepts of 'habitus' and 'doxa' are important. Habitus described a cultural framework within which and by which habitual thought and social action occur. Dominant social groups were thought by Bourdieu to use their power to ensure that their habitus remained dominant over others by legitimising actions and outcomes which they considered valuable, while constructing the characteristics of the habitus of subordinate groups as non-desirable. Bourdieu's notion of doxa, or interaction between habitus and a particular field of endeavour, produced a set of accepted assumptions in that field. These assumptions would come to be seen as "the norm" and therefore would be largely uncontested, making contrary social actions or beliefs become unthinkable or inappropriate to be expressed.

Foucault introduced the concepts of ‘technologies of power’ and ‘technologies of self’ as mechanisms of enforcement of social practices, as well as the social roles of individuals that participated in those practices. These mechanisms would create “institutions” that authorised particular practices and influenced how individuals perceived their roles. Similar to Bourdieu’s “doxa”, Foucault ascribed to *discourses* the ability to set the boundaries of what could and could not be queried, what was and was not acceptable in terms of beliefs and actions about a given subject, and the appropriate ways of expressing those beliefs. From Foucault’s perspective, institutions are defined and understood through discourses at the level of both individuals and macro-groups.

Gramsci’s contribution to this topic is through his well-known conception of “hegemony”, which came in two forms. His first framing of hegemony referred to the mechanisms of power that controlled capitalist and fascist societies through ideological and consensual means, as opposed to the coercive approach of the state via the army, the police and the judiciary. The second conception of hegemony, framed as a more socially equitable alternative to the previous form of political and economic domination, offers opportunity to subordinate groups to resist through organisation of new models of education, politics and economics.

At this point it is important to audit the organizational studies literature on institutions to ensure conceptual clarity going forward, since, like ideas, many different perspectives on institutions have been advanced in the past.

According to Barley and Tolbert (1997: 96), institutions are “*shared rules and typifications that identify categories of social actors and their appropriate activities or relationships*”. They represent “*constraints on the options that individuals and collectives are likely to exercise... that are open to modification over time*”. In this way institutions can be said to “*set bounds on rationality by restricting the opportunities and alternatives [that individuals and collectives] perceive and thereby, increase the probability of certain types of behaviour*” (Barley and Tolbert, 1997: 94). Or, in other words institutions are “*conventions that are self-policing*” (Douglas, 1986).

Institutions are not perfectly resistant to change, however, and can be altered or even removed through choice and action (Barley and Tolbert, 1997: 94). Specifically, Barley and Tolbert (1997) suggest that two conditions have a major effect on how easily an institution may be challenged: the length of its history and the degree of its acceptance by the members of the collective (pg. 96).

Traditionally, institutional scholars have classified institutions into one of three categories based on their provenance: historical path-dependence resulting in “lock-in effects”; rational choice based on material interests; or, norms of cultural appropriateness arising from social interaction. More recently, a “*fourth new institutionalism*” (Schmidt, 2008) known as discursive institutionalism has been identified that extends and expands on the other three, as we shall see below.

From a historical institutionalist perspective, institutions are perceived as “*historical accretions of past practices and understandings that set conditions on action*” through the way in which they “*gradually acquire the moral and ontological status of taken-for-granted facts, which, in turn, shape future interactions and negotiations*” (Barley and Tolbert, 1997: 99).

A rational choice institutionalist perspective could sum up an institution as a rule that “*involves mechanisms that associate nonconformity with increased costs in several different ways: 'economically (it increases risk), cognitively (it requires more thought), and socially (it reduces legitimacy and the access to resources that accompany legitimacy)'*” (Phillips et al., 2000: 28).

Sociological institutionalists see institutions as norms that “*influence behavior, because departures from them 'are counteracted in a regulated fashion, by repetitively activated, socially constructed, controls'*” (Jepperson, 1991: 145). And, in common with discursive institutionalists, according to Phillips, Lawrence and Hardy (2004: 638) the sociological view recognises that institutions are “*social constructions, produced through meaningful interaction*”, however, they “*are not just social constructions but social constructions constituted through discourse*” (Kress, 1995; Parker, 1992).

A discursive institutionalist would portray an institution as a product of discourse. For example, Fairclough defines an institution as, “*an apparatus of verbal interaction or an 'order of discourse'.... Each institution has its own set of speech events, its own differentiated settings and scenes, its cast of participants, and its own norms for their combination.... It is, I suggest, necessary to see the institution as simultaneously facilitating and constraining the social action of its members: it provides them with a frame for action, without which they could not act, but it thereby constrains them to act within that frame*” (Fairclough, 1995: 38). However, as Phillips, Lawrence and Hardy (2004: 638) point out “*while all institutions are discursive products, not all products of discourse are institutions*” because only institutions have “*self-regulating, socially constructed mechanisms that enforce their application*”. From this perspective an institution can only exist “*when sanctions are sufficiently robust*”.

Consequently, depending on the organizational situation, a historical, rational choice, or sociological explanation may be best suited to elucidating the institutional dynamics.

To conclude this part of the discussion we can say that while institutionalization is the process of production and reproduction of institutions, from a discursive perspective, institutionalization *“occurs as actors interact and come to accept shared definitions of reality, and it is through linguistic processes that definitions of reality are constituted (Berger and Luckmann, 1966)”* (Phillips et al., 2004: 635).

2.2.2 The relevance of institutions for policy as discourse

Institutions exercise cognitive and normative functions, that is to say, they define “acceptable” and “unacceptable” behaviour in a given social context, while attributing rewards and sanctions accordingly. Institutions thus moderate human activity.

Institutions matter for policy because they affect discursive action as well as social action. Discursive institutions are linked to social institutions, but the two sets are distinct. Institutions governing discursive activity allow certain expression (who may speak, where, when, what type of expression) while constraining others, hence manipulating the flow of ideas. Institutions governing social activity control the allocation of resources. Thus, understanding the change (or continuity) in particular social institutions is an important issue for understanding how discourse contributes to policy (including why some policies are successful while others are not). Because of the effect of institutions, some actions are more likely to produce texts than others, and in turn those are more likely to influence discourse. Phillips, Lawrence and Hardy (2004: 640–644) suggest that two types of actions are more likely to produce texts than others: those that “leave traces” and those that “are likely to act as organising mechanisms across individual situations”.

If we now turn our attention to a developing country policy context so as to exemplify this analytical discussion, it can be said that in developing countries the plurality of narratives (as vehicles for ideas that originate from disparate sources of knowledge) is not opened up for consideration because of the high costs associated with doing so. These costs are economic, cognitive and social (Phillips et al., 2000: 28).

Other factors also influence how texts affect policy discourse in a developing country, such as:

- (1) **The characteristics of the text producer** (Phillips et al., 2004) - Higher visibility, access to the media and social prominence within an organisational hierarchy all contribute

favourably to the success of a causal narrative. Thus an “internationally renowned consultant” recommended by a multilateral funding organisation is given primacy over local technocrats because of the greater 'discursive legitimacy' afforded to such a consultant.

- (2) **Consonance between the narrative and “widespread and deeply held cultural values”** (Stone, 1989: 24) - The more a story and its associated texts cohere with the social and cultural institutions and aspirations of a people, the better its chances of being accepted. For example, the use of telecentres as a preferred mechanism for providing public access to ICTs has gained significantly more traction in the developing world than in the developed world. This is because collectivism (the main rationale for a telecentre) rather than individualism is a much stronger motivator for action in the developing rather than the developed world.
- (3) **Relationship between the story and the “national mood”** - Timing is also important. Stories that connect in the right way with appropriate audiences at the right time are more likely to succeed (Schmidt, 2008). Thus a narrative that catches the wind of current national sentiment will fare better than one that does not. Chigona & Mooketsi (2011) explore the impact of the media on facilitating the diffusion of such narratives in a developing country context.
- (4) **The form (genre) of text** - overseas expert-led training seminars, meetings of international multilateral bodies, and development funding organisations are all sources of texts that *“enact a relevant and recognizable genre [and] are more likely to provide other actors with a tool they can use for interpretation, motivating them to use these texts and incorporate them into their own actions and texts”* (Phillips et al., 2004: 643)
- (5) **The relationship of the text to other texts** (Fairclough's “interdiscursivity”) - new texts that draw on the widely accepted genres discussed above are better placed to be accepted and adapted by actors into their practice than texts that do not. Conversely, rigid adherence to such widely accepted texts can have perverse effects on the resulting programmes of activity, as put forward by Clemens, Kenny & Moss (2007).
- (6) **Degree of prescription of radical redistribution of power or wealth** (Stone, 1989: 294) - Except in times of crisis, narratives that invoke images of gradual and non-conflictual change tend to be more successful. Maier (1975) gives a good example of this in the context of Germany, France and Italy after WWI.

This section has examined literature concerned with the relationship between discourse and social action as constituted by the production and consumption of texts, and as constrained and

enabled by institutions. In so doing I have discussed the varying meanings accorded to the terms “narratives”, “discourse”, “texts” and “institutions” so as to set the stage for the theoretical framework that is advanced in Chapter 3. We now move on to the review of the ICT4D literature.

2.3. ICT4D: ICT for Development

This section provides a survey of literature that has taken a critical view of the ICT4D discourse. As the confluence of two largely separate domains, ICT and development, I think it important to first locate ‘ICT4D’ within the much broader body of literature that addresses the various perspectives and practices referred to as ‘development’. Pieterse (2010: 3) has characterised development as *“the organized intervention in collective affairs according to a standard of improvement”*, with the caveat that the standards defining ‘improvement’ and ‘intervention’ are subject to contextual particularities such as culture and power relations. I have taken this approach because of my interest in uncovering and deconstructing the assumptions behind conventional understandings of development, and particularly how development relates to technology. As such, my review of the technology side of the literature will be constrained to that which relates to development.

For this review I have categorised development literature into two main camps. The first I characterise as the dominant discourse of development literature which I have found to be largely techno-deterministic. Herein, authors have portrayed development in narratives synonymous with “economic growth” and “progress”, as driven by technological innovation. In a subsequent section that perspective is contrasted with alternative narratives that are more human-centric and have been argued by their adherents to go beyond an economic focus to incorporate social and ecological goals as well. Sections 2.3.1 and 2.3.2 explore the character of ‘development’ by chronicling the major narratives that have described and comprised the phenomenon over time, with an emphasis on recent decades. Section 2.3.3 then integrates ICT by examining the purported outcomes of ICT4D initiatives: information or knowledge societies. Depending on how development goals are defined, such societies occur at the convergence of technological advancement and societal advancement. Finally, Section 2.3.4 offers a discussion of the perils of manipulating multiple sources of knowledge when advancing an ICT4D agenda.

2.3.1 Dominant development narratives: from “development-as-economic growth” to globalisation

The fact that change has been a constant feature of human society from earliest recollections is well agreed upon. Key literature that bookended the turn of the twentieth century included Friedrich List's (1841) 'Das Nationale System Der Politischen Ökonomie' (The National System of Political Economy) and Joseph Schumpeter's (1911) 'The Theory of Economic Development', however the modern discussion of economic development as a discernible process with specific goals took root during the 1950s. Specifically, works such as Lewis (1954), Myrdal (1957), Hirschman (1958) and Rostow (1960) laid the groundwork for collective emphasis on societal advancement at national levels via programmes of industrialization and later, modernization. In particular, Walt Rostow's (1960) *The Stages of Economic Growth* was a seminal text that played no small part in propelling the Anglo-American focus in the 1960s on an economic growth agenda enabled by liberal democracy and free enterprise, despite the author's later assertion (Rostow, 1971) that his motive had been generally non-economic. Rostow's model was decidedly linear and proposed a direct connection between improvement in technological stock and transport infrastructure on the one hand, and rapid change that he referred to as economic take-off. The direct result of this phase of rapid growth would have been the production of more effective technology, which in turn was expected to encourage investment into manufacturing industries. Improvements in manufacturing would then yield even better technology and spur economic diversification. The final expected stage of this chain was a state of mass consumption, fuelled by the availability of better consumer goods and services.

During the 1920s and 1930s there was a parallel linear model of development being proposed in the Soviet Union which emphasised the need for industrialisation and the centrality of heavy industry as a means for development of self-reliance. Several of the larger developing countries including India and China were influenced by this line of thought and made substantial sacrifices to pursue this goal during the 1950s and 1960s. Stewart (1978: 141–154) has argued that although the theoretical rationale for investment into capital goods industries followed by such developing countries was misguided since the underlying assumptions did not hold for those countries, such a capital goods sector was required for technological development. Without it, she averred, developing countries would be constrained to conform to a rate and pattern of development that was defined by the technological change of the advanced countries.

Radical academic response to such linear perspectives on development began in the 1970s and came in the form of a neo-Marxist critique that focused on the perceived exploitation of the

poor in the global South by capitalist enterprise. This turn came to represent what was known as the dependency argument⁷. Some important early examples of work in this area are Best (1968), Best & Levitt (1968), Frank (1967, 1969), Girvan (1970; 1973) and dos Santos (1970). In the cases of Frank and dos Santos, their critiques were ostensibly founded on their political leanings since their analyses drew attention to what they identified as structural inequalities in the prominent capitalist development models of the time as well as the ill-effects of military interventionism into the 'Third World' by the US and the Soviet Union during the Cold War. At later stages of the debate other diverse facets of poverty were identified that had been under-specified previously, such as gender discrimination (e.g. Momsen & Townsend, 1987). While some have argued (e.g. Unwin, 2007) that the critiques did not seek directly to improve development practice, some change was achieved; most notably in the increased emphasis in the literature on bottom-up (e.g. Stöhr & Taylor, 1981) and agropolitan development (e.g. Lea & Chaudhuri, 1983) which, in turn, influenced the activity of NGOs and civil society.

The rise of neoliberalism in response to the Latin American debt crisis of the early 1980s signified a revision in development approach among developed countries and return to former neoclassical economics-based policies. Neoliberalism may best be associated with a confidence that the processes of approach to and onset of 'economic take off' described above would generate markedly higher levels of social welfare giving rise to what has pejoratively been referred to as 'trickle down' logic or more positively as a 'rising tide lifting all boats.' Its primary emphasis was on the creation and extension of conditions for global free trade. Free trade was the "engine" that was meant to raise the tide. Herein the definition of development as "economic growth" was retained with a switch from the state to the market as the primary implementation mechanism.

Under the Reagan and Thatcher administrations in the US and UK respectively, the Bretton Woods organisations, IMF and World Bank, embarked on what has been called an 'exportation' of free-market policies from Western Europe and North America to poorer countries that came to be known as the Washington Consensus. The policy prescriptions encompassed therein comprised structural adjustment programmes (SAPs) based around market deregulation, reductions in state intervention, and divestment of inefficient public-sector enterprises. The driving force was a concern that the social and economic structures of many developing

⁷ West Indian scholars such as Lloyd Best and Norman Girvan, as well as non-West Indians such as Kari Polanyi Levitt critically theorised the dependency argument as a determinant of underdevelopment in the Caribbean region, making seminal contributions to the Plantation School of Caribbean economists in the process.

countries represented a serious impediment to the possibilities for development. In effect, these countries were or were becoming welfare dependent and free trade without structural reform would not be enough. Hence, this perspective led to the idea that a number of structural reform measures should be imposed on countries – ranging from some that were less controversial such as limiting corruption to others that were much more controversial such as limiting the public sector's role as an actor in the economic system (precluding 'developmental state' types of policies such as those advocated by Evans, 1995).

Following the fall of Soviet Union in 1991 there was an increased emphasis on liberal democracy as a necessary pre-condition for growth, particularly among the transition economies of Central and Eastern Europe, but later as part of the prevalent generic approach to supporting development in poorer countries. The linear argument underlying this model can be understood as: good governance (as provided by liberal democracy rather than centralised administration) enables free markets which generate economic growth and results in poverty elimination. By defining 'development' thus in purely economic terms the problem was portrayed as one to be addressed via a narrow set of prescriptions. Some have argued that the linear model that underpinned Structural Adjustment Programmes (SAPs) also lies at the root of the Millennium Development Goals (MDGs) adopted in 2000 (Unwin, 2009). Though, a counter-balancing argument is that the MDGs have stepped up emphasis on public-private partnerships, including those that can leverage ICT for poverty reduction.

Closely intertwined with the 'development' discourse of the 1990s has been the 'globalisation' discourse, which has been extensively addressed in the literature and has now transitioned into general popular language. Definition of the term 'globalisation' is not a straightforward endeavour. While commonly understood as a catch-all for the increased interconnectedness of human activity across the world through trade and cultural exchange, in everyday speech people often view globalisation as a process that acts autonomously. As a precursor to examining ICT4D as a major mechanism for such interconnectedness Unwin (2009: 15) characterises globalisation in this way:

- **Economically:** *"a rapid increase in international trade, the integration of global financial systems, changing systems of industrial production involving increased amounts of outsourcing, growing economic interdependence between states, increased power of global or multinational corporations, increasingly global patterns of consumption, and an increasing complexity of global economic institutions such as the World Trade Organization (WTO)."*

- **Socially:** *“increased migration and travel, new means of social communication such as instant messaging and mobile telephony, and increasingly complex patterns of human relationships across the world.”*
- **Culturally:** *“increased intermixing and hybridisation, the creation of global fashions and crazes, the rise of global media organisations, increasing acceptance of a global set of human values as reflected in the Universal Declaration of Human Rights, and above all a tendency for the artefacts of a few dominant cultures to be spread much more widely across the world.”*
- **Politically:** *“the expansion of global justice movements and the creation of the International Criminal Court in 2002, the growth of international political alliances, the increasing significance of so-called ‘international terrorism’, the rise of global environmental movements, the dominant military role of the USA as a global political force, and indeed the existence of a worldwide anti-globalisation movement.”*

Some would argue that globalisation is not a recent phenomenon. World-system proponents such as Wallerstein (2000) have insisted that we must examine processes both short term (within the last 50 years) and long term (within the last 500 years) to truly understand the impact of globalisation as a policy development mechanism. These debates are explored in the literature on policy convergence – for example Drezner (2001) and Holzinger & Knill (2005).

Whether or not the change processes in question were initiated well in advance of the current ‘information revolution’, it is generally well accepted that ICTs have been used to a very large degree to increase the speed and scale of those changes within the past three decades. This point is explored further in Section 2.3.3.

2.3.2 Alternative development narratives: from capacitation to post-development

Modernization theory underpins much of the classical development thinking described in the previous section, and there is a well-recognised relationship between modernization theory and the knowledge revolutions of the 18th century Enlightenment (Bronner, 2004; Pieterse, 2010: 22). Specifically, according to (Pieterse, 2010) it was during this period that rationality was asserted as the foundation of knowledge and ethics, building on the works of the Marquis de Condorcet (1743-1794). Consequently, empirical experimentation came to be perceived as the foundation of scientific enquiry. Unwin (2009: 7–8) points out three main problems with this view of the Enlightenment’s role in shaping development theory. Firstly, he argues that this perspective understates the influential intellectual traditions that preceded the Enlightenment, such as the works of John Locke, Rene Descartes, Francis Bacon and Thomas Hobbes in the 17th

century. Secondly, it downplays the moral & ethical dimensions of religion, such as the emphasis in both Islam and Christianity of charity to and worthiness of the poor. And finally, it is too Eurocentric, and doesn't reflect well the realities of development in Eastern cultures such as Korea and India (see also Mehmet, 1999). Economic historian and dependency theory proponent Andre Gunder Frank took the view that "*[t]his entire approach to economic development and cultural change attributes a history to the developed countries but denies all history to the underdeveloped ones*" (Frank, 1969: 40 quoted in Pieterse, 2010: 22).

An alternative focus in development thinking arose in the 1970s/80s in the form of human development. The general thrust of this approach was the revision of contemporary development approaches to incorporate bottom-up, participatory approaches that recognise social and ecological, as well as economic goals. Some important works in this area include Chambers (1983), and Sen (1970, 1980, 1999). Amartya Sen in particular advanced the perspective of development as "capacitation", which is focused on enabling of human capacities and entitlements. Sen's influence led to the creation of the United Nation's Human Development Index, and saw the portrayal within UNDP Human Development Reports of development as the "enlargement of people's choices" (Pieterse, 2010: 7).

Whereas the 1980s saw the expansion of development literature, the 1990s brought to the fore the perspective of post-development. The post-development movement did not present an alternative to mainstream development concepts *per se*, but focused on discrediting the goals (economic growth) and means (the state) of conventional (pre-neoliberal) development agendas. The main claim made by the post-development adherents was that a majority of people suffer as a result of development programmes, and as a result the entire 'development project' should be scrapped. Key figures that espoused this view include Escobar (1995), and Rahnema & Bawtree (1997).

2.3.3 Narratives of ICT for Development

The rapid innovation and diffusion of ICTs within the past three decades have accelerated the processes by which private and public organisations have ramped up the scale and speed of transnational commerce and cultural exchange via processes of globalisation. Accompanying these changes has been an increase in the literature examining the nature and determinants of what has been portrayed as a new social order and means of economic production, variously labelled the "information society", "network society" and the "knowledge society" that are

driven by the advance of “information technologies”, “telecommunications” and “information and communication technologies” (see, for example: Avgerou, 1998; Bell, 1976; Castells, 1996; Mann, 2003; Nair & Prasad, 2002; Webster, 2002; Friedman, 2006). This section will explore these concepts as they have been invoked in the context of development.

Near the end of the 1990s various UN agencies turned their attention to the potential importance of ICT to development and the risk of being left behind faced by those without access to ICT. As a result, several working groups were created around the issue. One example was the *Working Group on IT in Developing Countries* established by the UN Commission on Science and Technology for Development (UNCSTD). An early output of that Working Group - Mansell and Wehn's (1998) *“Knowledge Societies: Information Technology for Sustainable Development”* - analysed some negative effects of ICT diffusion at the time. They characterised ICT as having had negligible impact on the lives of the majority of people in the least developed countries, with the resultant exclusion from the “global information society” causing negative effects, particularly associated with the social and economic ‘dislocations’ related to technological change. Mansell and Wehn's recommendations to governments at the time to develop national ICT strategies encouraged the creation of plans for establishing regulatory frameworks for ICT, transforming the public sector with e-government, building telecentres (public internet access points) and engaging in ICT education and skills training programmes (Kleine and Unwin, 2009: 1048).

The national ICT strategies that were created in attempts to accelerate economic development through use of ICT were of two types (Kleine and Unwin, 2009: 1048):

- a) ‘ICT-enabled’ strategies that *“us[ed] ICT across sectors to increase efficiency overall (e.g. Chile, South Africa and Malaysia)”*.
- b) ‘ICT-based strategies’ that focused on *“economic development spearheaded by a competitive ICT sector (such as in India, Costa Rica and Brazil)”*

In parallel to these developments the global ICT industry took off, consisting of companies that integrated ICT into their business processes and created new business models (the dot-coms). Despite the bursting of the speculative investment bubble surrounding that industry in 2000, a few key ones survived and joined the incumbent trans-national corporations in reshaping the ICT industry and the global economy more generally. At this point politicians and academics both

contributed to expanding the techno-centric development discourse to include ICT-specific references such as “digital revolution” and “information superhighway”⁸.

ICT4D is but one of a series of terminologies used in reference to the exchange of ‘information’ for the development of regions, countries, industries, communities and people. Of the many different turns in the literature it would appear that, while often used synonymously, the term ‘knowledge’ is invoked to encompass a wider conception of social, economic and political issues than the term ‘information’ which is argued to be comparatively more focused on technologies that manipulate discrete units of processed data as inputs for decision making or as commodities (Unwin, 2009). So, for example K4D (*knowledge for development*) and KM4D (*knowledge management for development*) have been advanced by organisations such as the United Nations Development Programme (UNDP) and other UN agencies while ICTD (*information and communication technology and development*) and ICT4D (*information and communication technology for development*) have been preferred by the Washington organisations (IMF and World Bank) and the World Trade Organization (WTO). In each of these domains the choice of terminology emphasises different intellectual, economic, political, social and ideological interests.

Despite the complications created by this variety in terminology a constant feature of the ICT4D literature is that ICT is regularly portrayed unproblematically in beneficent terms, even if its effects (such as its developmental effects) are portrayed negatively and criticised. This is even evident in Avgerou’s (2010) wide-ranging multidisciplinary review of ICT4D⁹ literature wherein she argues that all ICT4D studies adhere to a specific assumption of the nature and process of IT innovation in developing countries, as well as its purported contribution to ‘development’. She identified two perspectives on the nature of ICT innovation:

- 1) Innovation as the result of transfer and diffusion of material and cognitive entities that comprise IT, as well as the associated organisational practices surrounding their application, from the social environment in which they were produced into another;
- 2) Innovation as the socially embedded construction of new techno-organizational arrangements in the context of a developing country.

⁸ While this term was popularised by US Senator and former Vice President Al Gore, it has even earlier origins, such as Brotherton’s (1964) *Masers and Lasers; How They Work, What They Do* and in a slightly different form (electronic superhighways) by Korean-American artist Nam June Paik from 1974.

⁹ That author actually uses the ‘ICTD’ construction

While this characterisation considers the issue of the origins and centres of innovative activity in the ICT field – thereby addressing the eventuality of ICTs being created within and for developing countries – it appears to accept without question the construction of ICT innovations themselves as beneficial interventions. This is notable because the author then goes on to characterise the concept of ‘development’ in ICT4D research, as either “progressive transformation” or “disruptive transformation”. In her view, the progressive transformation approach in ICT4D research *“reflects a widespread understanding of ICT as an instrument for economic and social gains that has been promoted since the mid-1990s by major international development agencies”* (pg. 6). This perspective associates investment in ICT - and its subsequent effective use - with a country's economic development, which is purported to accompany efficiency, transparency and responsiveness in government, as well as private sector gains. While adherents of this perspective acknowledge that organizational restructuring is required to deliver such productivity gains, according to Avgerou, research in this perspective is underpinned by the fundamental assumption that *“ICT-enabled improvements can be achieved without challenging the political economy of a country's social welfare provision”* (pg. 7).

Research that characterises development as disruptive transformation, on the other hand, *“considers development, including ICT-enabled development, as a contested endeavour, or as involving action with unequal effects on different categories of population, and thus, as laden with conflict”* (pg. 7). For authors that take this perspective (e.g. Thompson, 2004a, 2004b), the intentions and effectiveness of the main institutional actors of ICT4D - national and international development agencies - are the subject of critical assessment. The policies produced by such actors are seen as enabling and enforcing a social order that disadvantages some people to the benefit of others. As such, rather than adopt a neutral position vis-à-vis development, researchers who adhere to this type of approach adopt the cause of the marginalised constituents under discussion and seek to reveal the hidden motives of those who champion ICT-enabled development, and thus support the interests of the wealthy and powerful in society.

Interleaving the two perspectives on ICT innovation with those on development in ICT4D research led Avgerou to propose four ‘discourses’ on information system innovation and development. She cautioned, however, that these discourses cannot lay claim to describing all ICT4D research because of the lack of explicit definition of ‘development’ or link to development theory in much of that research. At any rate, the four discourses are:

1. *“ICT and Development [represents] socioeconomic improvements through the transfer and diffusion of ICT and required institutions”* (achieved by combining the ‘IT innovation

via transfer and diffusion' perspective with the 'development as progressive transformation' perspective). Here, the main argument is *"the adoption of ICT-based practices pioneered in advanced economies [is] a necessity for improving life conditions in developing countries"* (pg. 9)

2. *"ICT and Development [represents] socioeconomic improvements through locally situated action"* (achieved by combining the 'IT innovation via socially embedded action' perspective with the 'development as progressive transformation' perspective). Here, the main argument is *"ICT [can] contribute to improving life conditions, but ... the form and processes of improvements are to be worked out primarily locally, in accordance to historically shaped meanings and power relations."* (pg. 9)
3. *"ICT does not necessarily result in development for all; the transfer and diffusion of ICT leads to uneven development"* (achieved by combining the 'IT innovation via transfer and diffusion' perspective with the 'development as disruptive transformation' perspective). The main argument here is *"ICT [is] a force for socioeconomic change, but ... ICT intervention entails risks of reinforcing domination and inequality."* (pg. 10)
4. *"ICT does not necessarily result in development for all; it is subject to the power dynamics of IT innovation action"* (achieved by combining the 'IT innovation via socially embedded action' perspective with the 'development as disruptive transformation' perspective). This discourse rests on the argument that there are *"particular biases of power and inequalities in specific socioeconomic conditions of a country or community"* that are exacerbated by ICT. (pg. 10)

While this framework may not cover all existing perspectives in the literature on ICT-enabled development, it is useful as a focusing tool for the refinement and operationalization of a theoretical framework.

2.3.4 Discussion: the perils of manipulating multiple ICT4D knowledge sources

Thus far in Section 2.3 we have reviewed the dominant development narratives, and considered the effect of globalisation as an impetus to development. We have also reviewed alternative, contested conceptualisations of development that draw upon different knowledge sources for validation than those in the mainstream. An examination of the various perspectives of ICT4D

that exist in the literature followed. This opened up the door to the possibility of uneven development or even non-development arising from ICT innovation that causes disruption to socioeconomic norms, whether that innovation is imported in or developed locally. This raises a question about the differences in context that underlie either of those scenarios which I will explore next.

As is evident from the various contested perspectives on development within both of the categories I have presented above, dominant and alternative narratives, there is no generalised agreement on the meaning of development, and hence, on the mechanisms of achieving it or on the knowledge required to activate those mechanisms. In fact, a central problem in more recent literature addresses the problem of “which knowledge, and for whose development” (see, for example, Powell, 2006). The view is now held by some (e.g. UNCTAD, 2009) that without a contextual understanding, or ‘knowledge’, of the socio-economic reality in an environment and the perceptions of that reality by its citizens, it is impractical to expect lasting, self-sustaining change to take place as a result of development-orientated interventions. Such arguments are based on a series of five presumptions.

Firstly, it is presumed that a given society has a particular “historical reality” that is unique to that society. That is to say, the situated experiences of various communities are not easily reducible to a universal commonality, and the variance in those experiences will often affect the manner in which the development interventions are received by their beneficiaries.

This connects to the second point, that the people who comprise a given society have particular perceptions of their reality. These perceptions are created through collective procedures by which people make sense of their circumstances¹⁰.

This brings us to the third presumption that in order to be truly effective, development organisations must recognise and acquire knowledge of *both* the reality of the society it seeks to change, *and* the perceptions of that society's citizens about that reality. This understanding must be accompanied by knowledge of the divergences between their perceptions of the proposed change and the change that is needed.

Fourthly, the practical acquisition of knowledge of societies and their citizens requires engaging in activities aimed at using and improving the development organisations' stock of knowledge.

¹⁰ See Harold Garfinkel's (1967) seminal introduction to ethnomethodology in which he offered the concept of *shared methods of practical reasoning* and Charles Taylor's (2002) *modern social imaginaries*

And finally, there are persistent, structural flaws in the mechanisms employed by (Northern) development organisations for using and improving their knowledge stock of (Southern) socio-economic realities.

In summary, Powell concludes:

"The crucial point that needs to be made about 'knowledge' in relation to development is that there is no universal understanding of what it is. We all 'know' the world through a combination of our education, language, culture, and belief and, just as importantly, our actual physical realities - gender, location, socio-economic environment. How life is 'known' - that is, how it is experienced and understood - inevitably varies profoundly according to these differences. The issue for anyone working on development issues cannot be simply how to deal with 'knowledge', but how to act effectively in an environment of multiple 'knowledges'. How can this be done? What relationships are possible between different 'knowledges'?" (2006: 521)

When viewed from the specific perspective of ICT4D this foments a particularly intractable problem since ICTs are often considered by both development agencies and developing country policymakers as arising from purely technological considerations and thus, being devoid of political or economic interference. Such a perspective obscures the role of path dependency and technological lock-in on the development of technology, while leaving no room for considering that localised knowledge has a key role to play in producing context-appropriate products and services for users in developing countries.

The ramifications of this problem of different knowledges, and indeed, knowledge gaps underpinned Avgerou's 4-part framework which provided a useful structure for organising the ICT4D literature. The framework serves as a focusing tool for examination of the socio-political elements of the ICT4D discourses.

2.4. A prospective bridge to close the gap between disparate policy knowledge sources

It is outside the scope of this thesis to fully detail a mechanism for coordination and interaction among disparate policy knowledge sources to foster a more appropriate or effective path of information society development. However, owing to my commitment to make this research also relevant to policymakers through improvements to policy practice, in addition to the primary commitment of contributing to policy research, I wish to now set out some initial considerations for bridging the gap. To assist in this regard, there are some promising leads I wish to draw on from the sociology of scientific knowledge literature.

A concept that has been applied to collaborations in science and technology that appears relevant is the concept of a **trading zone**. This concept was first introduced by Galison (1997) and subsequently extended by other scholars such as Collins, Evans, and Gorman (2007). According to Galison, *“Two groups can agree on rules of exchange even if they ascribe utterly different significance to the objects being exchanged; they may even disagree on the meaning of the exchange process itself. Nonetheless, the trading partners can hammer out a local coordination, despite vast global differences. In an even more sophisticated way, cultures in interaction frequently establish contact languages, systems of discourse that can vary from the most function-specific jargons, through semispecific pidgins, to full-fledged creoles rich enough to support activities as complex as poetry and metalinguistic reflection”* (Galison, 1997: 783). Galison initially explored this concept through a study that explained how physicists and engineers from different paradigms collaborated with each other to develop particle detectors and radar.

Galison’s insight on trading zones resonates with the focus of this work on two dimensions. Firstly, ICT4D policy, and specifically, the development of information societies is such that it draws on multiples sources of expertise, and therefore, there is seldom consensus or complete agreement on the meanings of terms. Galison’s trading zones was developed from that context, and the extension of **interactional expertise** derived by Collins, Evans, and Gorman (2007) and others usefully orients the original metaphor towards application to policy practice since it emphasises coordination by utilising expertise in multiple problem domains. In the perspective of this thesis, that means both ICT4D expertise and deep contextual knowledge of the developing country landscape into which it is being embedded.

Secondly, while trading zones initially generate the contact languages of **pidgins**, these language constructs evolve over time into more general purpose languages which are used not only in situations where speakers come from different linguistic and cultural contexts, but also in discourse *within the same cultural context*. The result, in linguistic terms, is called a **creole**. Creoles are stable natural languages that may develop from pidgins and become nativized through the development of a full vocabulary and grammar system.

One way of tying these ideas together and linking them to the present concern with discursive policy making processes for complex issues in developing countries is through the perspective that both intentionality and temporality are required to bridge the policy knowledge gap. Determined effort on the part of personnel drawn from the different technological and political communities that comprise a policy domain (in this case, ICT4D policy) can be effective, but only

if those persons have sufficient interactional expertise to use appropriate contact languages to facilitate the translation.

We will revisit this prospective bridge during the interpretation of the present case study that appears in Chapter 7.

2.5. Chapter Summary

In this chapter I have reviewed the literature and produced characterisations of the main constructs of this dissertation. Policy has been characterised as a process involving multiple actors, both in the sense of individuals and collectively as organisations, who adhere to diverse, potentially conflicted interests and who gain understanding of their environment through processes of shared sense-making referred to as discourse. These actors are interconnected through networks and coalitions which are dispersed geographically, as well as over time. Policy ‘problems’ are seen to be constructed along with ‘solutions’ through discursive processes that impact and intersect social actions that are observable and measurable. All actors (including researchers) thereby play a role in shaping the discourse that creates policy, however, power – viewed as the capability to dominate alternative perspectives - is unevenly distributed among them. Examining the effects of these imbalances in power - and particularly the way in which some narratives are rejected, others ignored, while others still gain primacy – is a fertile issue for research.

We have seen that ICTs have been portrayed as solutions to a developmental ‘problem’. This has been characterised in terms of a ‘dominant contemporary vision of the information society’. However, further recognition is required among policy makers about the social construction of technological systems - that ICTs are not just neutral technological artefacts, but are also defined by and embody context (culture, values, preferences) through discursive processes. Usage of ICTs is redefined by users when they reinterpret ICTs in the in the context of their usage scenarios. ICT as a research theme is unique because the discourse in which ICTs are produced is also constrained and enabled *by* ICTs. This means that the definition of the ‘problem’, as well as who is allowed to define the ‘problem’ are linked to the power to produce and distribute ICTs.

Multiple conceptualisations about development were offered. Some were solely focused on economic considerations, with others incorporating issues of social justice, enabling of human capabilities and equitable distribution of resources. Different ‘knowledges’ are enacted depending on the perspective taken by those shaping the developmental interventions.

Proliferation of ICTs is then seen as a mechanism that can either exacerbate existing gaps – which persist beyond knowledge into culture, economic and social status – or find innovative ways of reconciling the various perspectives into a new developmental vision.

In sum, ICT4D policy is the result of conflicting discourses around divergent aims and proposed means of achieving the ‘information society’, and these divergences create paradoxes. Their resolution is a topic of importance in recent academic research. The contemporary focus in practice still overwhelmingly emphasises closing simplistic binary ‘digital divides’, but there is opportunity for research to help to widen conceptualisations, open up discussions and bring in alternative perspectives.

In the final section of this chapter I introduced a prospective bridge for widening the conceptualisations of ICT4D policy among policymakers that needs to be more deeply explored empirically. Strictly speaking, such exploration is outside the scope of the core research question being addressed presently. Nonetheless we shall initiate investigate the utility of this bridge for interpretation and identification of policy implications in Chapter 7, while leaving more in-depth analysis to be the subject of a different research project.

We now move on to detail the theoretical framework of this thesis.

3. Theoretical Framework

In this chapter the three streams of literature that were explored in Chapter 2 are integrated into the theoretical framework being adapted for this research.

The next section introduces the framework as a discursive model of policy-as-discourse construction before the research questions are presented in Section 3.2.

3.1. A Discursive Model of Policy-as-discourse Construction

Building on the literature review presented in the previous chapter I have adapted a theoretical framework that integrates the conceptual domain of this dissertation (construction of policy-as-discourse) with the empirical domain (policy) through a case of ICT4D policy in the specific context under examination (Trinidad and Tobago, between 1985 and 2011).

The main approaches being drawn on are critical discourse analysis (as proposed by Norman Fairclough and others), Brian Pentland's take on narrative theory and the discourse coalition framework of Maarten Hajer. These will be integrated into a single framework founded on the discursive model of institutionalization proposed by Nelson Phillips, Thomas Lawrence and Cynthia Hardy (2004).

Critical discourse analysis (CDA) has the benefit of building on critical theory, and so is ultimately concerned with changing the policy status quo that advantages some while disadvantaging others. Such an approach examines how the use of language creates and sustains the dominant discourses that comprise the status quo, and hence can potentially be used to upset it. Notable difficulties with a CDA approach include its problematic treatment of the concept of 'power'. Left unadapted, CDA at its extreme lends itself to a simplistic dynamic of power 'holders' who shape discourse and power-less actors who are constrained by discourse.

Narrative theory as proposed by Pentland conveys a processual focus that goes beyond sequential event reconstruction and attempts to discern the fundamental generating mechanisms that explain process change. Nonetheless, narrative analyses share one of the central criticisms of structuralist thinking in that they offer little guidance for ensuring validity and reliability of the process theories generated since the "deep structure" that is the subject of such theories is unobservable.

Hajer's discourse coalition framework improves on political rationalist approaches to policy studies by taking a discursive-analytical view. In doing so an analysis predicated on ACF can appreciate that actors shape both 'problem' AND 'solution' construction. By focusing on discursive reproduction ACF analysis can explain both policy change – esp. how this occurs over time, dispersed over large distances without requiring personal contact – and stability (since actors can resist new facts that don't mesh with their current interpretation). One apparent shortcoming of an ACF is that by emphasising interactions of coalitions, it neglects interactions that are accidental, unregulated or otherwise irregular.

The model of institutionalization proposed by Phillips, Lawrence and Hardy (2004) provides the main underpinning of the theoretical framework adopted for this research. However, whereas those authors emphasised the production of institutions as the focal point of their work, this thesis puts the focus on the construction of policy, inclusive of the effect of institutions. The discursive model developed below illustrates the manner in which the collected data is connected to the theoretical framework.

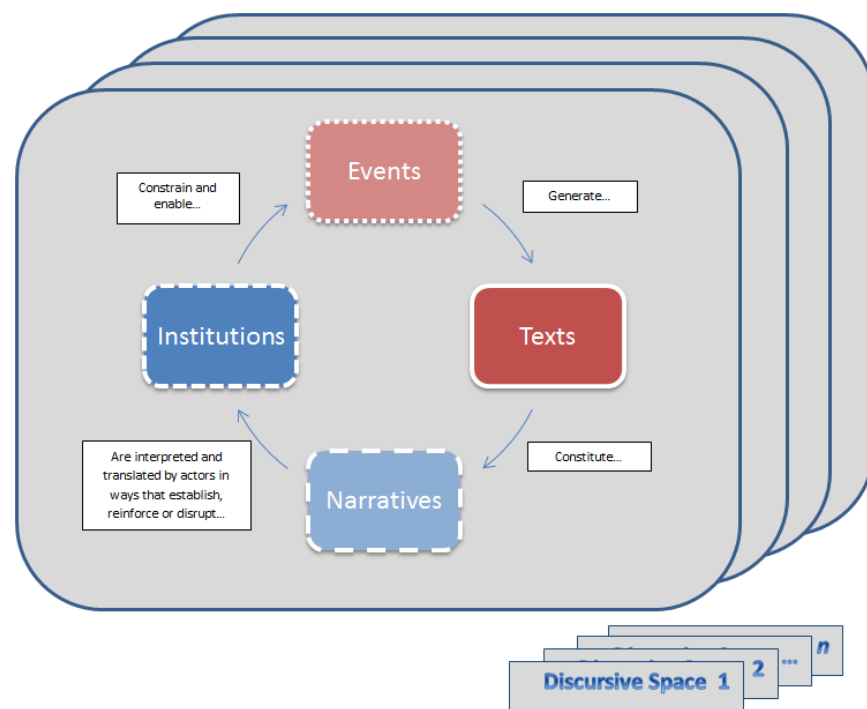


Figure 1 – Discursive model of the policy construction process (adapted from Philips, Lawrence and Hardy, 2004: 641)

Key

Directly observable	Events	Not directly observable	Narratives
	Texts		Institutions

Using this model, I will present the empirical data in Chapter 6, through description and critical discourse analysis of a corpus of texts (documents and interviews) that describe a series of events and then in Chapter 7, summarise the theoretical contributions via interpretation and explanation of the underlying policy institutions that drive the events.

The model can be explained as follows. Events (e.g. policy consultations, conferences, meetings, general elections, negotiations, protests, etc.) that occur in discursive spaces (such as daily newspapers, online forums, political campaign platforms, Parliamentary debate, etc.) generate texts (such as interview transcripts, reports, policy documents, legislative documents, manifestos, meeting minutes, green papers, white papers, periodicals, journal articles, etc.). These texts are used by people to constitute narratives. Narratives influence activity, and as they spread and gain popularity they recruit more adherents. During each iteration the narrative is re-interpreted and reproduced. When shared among a large proportion of the population of stakeholders, over time behaviours become subconsciously taken for granted and transition into institutions. Institutions, being self-policing, constrain and enable further social activity.

Construct Definitions

The definitions of the constructs employed in this framework are:

“Discourse” can refer both to the process of making sense of the social world (e.g. among CDA theorists like Fairclough) and the tangible, surface-level outputs of that sense-making process (e.g. among narrative theorists like Pentland). However, the resultant effect of nesting the term “discourse” - the output of the process - within the process of “discourse” while constructing a process theory that explains how “discourse” creates policy seems unwieldy. To avoid such confusion I propose to use the following distinctions that bridge the vocabulary of CDA (Fairclough, 1995) with that of narrative theory (Pentland, 1999).

In attempting to integrate the three approaches into a cohesive framework suggested by the fourth I have adopted the following conventions, drawing on various elements of the literature.

Discourse is taken to mean a process by which people make shared sense of their environments and situations, thereby setting a context from which they then act (adapted from Fairclough, 2009: 162–163 and Garfinkel, 1967)

Narratives are stories that construe a sequence of events that are causally linked to particular outcomes. This perspective integrates Fairclough’s (2009) perspective that

narratives are ways of construing aspects of the social world associated with a particular social perspective and Pentland's (1999: 711) definition of narrative as "*a story that describes the process, or sequence of events, that connects cause and effect*". [c.f. Stone's (1989) "causal stories"]

Texts are instantiations of particular narratives through written and/or verbal communication into directly observable artefacts such as books, newspaper articles, interview transcripts and policy documents. (adapted from (Fairclough, 2003: 3)

Discursive spaces are sites of discourse that are "*governed by different rules and understandings regarding text production (who may author texts, of which type); distribution (when, where, and how texts may be distributed); and consumption (who is the target audience; who may access and act on texts)*" (Hardy and Maguire, 2010: 1365)

Social Action comprises specific activities that are carried out by actors in relation to other actors as a result of their interface with text. Those activities may be intentional, consequential or emergent.

Intentional action deliberately conveys particular ideas through texts. It is important to note that while a reason for the intentional action always exists, that reason may not necessarily have been rehearsed by the actor prior to acting, and may instead be reconstructed upon reflection.

Consequential action is generated as a by-product of ongoing dialogue among actors during which they may draw on broader narratives. Even though such action is not the primary focus of the actors, consequential action is not equivalent to the random combination of disconnected or isolated texts.

Emergent action arises through discursive contestation and struggle in ways that were not necessarily intended or predicted. In this process, narratives are re-contextualized when new connections are made between texts drawn from different subject fields or linked at different levels, such as local, national and global.

Social action conveys meaning, and meanings are constructed reciprocally by the actors involved via text. (adapted from Fairclough, 2009: 164 and Wetherell, 2001: 15–18)

Actors may be "*individuals, groups, organizations, or even larger collectives*" (Barley and Tolbert, 1997: 97) since institutions (see below) can exist at any or all of the levels of analysis inferred by those categories.

An **event** is a sequence of actions that have a causal relationship with specific outcomes in the social world. Events are used by research participants as anchors in the narratives they (re)construct about the actions of themselves and others. (adapted from Pentland, 1999)

An **interaction** is a scheme of social actions and events. Interactions can be categorised in one of four ways: social, repeated, regular, regulated (this follows Weber's theory of social action; see Weber, Runciman, & Matthews, 1978)

Institutions are "*shared rules and typifications that identify categories of social actors and their appropriate activities or relationships*" (Barley and Tolbert, 1997: 96)

Institutional fields "*constitute recognized areas of institutional life*", are "*formed around industries, common technologies or issues*", may be "*arenas of struggle and conflict*" and develop into "*centers of debates in which competing interests negotiate over issue interpretation*". They are "*comprised of three key components: positions, understandings, and rules*" and themselves comprise "*meaning systems which are cultural expectations, shared cognitions and beliefs based on shared conceptions that constitute the nature of social reality and the frames through which meaning is made.*" In so doing, institutional fields become taken for granted and "*shape what is considered appropriate behaviour and give meaning to actions*". (Hardy and Maguire, 2010: 1366)

3.2. Research Questions

Following from the discussion of the literature in the previous chapter, and using the theoretical framework developed above to provide the analytical lens of this thesis, the following research questions are being addressed:

How has ICT4D policy been constructed discursively in Trinidad and Tobago?

This main question adopts a discourse analytic perspective to explain the process of ICT4D policy construction. Using this perspective and focusing on the domain of ICT4D policy that is concerned with socio-economic development in the Information Society, I ascribe to the view that policy is a result of discursive processes that produce institutions which, in turn, constrain and enable social action.

The following sub-questions each address a perspective of the main question.

- **How do texts enter policy processes?**

This question considers the processes by which texts are manipulated to achieve a shared understanding of the policy institutional field by the actors who interact in that field. The relative importance of *texts* (as embodiments of narratives conveyed via use of language) is assessed in relation to interests, technical claims and underlying belief systems. This question also considers the entry points into policy processes.

- **What are the competing narratives that interact in the institutional field of ICT4D policy?**

As presented in the literature review, narratives are constructed through discursive processes and exist in perpetual competition with alternative (sometimes conflicting) narratives. Narratives are being taken here as the units of analysis for discourse. This question, therefore, describes the narratives that constitute the institutional field of the present case.

- **How has the competition between narratives produced the institutions that comprise the institutional field of ICT4D policy?**

Finally, this question examines the effect of the discursive practices on the observable social practices that comprise the events being chronicled in this dissertation. The discursive practices include negotiation between individual actors as they reconstruct narratives. Specifically, the narratives produce institutions that constrain and enable actions. Since institutions are not directly observable, they will be assessed by referring to actions.

3.3. Chapter Summary

In this chapter the theoretical framework underpinning this thesis was developed and presented. The framework is an adaptation and extension of the work of Phillips, Lawrence and Hardy (2004), but this adaptation emphasises the role of institutions in constructing *policy*. In the next chapter a methodological approach is developed to operationalise this framework so as to study, in a discursive manner, the construction of policy-as-discourse. The theoretical framework developed here undergirds the analysis of the case study presented in Chapter 6, as well as the discussion and inductive development of theory presented in Chapter 7.

4. Methodology and Research Methods

This chapter outlines the research methodology that was adopted for this thesis, as well as the practical steps through which that methodology was operationalised to collect and analyse data.

Section 4.1 presents the rationale behind the methodological choices made, such as the decision to use a case study approach, and the key features of the resulting research design. Section 4.2 presents a summary of the actual approach taken to collect data through mixed methods. Section 4.3 summarises and reflects on the data analysis process employed, while. Section 4.4 addresses the limitations of the methodology and research methods.

4.1. Methodology

As is evident from the thesis title the overall methodology of this research is a case study. According to Yin (1981) the defining characteristic of a case study as a research strategy is that it attempts to understand contemporary social phenomena in their natural setting, especially when the distinctions between the phenomena and their contexts are unclear. The literature review and subsequent theoretical framework developed in previous chapters have hopefully presented a compelling case that the mutual interaction of the phenomenon being studied in the present thesis (construction of policy-as-discourse) and its context (Trinidad and Tobago during the period 1985 to 2011) is not incidental, but is, in fact, a critical feature of this research. More specifically, given that the main research question being explored here has a processual orientation, that is, it emphasises *how* policy is constructed discursively, the case study approach is better suited to be the form of empirical inquiry than alternatives such as experiments, simulations or histories.

Experiments and simulations are unsuitable because they would have required separating the phenomenon from its context, and because they imply the exercise of control by the researcher on the events under review, which would have been impossible given the topic. A strictly historical approach would have been inadequate since the phenomena being studied were not solely restricted to the past, but, per the theoretical framework, past actions exerted influence on the present actions and events that were observable at the time of the research.

4.1.1 Contextual case studies

A research approach that has been used to analyse the effects of multi-level economic, political and social situated factors is the **contextual** case study approach as defined by Andrew Pettigrew (1990). According to Pettigrew (1990) a contextual analysis can be characterised as:

- *processual*, by emphasising the evolution of actions embedded in specific contexts (structural and otherwise) over time;
- *multi-stakeholder*, by recognising the competing viewpoints of reality perceived by actors at different levels;
- *longitudinal*, by considering both historical and contemporary views of actions and events.

Further, according to Pettigrew (1990: 269), a contextual analysis is predicated on four assumptions:

- i) the '*embeddedness*' or interdependencies among multiple levels of analysis and their effect on the phenomena under investigation;
- ii) the '*temporal interconnectedness*' of processes as a result of actions in the past and present (which therefore shape the direction of actions in the future);
- iii) the reciprocal and intertwined relationship between context and action; and
- iv) that causation of the types of change studied is neither linear nor singular.

In this mode, "*an approach that offers both multilevel or vertical analysis and processual, or horizontal, analysis is said to be contextualist in nature*" (ibid). Such an approach seeks to create holistic explanations of process change by viewing social processes as the result of contexts constraining or supporting actions and events. Through these processes the contexts are re-defined reciprocally by the actions and events. Contextual analyses offer explanations of events based on interpretations of the actions of people. These interpretations stem from the systems of meaning they have constructed about their social worlds. Being focused, therefore, on explaining processes, a contextual approach is therefore distinct from variance theory-based alternatives that "*provide explanations for phenomena in terms of relationships among dependent and independent variables*" (Langley, 1999: 692) since these are seen to be better suited to identifying the *what* of change, but less relevant or appropriate for gaining understanding of *how* and *why* change occurred.

As defined above, a contextual research approach that employs mixed research methods is capable of developing a comprehensive explanatory narrative of ICT policy discourse

construction in Trinidad and Tobago, thereby shedding light on issues that have been ignored in mainstream discussion, and giving voice to actors that could not receive attention if other, more rationalist-leaning techniques were employed. This type of approach has been used, for instance, in the study of educational policy innovation under the Minnesota Innovation Research Program (Roberts and King, 1989).

Process theory can be built around the resulting explanatory narrative by using the four-level construct defined by Pentland (1999). The most tangible level consists of **text**, or the “*particular telling of a story by a specific narrator*” (p. 719). Data such as documents, interview transcripts and notes from participant observations are collected at this level. The next level involves **stories**, which are specific subjective versions of the deep structures that underlie events as told by actors involved in the events. Here, various (possibly contradictory) perspectives will be distilled from the text as the search for patterns and relationships begins. Going further, takes us to the level of **fabula**, or “*generic descriptions of a particular set of events and their relationships*” (p. 719). This is the level at which narrative theory emerges and seeks to derive its validity by codifying the elements of the stories that are constant across different relations of the stories. Finally, the deepest level offers **generating mechanisms**, building on the ‘motors’ of Van De Ven & Poole (1995). These mechanisms have been suggested as the basic conceptual building blocks that underpin all process theories of organizational change and development.

The analysis that derives from the data collected while using a contextual research approach will result in a critical case study that goes past the subjective histories offered by actors with different points of view and hopefully approaches the ‘deep structure’ and ‘generating mechanisms’ that underlie the discourse¹¹.

4.1.2 Critical discourse analysis

Two considerations influenced my choice of critical discourse analysis (CDA) as the analytical lens for this research. Firstly, the research topic is inherently linked to issues of modernization, democratization and globalization, and these issues are of significant contemporary importance for the practice of policymaking in developing countries. Secondly, as advanced in the literature review, contemporary policymaking is a discursive process, where the use of language as structured in narratives plays a key role in establishing, reinforcing and disrupting institutions that, in turn, enable and constrain social action. These considerations fit well with CDA’s

¹¹ See, for example, Morlacchi and Nelson (2011) for an application of this approach to the study of co-evolution of technology and organization in the context of medical practice and policy

objective of *“correct[ing] a widespread underestimation of the significance of language in the production, maintenance, and change of social relations of power and increas[ing] consciousness of how language contributes to the domination of some people by others, because consciousness is the first step to emancipation”* (Fairclough, 1989: 1). To further establish CDA’s appropriateness within the present methodology, we should first unpack “discourse analysis”.

Discourse analysis can be considered a study of “language in use”(van Dijk, 1985). This means that it is a method concerned with examining how language shapes and is shaped by social order (Jaworski and Coupland, 2006: 3). The increasing emphasis on discourse as an explanatory mechanism over the past three decades can be traced to the rise of post-modernism and the attendant ‘shift in epistemology’ that occurred, thus causing researchers to question how people (including researchers) apprehend and represent their environment, i.e. *how* they know what they know.

Contemporary discourse analysis takes place at the confluence of multiple academic disciplines and this is reflected in its many historical traditions, including: speech act theory, conversation analysis, discursive psychology, ethnography of communication, interactional sociolinguistics, narrative analysis and critical discourse analysis (Schiffrin et al., 2003). The disciplinary focus in these traditions includes linguistics, literary studies, social psychology and sociology.

The key objective of CDA, therefore, is the deconstruction of the practices, structures and institutions that underpin the apparently objective, normative and factual bases of social life. The *critical* element of critical discourse analysis is drawn from its foundation in critical theory, thus distinguishing it from other forms of discourse analysis by focusing on ideological analysis, particularly with the view of discourse as both *“the instrument of power and control”* van Leeuwen (1993: 193) and *“the instrument of the social construction of reality”* (ibid). As such, critical discourse analysis is oriented to social change by firstly seeking to *“understand social changes in the ideological use of language”* (Jaworski and Coupland, 2006: 29) and secondly to *“resist social changes that curtail liberty [and/or democracy]”* (ibid). Important entries in the practical CDA literature include Fairclough (1995, 2003), van Dijk (1993), Wodak (2001), and Titscher, Meyer, Wodak, & Vetter (2000), all of which emphasise the asymmetrical power relationships, and hence, asymmetrical influence of actors in the shaping of discourse.

The connection between the text being examined through CDA and its social impact can be illustrated with reference to the concept of ‘discursive events’. According to Fairclough (1992: 4), “[A] *discursive event can at once be seen as text, discursive practice, or social practice*”.

As *text*, the focus of analysis of the discursive event is "*to understand how a discourse links together its utterances according to distinctive discursive forms; for example, referential, narrational, persuasive, expressive, or poetical*" (Fischer, 2003: 74). The result here is of primary importance to linguists. As *discursive practice* the focus of analysis is understanding "*processes of text production and interpretation*", that is, examining "... *which types of discourses are employed in particular contexts, especially which discourses are privileged in particular areas of policymaking and which are excluded*" (ibid). This type of work is the province of literary scholars. Finally, with the discursive event as *social practice* the focus of analysis is "*the institutional and organizational circumstance of the discursive event and how that shapes the nature of the discursive practice*" (ibid). This is done by examining "*the kinds of assumptions that underlie practices of particular policy institutions—for example, the way an office of education might be governed by a particular educational philosophy...*" (ibid). It is this level of analysis that produces findings relevant to social science, and more importantly, to this thesis (Figure 2).

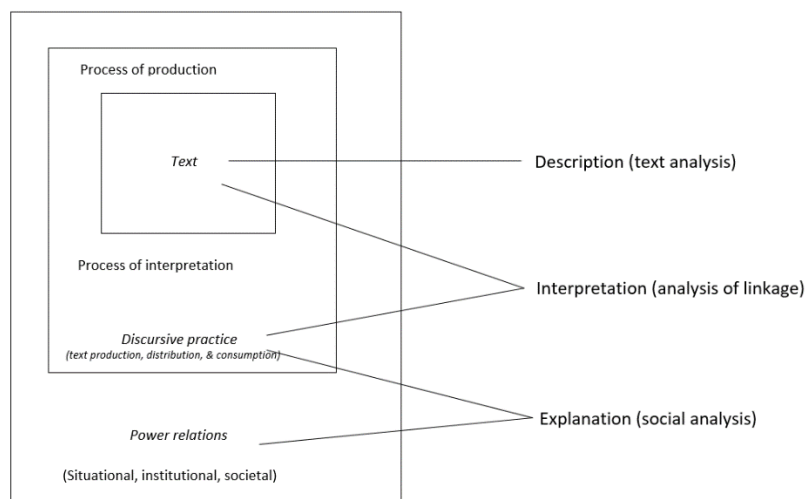


Figure 2 – Dimensions of discourse and discourse analysis (source: Thompson, 2004b: 6)

Working definitions

Discursive practice refers to configurations of "*discrete, unique utterances, or combinations of idioms, references, inferences or phrases with a particular 'order of discourse' such as 'development'*" (Thompson, 2004b: 6).

An order of discourse can be understood as "*the totality of discursive practices within an institution or society, and the relationships between them*" (Fairclough, 1992: 43).

Speech genres are “*linguistic devices which apply horizontally across various orders of discourse ... which any researcher might be likely to find when performing CDA in other domains*” (Thompson, 2004b: 6) .

Discursive types are “*formations which are ‘vertically’ identifiable as part of a particular order of discourse and which are likely to remain specific to a particular domain of study*” (Thompson, 2004b: 6) .

For the foregoing reasons CDA is considered well suited to producing deep critical explanatory narratives of social change in a particular context. There are reservations, however, concerning its applicability in a structured manner to repeatable empirical analysis. This is because analysing discourse is not amenable to specification in a set recipe of procedures, as it is dependent in large part on the skill and reflexivity of the researcher.

Combining multiple methods improves upon the explanatory potential offered by any single one. For this study, although CDA is the primary means of eliciting discursive events from the various sources of text (documents and interview transcripts), content analysis was considered to assess the effect of those discursive events on their audience by quantifying their frequency. Because of the empirical focus on narratives at the societal level of events and across multiple texts, content analysis – which would have necessitated a more granular unit of analysis - was not eventually utilised, but the findings generated by CDA were subjected to review by a few key informants to assess their validity.

4.1.3 Case Selection

Why study ICT4D policy in T&T?

ICT4D is a field that has been the subject of much interest in policy and academic circles in developing countries in general¹², and in Trinidad and Tobago and the rest of the Caribbean in particular. My tenure at the Ministry of Public Administration within the Government of Trinidad and Tobago began in 2005 in the wake of a major policy development thrust to conceive Trinidad and Tobago’s first national ICT4D strategy, dubbed “*fastforward*”. The following three years saw major foundational developments take place that established the platform for advanced

¹² As evidenced by the field’s three major journals: *The Electronic Journal on Information Systems in Developing Countries*; *Information Technology for Development*; and, *Information Technologies & International Development*.

telecommunications, informatics and electronic commerce that became commonplace by the end of the decade.

The drive to apply information and communication technologies in new ways so as to improve the efficiency and productivity of the public and private sectors did not commence with the development of *fastforward*, however. From as early as the mid-1980s plans were set in motion to modernise the telecommunications infrastructure that underpinned much of the “ICT” and Internet-centric activity that took place from the mid-1990s onward.

Three factors reinforced my decision to conduct research in this area: the wealth and availability of research material; the ease of access to that material afforded me because of my prior occupation; and, the relevance of this type of research for policy development in other small island developing states.

Why focus on the specific case chosen?

The case was selected because it provided examples of situations wherein policy change that spanned a number of years was influenced by multiple stakeholders operating at different levels. The case was therefore reflective of the theoretical propositions of the research. Furthermore, examining these situations provided an opportunity to improve the understanding of policy change and policy development processes among practitioners in small developing states by correcting misconceptions commonly held and extending the literature.

4.2. Mixed Methods of Data Collection

Data were collected on site during the period July to December 2011. I categorised the data into two main tranches: documents and interviews. The documents include policy proposals, strategic plans, formal reports, acts of Parliament, cabinet meeting minutes, newspaper articles, and presentation slides. Documents in paper form were electronically scanned into digital form for ease of search and manipulation later. The interviews took the form of twenty-seven in-depth key informant interviews (Fontana and Frey, 2005; Kvale, 1996; Sherman Heyl, 2001) that were captured via digital audio recordings as well as notes that were written down either during the interviews or immediately afterwards. The key informants were selected via the sampling selection method detailed in Section 4.2.2. Selected portions of the interviews were later transcribed. Both the transcripts and the documents were included in the textual corpus for CDA (Fairclough 1995, 2003). A third originally planned component, non-participant observation (Emerson et al., 2001; Tedlock, 2005) of policy forums, conferences and meetings, did not

generate the data originally anticipated owing to event rescheduling and cancellations. Upon review I determined that those events were mainly useful for identifying and making contact with additional key informants while I was in the field.

I spent the first two (2) weeks working out of my old office at the organisation that had become the National ICT Company of Trinidad and Tobago Ltd (branded as *iGovTT*) which had formerly been known as the National ICT Centre (NICTC) of the Ministry of Public Administration. During this time I re-established communication with former colleagues, familiarised myself with the new organisational culture and began sifting through stores of archived documentation left behind by the Telecommunications and Infrastructure Unit that had previously been responsible for supporting the Government's telecommunications policy function.

I developed a database of all research materials using **NVivo** qualitative data analysis software. Use of this software enabled me to compile a robust collection of documents, case study notes, digital voice recordings and early-stage analytical narratives. I also developed a simple database of interview participants, both prospective and those I eventually actually interviewed. This database captured all details on affiliations, contact details, interview schedules, and brief interview notes.

I structured my data collection efforts into three discrete work packages, each intended to collect and streamline data associated with one or more of the sets of actor relationships at the four levels of analysis identified in Chapter 3:

- a **government actors** package to capture data concerning the intra-governmental (between government agencies/departments) interactions and extra-national state-focused (government-to-government/quasi-government; and government-to-multilateral organisations) interactions;
- a **local third-party actors** package that would collect data relating to intra-national (government-civil society-academia-enterprise) interactions;
- an **international third-party actors** package that focused on data relating to interactions with multinational ICT corporations (e.g. Microsoft and Fujitsu) and funding agencies (e.g. IDB).

Each work package involved two phases: document handling (identification, organisation and collection of documents) and interviews. To identify potential interview participants I started with a database of stakeholders kept on file for policy consultations (provided by a contact within the Ministry) and gravitated first to those with whom I had previously worked, then used

their recommendations to identify and make contact with other pertinent interviewees (snowballing technique).

Starting with the government actors package, with the help of former colleagues I was able to access unpublished draft policy position papers, reports, and even fourteen years' worth of Cabinet Minutes (1997-2011) - the formally documented outputs of weekly Cabinet meetings that outline all Government decisions - which I was authorised to use by appealing to provisions of Trinidad and Tobago's Freedom of Information Act of 1999 (as amended). Such documents provided insight into a range of important policy decisions – from the establishment in 1997 of an Information Technology Policy for the Public Service, to the creation of a National ICT Strategy, branded *fastforward*, in 2002, among others. The participants I interviewed during the course of this work package included a former Minister, three Permanent Secretaries and the Regional Representative of the UNDP. Most participants have been employed in different government departments over several years across different political administrations and so were able to recollect the political climate around major paradigm shifts which occurred during momentous events such as the establishment of an independent telecommunications regulator¹³, and the building of the communications network¹⁴ that links all government ministries and departments across the country.

To investigate the local third-party actors package I began by cross referencing watershed events recorded in official government documents with news reports from local media archives, specifically those of the two prominent daily newspapers, the Trinidad Express and the Trinidad Guardian. This comparison provided insights into the media's influence on policy agenda setting, which is a theme that relates to at least two of my subordinate research questions. This exercise, conducted over a span of several weeks, provided a collection of thousands of news articles and editorials spanning the period 1995 (the earliest year for which electronic archives of either newspaper exist) to 2011 on subjects related to a range of terms ("computers", "information technology", "information superhighway", "digital divide", "telecommunications", "internet", et al.) which had appeared regularly in the government documents. In parallel, I conducted interviews with other stakeholders who worked outside of government, yet undoubtedly have played a part in the shaping of the domestic ICT4D policy discourse. These included a journalist whose weekly technology column¹⁵ is *"the oldest continuously published column on technology in Trinidad and Tobago"*, the former head of the Trinidad and Tobago Computer Society, and

¹³ TATT, or Telecommunications Authority of Trinidad and Tobago

¹⁴ The Government Wide Area Network, or Backbone as it is commonly referred to

¹⁵ BitDepth. Available at: <http://lyndersaydigital.com/bd/current.html>

two university professors who at one time served on a telecommunications advisory board that existed in the interim between the passage of the Telecommunications Act (2001) and the establishment of the Telecommunications Authority of Trinidad and Tobago.

Negotiating access to participants from the international third-party actors package proved the most intractable activity of my field research. Unanswered calls, unreturned messages and being palmed off onto assistants were the order of the day. Representatives of multilateral funding agencies such the Inter-American Development Bank (the agency that provided counterpart funding for the Modernization of Telecommunications Programme) were very helpful in providing information and making themselves available for interviews. On the other hand my efforts to secure meetings with private sector stakeholders, such as executives of Microsoft (provider of enterprise software to many public and private sector organisations), and Fujitsu (co-contractor responsible for the installation of the Backbone network), or ICT firms of local origin but regional reach such as Infotech Caribbean Ltd, were often futile. The relative lack of direct input from this important stakeholder group has left a gap in the map of actors that I sought to construct of Trinidad and Tobago's policy discourse construction process. While I have been able to garner perspectives of the role of the private sector from other participants, my understanding of this sector's view of themselves in the events under consideration as well as their take on the rest of the environment is limited. The ramifications of this lacuna for the production of a valid and reliable account of the policy processes under investigation are identified as a limitation in the final chapter.

4.2.1 Documents

In terms of establishing the relevance and validity of information, I put emphasis on formal documents such as reports and policy documents produced by established organisations, such as ministries, and used secondary documents such as newspaper reports for triangulation, or for selection of excerpts that exemplified particular analytical points.

The following are the categories of documents used as data sources, along with a count of the number of each type¹⁶:

Table 1 – Document types collected and used for the analysis

Concept Notes	2
Constitution	1
Secondary Interview Transcript	1
Loan Programme Donor's Memo	1

¹⁶ See Appendix II for a summary list of the documents collected and used in the analysis

Conference Report	1
Cabinet Minute	34
Legislative Acts of Parliament	6
Policy document	3
Budget statements	11
Consultancy Reports	2
Multilateral Trade Agreements and related documents	4
Policy guidebook	1
Regional development strategy	1
Technology column articles	24
General newspaper articles	173
Market reports	5

These documents were created by a range of actors, including:

- Academics
- Civil Society
- Consultants
- International Development Banks
- Government Ministries and Departments
- Inter-Governmental Organisations
- Media Houses
- Parastatal Agencies
- Regulatory Agencies

I applied a purposive sample to sift through the documents, guided by my knowledge of the research area, literature and initial indications provided by desk-based research. This was further stratified by reputational case selection (Goetz and Lecompte, 1984; cited in Merriam, 1988), that is, recommendations from key informants, and inter-documental references.

Documents were added to the corpus until no new relevant insights were produced from addition of more participants or documents, where relevance was defined by the key informants. This provided a good sense that the sample was complete.

4.2.2 In-depth semi-structured interviews

Documents provide a codified source of the discourse being explored in this thesis. The choice of a range of different type of documents produced by many different groups of actors allowed me to identify comparable and contradictory perspectives on ICT and development held by individuals, and between and within groups. Documents are themselves, however, snapshots of history. Owing to their static nature, an analysis of documents would not have allowed me to interrogate the changing collections of meanings that actors referred to in the pursuit of their

job functions, nor the processes by which those systems were co-produced through social interaction. Except in cases where a document was explicitly or implicitly referred to in a critical manner by its sponsors, analysis of a given document could say little about how it was received and interpreted by its audience. This is a critical element of the process of sense-making for which it was necessary to engage with the actors involved and assess those meaning systems and sense-making processes in context – a call that has been made one of the most vocal proponents of CDA (see Fairclough, 1995: 9-10). For this reason semi-structured in-depth interviews (Fontana and Frey, 2005; Sherman Heyl, 2001; Kvale, 1996) were conducted. The analysis of the documents undertaken in the first stage of research, and the recommendations of key informants were used to inform the initial selection of suitable interviewees. However, I also recognised that references within the loosely connected network of those persons identified by informants might also serve to improve the variety of perspectives represented and limit the influence of the informants in shaping the perspectives of those interviewed. Hence a further selection of people to interview was conducted using a snowballing technique.

My ability to gain access was facilitated by my prior role as a Technical Analyst attached to the National ICT Centre of the Ministry of Public Administration (MPA) between 2005 and 2008. I started with a list, acquired from MPA, of stakeholders (people and organisations) typically approached by MPA during policy consultations. I then asked a former colleague who had long-term knowledge of the policy processes (Peter Mitchell) to identify key contacts within the list. Among the people identified as key contacts, I initiated contact with those with whom I already had a professional relationship. All were briefed that I was now engaged in a research project without a specific political aim regarding the current government, or seeking to exacerbate the established problem of 'information silos' between Ministry divisions and departments. I increased the sample frame by asking each interviewee who else I should interview, and was thus introduced to people who were either unknown or only casually known to me. This was repeated until no new people were suggested.

The selection procedure resulted in the production of a list of twenty-seven interviewees whose input can be considered germane to the case (see Table 1). During the interview period, they were senior-level representatives of government ministries and agencies, research institutions and universities, international and regional multilateral agencies, and civil sector associations and NGOs.

Table 2 – Interviewee sampling

<i>Interviewee</i>	<i>Reason</i>
Dr. Kim Mallalieu – Senior Lecturer, Dept. of Electrical and Computer Engineering, The University of the West Indies	Was once a member of the Telecommunications Advisory Team that preceded the formation of the Telecommunications Authority of Trinidad and Tobago; long-time advocate for telecommunications development.
Prof. St. Clair King – Senior Lecturer, Dept. of Electrical and Computer Engineering, The University of the West Indies	Was once a member of the Telecommunications Advisory Team that preceded the formation of the Telecommunications Authority of Trinidad and Tobago; Member of the Infrastructure Working Group during the creation of <i>fastforward</i> .
Cintra Sooknanan – former Director, Trinidad and Tobago Computer Society	Former head of one of the few civil society organisations related to ICT4D in T&T (T&T Computer Society) and co-founder of the T&T chapter of the Internet Society; Is an attorney by profession, so she brought a legal perspective to bear on the discussion.
David Little – President and founding Partner, PSTG Consulting	Head of the Canadian consulting firm, PSTG Consulting, that coordinated the production of the T&T National ICT Strategy 2003-2008 (<i>fastforward</i>)
Devindra Ramnarine – Partner, PSTG Consulting	Former head of the National ICT Secretariat in the Ministry of Public Administration and Information during the time of the creation of <i>fastforward</i> ; Also sat on the National ICT Steering Committee; later became a partner of PSTG Consulting
Vashtie Dookiesingh - Multilateral Investment Fund (MIF) Specialist, Inter-American Development Bank (IDB)	As MIF Specialist, Ms. Dookiesingh acted as one of the liaisons between MPA and the IDB during the Modernisation of Telecommunications Project
Adam Montserin – former Executive Manager, e-Government, NICTC	Was originally hired as a specialist during the implementation of the Backbone; Promoted to Executive Manager of the e-Government Unit just before it was incorporated into the NICTC, and then led that unit

<i>Interviewee</i>	<i>Reason</i>
	during the <i>fastforward</i> era. Was a member of the Government Working Group during the creation of <i>fastforward</i> . Was no longer employed by government by the time of interview
Arlene McComie – former Permanent Secretary, Ministry of Public Administration (MPA)	Permanent Secretary of MPA during the period 2007-2010
Atiba Phillips – former Executive Manager, e-Business, NICTC; then Chairman, iGovTT	Led the e-Business Unit of the NICTC during the <i>fastforward</i> era. Later left the organisation and returned as its Chairman after it had been transformed from NICTC to iGovTT. Had previous experience in other ICT initiatives in GoRTT, such as the National Y2K Secretariat
Cleveland Thomas – former National Chief Information Officer (NCIO); then Chief Executive Officer, iGovTT	Led the NICTC during the <i>fastforward</i> era. Was a member of the Economy and Finance Working Group during the creation of <i>fastforward</i> . Left to lead the Caribbean Area office of the ITU around the time of the interview.
Denyse White – former Executive Manager, Policy, Metrics and Stakeholder Engagement, NICTC	Led the Metrics Unit of the NICTC during the <i>fastforward</i> era. Was originally hired as a specialist in the e-Commerce Secretariat in the Ministry of Trade. Participated in the Economy and Finance Working Group during the creation of <i>fastforward</i> .
Gerard James – former Executive Manager, Telecommunications and Infrastructure, NICTC	Led the Telecommunications & Infrastructure Unit of the NICTC during the <i>fastforward</i> era.
Gillian Macintyre – former Permanent Secretary, Ministry of Public Administration	PS of MPA during the period 2010-2015. Chaired the Government Working Group during the creation of <i>fastforward</i> .
Jacqueline Wilson – former Permanent Secretary, Ministry of Public Administration and Information	PS of MPAl during the period 2002-2007; Was a member of the National ICT Steering Committee during the creation of <i>fastforward</i> . Had a brief stint with the Commonwealth Secretariat in their “Commonwealth Connects” programme.

<i>Interviewee</i>	<i>Reason</i>
John Mollenthien – former Deputy NCIO, NICTC / Deputy CEO, iGovTT	Was the 2 nd -in-command of the NICTC, under Cleveland Thomas, during the <i>fastforward</i> era.
Joy Lange-Syriac – former Senior Manager, e-Government, NICTC	Was closely involved in implementation and administration of the Backbone project. Was a member of the Government Working Group during the creation of <i>fastforward</i> .
Kenwyn Austin – former Director, and later, Consultant at the e-Government Unit	Was instrumental in leading Phase I of the Backbone project. Wrote two reports that provided data for the Backbone case. Was a member of the Government Working Group during the creation of <i>fastforward</i> .
Kwesi Prescod – former Executive Manager, Policy and Metrics, NICTC	Was the Telecom Advisor before leading the Policy and Metrics Unit of the NICTC. Was instrumental in some aspects of telecom sector reform and the Backbone project. Contributed a lot of institutional knowledge.
Dr. Lenny Saith – former Minister of Public Administration, 2002-2007	Was hand-picked by the then Prime Minister to spearhead the production of a national ICT development strategy. He did so by chairing the NICT Steering Committee. Highly regarded in Cabinet, partially as a result of previous business success (Trinmar and the creation of the Pt. Lisas Industrial Estate)
Peter Mitchell – Asst. Director – Socio Economic Policy Planning Division, Ministry of Planning and Development; former Senior Manager, Policy and Metrics, NICTC, Ministry of Public Administration	Longstanding contributor to telecommunications policy development. Was seconded from Ministry of Planning to the Telecommunications Division, before it was incorporated into NICTC and he moved to the Policy Unit. He wrote a report that provided data for the telecom liberalisation sub-case, and was the main liaison with IDB during the Telecommunications Modernisation Project. Was a member of the Government Working Group during the creation of <i>fastforward</i> .
Bernadette Lewis – Secretary General (SG), Caribbean Telecommunications Union (CTU)	As SG, she headed the CTU – the regional body created by CARICOM to advocate and organise telecom (and later, ICT) development policy initiatives.

<i>Interviewee</i>	<i>Reason</i>
Edo Stork – Deputy Resident Representative, United Nations Development Programme (UNDP)	At the time of interview he had responsibility for the "Democratic Governance" focus area of UNDP TT's work. He was formerly involved in ICT4D work in the South Pacific. He contributed a chapter to a book entitled "ICT Policy Formulation and eStrategy Development – A Comprehensive Guidebook" by Richard Labelle, which provided data for the <i>fastforward</i> sub-case.
Nigel Cassimire – Telecommunications Specialist, CTU	Once worked at incumbent telecommunications operator, TSTT, and then briefly at iGovTT. Provided insight into the process of creating the National ICT Strategy which was useful for the <i>fastforward</i> sub-case. Also provided some insight about the CTU's relationship with regional governments in their policy advocacy role. Was a member of the Infrastructure Working Group during the creation of <i>fastforward</i> .
Mark Lyndersay – Journalist	Author of the longest running technology column in T&T – <i>BitDepth</i> – and occasionally wrote critically of Government's ICT4D initiatives. The back archives of his column provided data for the telecom liberalisation and <i>fastforward</i> case studies.
Bernard Mitchell – Chief Implementation Officer, Evolving TecKnologies and Enterprise Development Company Ltd. (eTeck)	Was once the Chief Operating Officer at TSTT. He shed light on the relationship between GoRTT, TSTT and C&W. Also discussed the relationship between eTeck and iGovTT as complementary and competitive arms of GoRTT's ICT4D function. Was a member of the Infrastructure Working Group during the creation of <i>fastforward</i> .
Cris Seecheran – Executive Director (ag.), Telecommunications Authority of Trinidad and Tobago (TATT)	Once worked at TSTT. He discussed the relationship between TATT and MPA vis-à-vis ICT4D policy

<i>Interviewee</i>	<i>Reason</i>
Annie Baldeo – Policy, Pricing and Research Analyst, TATT	Formerly worked at the NICT Secretariat. She also discussed the relationship between TATT and MPA vis-à-vis ICT4D policy

4.3. Data Analysis

In setting out to conduct this research I have realised that the processing (Wolcott, 1994: 24) or data management that are involved in data analysis are not straightforward activities. Nonetheless, I have attempted here to present in a fairly structured manner the approach I took to analysing the data that I collected in the field. In particular I have tried to be mindful of the pitfalls of analysis identified by (Miles and Huberman, 1994: 263), namely:

1. *Holistic fallacy*: “interpreting events as more patterned and congruent than they really are, lopping off the many loose ends of which social life is made”
2. *Elite bias*: “overweighting data from articulate, well-informed, usually high-status informants and underrepresenting data from less articulate, lower-status ones”
3. *Going native*: “losing your perspective or your ‘bracketing’ ability, being co-opted into the perceptions and explanations of local informants”

Pre-analysis: During and after data collection I wrote down "narratives" (ex-ante) to state my assumptions about the policy institutions that enable and constrain the policy process. This was done prior to analysis so that the narratives produced could be informed by insights gained from the interviews and preliminary document categorization done in the field while I was still temporally and cognitively close to the circumstances under investigation. Had this been done before data collection the narratives I would have come up with would have been informed only by de-contextualized theory, whereas after data collection but before analysis I was able to “see” the data in a more coherent and relevant way.

I pursued the stages of qualitative case study data analysis outlined by Miles and Huberman (1994): data reduction, data display, and, conclusion drawing and verification.

Stage 1: Data reduction

- Developed an overall chronology of all major events across the entire time period of the macro case, drawing on primary and secondary sources.
- Constructed an event history database for each of the three sub-case studies

- Applied a sampling strategy to the collection of textual data to pick out key texts and interview excerpts, and thereby produce a manageable corpus of text for CDA. This sampling strategy comprised using my own judgment (based on my knowledge of the context, the literature and evidence arising during data collection), which was then further refined by suggestions made by participants generally (snowballing) or by participants with specific expertise (key informants).

Stage 2: Data display

- Working through each category sequentially, I reviewed the definitive portions of documents (preambles, introductions, and summaries) and coded (Miles and Huberman, 1994: 55) excerpts to "free nodes" in the following categories:
 - types of events or activities "*that have discrete temporal and spatial boundaries and that are ecologically and culturally meaningful in the setting under study*" (Barley and Tolbert, 1997: 106)
 - types of actors "*defined in terms that are relevant to the actors themselves... to focus attention on activities characteristic of those who fill a particular role and on interactions between people who occupy positions in a role set*" (ibid)
 - types of behaviour "*such as expressions of conflict, coordination, or information giving*" (Barley and Tolbert, 1997: 107)
- Reviewed free nodes and assembled them into larger narratives (ex-post)
- Used interview excerpts as guides that exemplified theoretical points and substantiated the narratives. I then arranged the narratives according to the sub-case study they constituted. After doing so, I further refined the sub-case studies by adding additional supporting texts. At each step I triangulated with official records of major events
- Used critical discourse analysis on exemplary selections of text to identify and categorise the *discursive strategies* and *speech genres* used to construct the policy meanings and subject positions that constitute the narratives.
- Produced visual representations of network of core texts, interviews and actors

Stage 3: Conclusion drawing and verification

- Compared and contrasted ex-ante and ex-post narratives to distinguish between my assumptions going in and my reflections after having actually analysed the data

- Examined trends within narratives over time, such as changes in discourse associated with major step changes such as general elections, and more gradual changes such as those that occur within a particular political administration's governmental term.
- Removed narratives to which no nodes were coded
- Reviewed remaining narratives to reduce them to the main "sub-themes" that I interpret as comprising the policy institutions
- Considered and refuted alternative explanations for the production of institutions if they were not supported by evidence
- Revised explanations to incorporate alternative explanations if they provided a better fit.
- Compared and contrasted institutions across cases

Throughout this process I was preoccupied with increasing the confidence of the reader in the information found and the interpretations that I proffered. The literature suggests that this could be done by linking three levels of understanding: *"the meanings and interpretations of our informants, our own interpretations of those meanings, and our confirmatory, theory-connected operations."* (Miles and Huberman, 1994: 263)

To establish these links and thereby validate the interpretations I employed the following process. I started by selecting the narratives that were identified most frequently from the interviews in each sub-case and discussing them with key informants to ensure that researcher bias was not introduced due to any lack of reflexivity on my part. I then looked through the corpus for supporting texts that were referenced within the event history of each sub-case to gather corroborating evidence for the narratives.

Texts that were produced by authoritative sources such as Cabinet meetings, ministry departments or intergovernmental agencies were weighted more heavily for their authenticity when compared to texts such as newspaper articles or blog posts because of the generally higher level of rigour under which the former were produced, and the fact that they tended to be produced for specialist rather than general audiences which resulted in more detail being incorporated within the text. Even by following this approach, there were some narratives that were found to be frequently occurring, but for which I could find no supporting texts to substantiate them. Further investigation of these narratives led me to trace their origin back to well-networked individuals who had been able to influence many other informants with stories they had told, but which lacked any objective evidence. Such narratives were then excluded from the discussion.

A discursive analysis generates interpretations arising from the patterns discerned in textual relationships. As such, there was risk of some interpretations arising from circular reasoning or other logical fallacies. Such errors were mitigated by in-depth discussions with my supervisors, one of whom was experienced in the methodological approach I undertook, while the other was an expert in the policy domain under investigation. Proposing and defending each general and specific interpretation by in-depth discussions and debates with both supervisors significantly increased the confidence that the interpretations were valid and relevant for theory.

4.4. Limitations of the Methodology and Research Methods

The principal limitations of the methodology adopted for this thesis are linked to three factors. Firstly, my experience as a technocrat in the Trinidad and Tobago public service would have prefigured my reflexivity, thereby constraining to some degree what I was able to perceive during data collection. Secondly, scheduling challenges combined with limitations of my ability to secure interviews with private sector players, particularly those representing multinationals. This point can be addressed through further research. Finally, the limitation of using a snowballing technique to identify the whole social network, even in a small society such as Trinidad and Tobago, meant that my sample was subject to the possibility of only uncovering some of the 'small worlds' that exist, and not others. The likelihood of this being a problem is highlighted by the siloed character of the various stakeholder groups in general, and government agencies in particular.

4.5. Chapter Summary

In this chapter I have explained the methodology used in this research, as well as the methods employed to operationalise the methodology in the conduct of this research. The methodology is a contextual case study, which means that it is processual, embedded and longitudinal in character. In this chapter I also sought to justify CDA as a suitable analytical lens for the type of investigation being undertaken. The second section covered the details of the mixed methods of data collection employed: documents and semi-structured interviews.

We now move on to discuss the contextual background information that illustrates the contextual background in which the case study is embedded.

5. Contextual Background

This chapter presents the contextual setting of the study. This is necessary to frame the analysis in terms of the specific historical, cultural and political situated factors so as to allow the reader to evaluate independently the findings presented later in the thesis. This contextual background information also assists the reader in assessing the wider validity and reliability of the implications of this study in other policy contexts, as presented in the concluding chapter.

The next section details the particularities of Trinidad and Tobago in terms of its political history, society, smallness and insularity. A brief history of T&T's economic development policy and strategy is offered in section 5.2.

5.1. Particularities of Trinidad and Tobago

5.1.1. Political Economy

The twin-island state of Trinidad and Tobago was a British colony from the end of the eighteenth century to the country's independence from the United Kingdom in 1962. It later became a republic in 1976, thereby replacing the British Monarch as Head of State with a similarly ceremonial position of President. It has been widely covered elsewhere that during the colonial period in Trinidad and Tobago, as in other colonies, what can now be considered commonplace rights such as education, business and property ownership, and political self-government through adult suffrage were not afforded to the widest proportions of society but were instead the exclusive province of the elite colonial class or their income-earning equals (John, 1991). The country's economy was largely based on its manufacturing industry during that period, which consisted in the processing of raw materials, such as rum, sugar and oil for export to the metropolitan pole. Consequently, public policy of the day served mainly to advance the colonial agenda.

On the subject of the mechanics of the Trinbagonian variant of a modern democratic system Mottley (2008) provides critical and eye-opening insight. Given his role as a two-time government minister in two different People's National Movement (PNM) administrations, his views warrant some attention. He points out:

"Trinidad and Tobago operates a Westminster-style parliamentary democracy. In theory, there is a separation of powers: among the executive, the legislature and the judiciary. However, there is a long history and prevailing culture of centralized authority in Trinidad and Tobago which was ruled under a system of 'Crown Colony'

government in colonial times. Under this system, decisive power was centralized in the colonial governor as the representative of the British crown.

In the 46 years since independence in 1962, the government has been drawn for 36 of those years from one party, the People's National Movement (PNM). The formative years of the PNM were dominated by its charismatic founder, Dr Eric Williams. His instincts were closely aligned with the authoritative centralizing model of government he inherited.

Local government has little revenue-raising capacity or free determination of expenditure. Parliament rubber stamps cabinet decisions, exercising pragmatic restraint only when bills require a special majority for passage. The judiciary is largely independent, but does require cabinet and parliamentary approval for discretionary spending. In this system, real power lies within the Cabinet and, in the Cabinet, the Prime Minister is supreme.” (Mottley, 2008: 106)

As highlighted by Mottley, a governance style which can be characterised as ‘command and control’ was prevalent in the Trinbagonian political system. This was influenced by the country’s history as a British colony, the relatively short duration of its status as an independent nation, and the dominance of a single political party in the country’s leadership through much of that time. These characteristics influence the hyper-competitive nature of both inter-party politics and intra-Cabinet power struggles.

Trinidad and Tobago is a high-income country with per capita GDP of over US\$30,000 that is rich in natural resources, with mature oil, gas and petrochemical industries. Between 1994 and 2008, the country’s output grew at an impressive average rate of approximately 7% which exceeded the regional average of 3.7% over the same period. The country has been characterised by the Inter-American Development Bank (IDB) as having a dual economy (Artana et al., 2007). Its energy sector is very productive, export-oriented, and exhibits high rates of return on investment. However, according to World Bank data, over the decade 2005 to 2014 while the energy sector represented 90% of foreign exchange earnings, 66% of exports and 44% of gross domestic product (GDP), it only provided 3.1% of employment. On the other hand, the non-energy sector is underdeveloped, attracts little investment and, largely depends on government subsidies and transfers. Crude oil has been explored and produced in the country for over 100 years, but the real driver of growth in the past two decades has been the return on investments (both foreign and domestic) into production of liquefied natural gas, petrochemicals (ammonia, methanol and urea) and steel, supported by high energy prices. Over the last decade, average annual GDP growth in the petroleum sector averaged 9.7%. The non-energy sector on the other hand exhibited much slower growth rates with a decade mean of 3.6% (Longmore et al., 2014).

According to Central Bank of Trinidad and Tobago statistics¹⁷, on average over the period 2010 to 2015 the country's agricultural sector employed 3% of the workforce, while manufacturing accounted for 8%, and services (including government) made up 60%.

Nonetheless, as is common in resource-based countries, T&T's economy has historically been quite volatile and particularly vulnerable to commodity price shocks. The 2008 global financial crisis and its aftermath have exposed the structural weaknesses of the T&T economy. While its commodity producing Latin American neighbours registered positive growth throughout the international crisis, Trinidad and Tobago's economy contracted by 3.5% in 2009 and remained flat in 2010. This was due mainly to falling output in the energy sector. This situation highlighted the extent to which the country's growth performance remains dependent on its energy sector, and the need to exploit new sources of sustainable growth through economic diversification toward more innovation-driven activities.

T&T has been characterised as suffering from Dutch disease¹⁸, the effect of which has been a chronic struggle to effectively diversify its economy beyond the energy sector. According to Artana et al. (2007) other contributory factors to this malady include: the effect of natural resource abundance on public policies, particularly fiscal policy which tends to be pro-cyclical with energy prices, thereby diminishing the credibility of the government and increasing the macroeconomic risk perceived by the private sector; low research and development (R&D) capability and output in both public and private sectors; insufficient innovation capacity and technological readiness of firms outside the energy sector; infrastructure bottlenecks; and, finally, crime.

5.1.2. *People & Society*

T&T has successfully maintained a diverse mix of ethnic and religious people groups without having suffered the associated upheavals and violent eruptions so often found in other countries that are similarly composed, including neighbouring Guyana. This generally harmonious state of interaction (if only superficially so) once caused renowned South African social rights activist Desmond Tutu to refer to the twin-island state as a "rainbow country".

T&T's cultural, ethnic and religious diversity was borne out of a history of immigration that commenced with European colonisation of the native Amerindian population, proceeded

¹⁷ Central Bank of Trinidad and Tobago Data Centre – Annual Labour Force data - <http://www.central-bank.org.tt/content/labour-force-annual-0> [last accessed on 26th March 2016]

¹⁸ Dutch disease broadly refers to the harmful consequences of large increases in a country's income, whether as a result of natural resource discovery, sharp surges in natural resource prices or foreign assistance.

through African slavery and Indian indentureship¹⁹ (both intended to provide labour for sugar cane cultivation), and culminated with the immigration of Chinese, Syrian-Lebanese and Portuguese nationals right up to the early part of the twentieth century. At present, people of Indian descent and those of African descent make up the two largest ethnic groups, but there is notable representation from all other groups, as well as various mixtures.

Being such a plural society has had a peculiar effect on the political mobilization of the country's people. As Farrell (2012: 7) writes *"[t]he greater significance of Trinidad and Tobago's ethnic or 'tribal' segments is that the political parties have tended to draw the majority of their membership from one or other of the main ethnic groups. The support for the People's National Movement (PNM) has come mainly from the urban Afro-creole population distributed along the East-West Corridor and San Fernando, the second largest city, whereas the support for the main opposition party has been drawn from the East Indian population located in Central Trinidad. Tobago has shifted allegiances depending on which party more resources and more autonomy for Tobago are likely to come from. This has meant therefore that the policymakers have come predominantly from one ethnic group or the other, depending on which party has emerged successful in the general elections."*

What this has meant in practice over the fifty odd years since independence is the establishment, or at least certainly the perceived establishment, of monopolies on power and control of state resources held by one or the other large social group to the exclusion of others. La Guerre (1999: 41) rationalises this as follows:

"In plural societies ... the cultural cleavages are more deep-seated. Indeed so profound are these cleavages that they have given rise to a theory that such societies in which there is divergence in institutional practice at basic and secondary levels are sui generis. In such societies the family, economic and education systems are different for the various ethnic groups. Even secondary associations and institutions such as pressure groups, intellectual groupings, and voluntary activities follow the lines of ethnic cleavage. In such cases a culture constitutes a bloc of associations and institutions and closure within segments is at their greatest. In the case of Trinidad, it is important to recognize the plural nature of the society and its differences from other societies of the Caribbean."

¹⁹ The system of indentureship of Indian immigrants was intended to replace the abolished practice of slavery of Africans who had been transported to the New World to provide labour for agricultural production. For further information on the history of Indian arrival in Trinidad and Tobago, please see the website of the National Council of Indian Culture - <http://www.ncictt.com/indian-arrival/history> [last accessed on 22.03.2016]

This would suggest that at a fundamental level, T&T is configured in such a way that multiple discursive spaces and a variety of disparate narratives is constantly at work in the discursive construction of every social institution, including the national policy system. Farrell (2012) suggests that this peculiarity has had a negative influence on policymakers since they may perceive a stable bloc of support regardless of the efficacy of their policy choices. Further, this scenario regularly raises questions among the general public as to the equity of distribution of resources across ethnic groups as well as geographic regions of the country.

5.1.3. Smallness & Insularity

Trinidad and Tobago has a population of 1.3 million people – tiny by the standards of most other countries in its income bracket. This small population affords the country a similarly minute domestic market which has precluded the attainment of economies of scale and has had a stunting effect on the development of customer and business sophistication, characteristics which are essential on both the supply and demand ends of the production system for crafting an innovation-driven economy.

Trinidad and Tobago's smallness is also exhibited in its "populist politics". While such a phenomenon is also prevalent in several Latin American countries, the Caribbean variety of populism that is displayed in Trinidad and Tobago has been exacerbated by a post-colonial identity crisis. In this regard populism can be understood as a mechanism used by politicians for appeasing the broadest base of constituents at any cost, often devoid of any particular philosophical or economic ideology. The effects of Caribbean populism are more acute than those which affect Latin American countries because of the limitations that are typical of small states, such as: small goods and labour markets; limited indigenous skills and resource base; diseconomies of scale, etc. In the Caribbean such limitations are extended further owing to the fact that countries such as Trinidad and Tobago are Small Island Developing States (SIDS), a status which is accompanied by a series of vulnerabilities that are social, economic and environmental in nature²⁰.

Trinidad and Tobago, like the rest of the Caribbean, is passively integrated into the global economy. This is because, even with independence and well-developed oil, gas and petrochemical industries, asymmetrical preferential trading agreements with the metropolitan states (e.g. the Lomé Conventions²¹ I-IV with Europe) created a false sense of comfort among

²⁰ For more detailed coverage of the constraints of small size faced by Caribbean countries see Demas (1965)

²¹ The Lomé Convention was a trade and aid agreement that existed between the European Economic Community and 71 African, Caribbean and Pacific (ACP) states that was first established in 1975, was

local policymakers, and hence, did not instil in them the drive to establish the necessary framework conditions to encourage the non-energy firms in the country to grow and become more innovative and export-orientated in the intervening years since gaining independence. Upon establishment of the World Trade Organization in 1995 the US lobbied successfully against asymmetrical trading arrangements, thereby bringing an end to Lomé and making way for the CARIFORUM-EU Economic Partnership Agreement (EPA). It was anticipated that a revamped trade policy framework would facilitate development among the Caribbean countries that are party to the Agreement. Having been shocked out of their lull, Caribbean policymakers (as compared to those from other parts of the African, Caribbean and Pacific (ACP) and Group of 77) responded too eagerly to the EPA – a choice that has been roundly criticized in some quarters²². The consequence of this approach will only become fully known from 2015 and beyond as the EPA comes into full effect.

T&T's geographical location (10.6667° N, 61.5167° W i.e. the southernmost islands of the Caribbean archipelago) puts the country within close reach of the large Latin American markets of Venezuela, Colombia and Brazil. Yet, despite its geographical closeness with its Latin American neighbours, for historic, linguistic, political and other reasons, both North America and Western Europe remain key trading partners for T&T. This is a poignant example of the "insularity" first pointed out by Clarke (1976) and revisited by Girvan (2001) that arises from the country's stunted and fragmented identity as a manufactured nation of immigrants with a persistent longing for the former colonial masters (or neo-colonial masters, in the case of the US).

From another perspective, the lack of customer sophistication, and aversion to exploiting new markets expressed by business owners means there has been little impetus for firms to grow their capabilities to create new products through innovation. The introduction and take up of advanced telecommunication services during the mid-1990s to mid-2000s helped reverse this trend, but overall, the proportion of firms with a high capacity for innovation is low²³. Such behaviour can also be attributed to low domestication of ICT and the Internet as an adaptive

renegotiated and renewed 3 times (hence versions I-IV), and subsequently brought to an end when the US petitioned the WTO on the grounds that the Convention violated WTO rules.

²² See, for example, Havelock Brewster's (2008) "The Anti-Development Dimension of the European Community's Economic Partnership Agreement for the Caribbean", available online at: <http://www.normangirvan.info/the-anti-development-dimension-of-the-european-communitys-economic-partnership-agreement-for-caribbean-havelock-brewster/> [accessed 18 Feb. 2015] and Brewster, Girvan and Lewis (2008) "Renegotiate the EPA", available online at: <http://www.normangirvan.info/wp-content/uploads/2009/03/renegotiate-the-epa-rev1.pdf> [accessed 18 Feb. 2015]

²³ Trinidad and Tobago's low capacity for innovation places it 105th of 144 countries surveyed in the World Economic Forum's Global Competitiveness Report 2014-15. The evidence of this characterisation is borne out by the country's rank of 90th of 143 countries in the Global Innovation Index 2014

system since the range of internationalisation techniques are dependent on the level of analytics integrated into business operations, and the willingness of company leadership to take risks. This state of affairs has not hindered the country's ability to dominate CARICOM markets, however²⁴.

5.2. A history of economic development policy and strategy

Consistent with the popular perspective of development as economic growth at the time, developmental initiatives in the country from its independence until 2011 took on a primarily industrial character, intended to transform and develop the national economy, with the expectation that such transformations would provide the financial windfall to facilitate societal change.

After winning general elections in 1956 the PNM-led government engaged in an initiative of national progress by industrialization, which was characterised by a series of five-year development plans commencing in 1958. According to Wendell Mottley's (2008) chronicle of the country's industrial policy history, "*[i]ndustrialization was an important economic goal in these plans which the nationalist government believed would give economic expression to political independence.*" (p. 9)

Mottley went on to explain how Trinidad and Tobago came to mimic Puerto Rico's strategy of 'industrialization by invitation' by establishing its own Industrial Development Corporation (IDC) in 1959 in the mould of the Puerto Rican Industrial Development Corporation (PRIDCO). The IDC was opened up to external input as it was headed by a non-national, David Weintraub. At the time the Trinidad and Tobago government also employed fiscal incentives such as tax holidays, duty-free raw material and capital goods imports. Owing to a lack of preferential legislative conditions such as were present in Puerto Rico (via the US Internal Revenue Code which created incentives for US investment in that country), Trinidad and Tobago moved on to an import substitution model of industrialization post-1966. In this new dispensation, the IDC, now headed by nationals, implemented some alternative mechanisms to encourage domestic manufacturing, such as: legislative protection in the local market by way of a negative list that restricted imports, and later, the introduction of high import tariffs; and subsidization of capital

²⁴ In 2010, Trinidad and Tobago enjoyed a net positive Balance of Trade with CARICOM of EC\$ 5.23 billion, and over the period 2005-2010 experienced an average annual share of intra-regional exports of 77.8%, according to (CARICOM Secretariat, 2005) *CARICOM's Trade – A Quick Reference to Some Summary Data: 2005-2010*, available online at: http://www.caricomstats.org/caricomtrade_quick_ref.htm [accessed 16th February, 2015]

expenditure via the establishment of factory shell buildings on industrial estates. Declining product quality of locally produced goods, combined with allegations of institutional corruption in the issuance of licences for import led to a revocation of these policy measures by the early 1990s (Mottley, 2008: 11).

On the social relations front, besides a greater potential for self-governance, one of the purported rationales for the PNM coming into power and seeking an end to British rule had been the decolonisation of society. The class divide that existed while under colonial control was understandably a sore point for the working class masses. And so, in parallel with the economic developments of the early post-Independence era, levels of social unrest came to a head in 1970 in what has been termed the “Black Power revolution” due to what was perceived as a slow pace of social change from pre-Independence social stratification (La Guerre, 1999: 154).

In the early 1980s the Government introduced a series of subsidies aimed at encouraging manufacturers to increase their export output. These incentives, along with the presence of very cheap electricity rates, spurred, and still maintain a net positive trade balance with the rest of the Caribbean in non-energy sectors.

Despite the discovery of oil in 1866, the petroleum industry did not take off until commercial production began in 1908. Refining began shortly after and climaxed in the 1950s with the purchase and expansion of the Pointe-a-Pierre refinery by American oil giant Texaco. At the time, the refinery sustained higher production levels by processing imported oil from other countries. Mottley (2008) proposed four major developments in the 1960s and 1970s that propelled the petroleum industry in T&T to its current place of prominence:

- 1969 - Amoco and the Pan American Oil Company discovered major oil deposits off the east coast of Trinidad
- 1970 - Amoco and other oil companies find natural gas deposits during further oil exploration
- 1973 - Arab/Israeli war prompted global ‘oil price shocks’ which raised oil prices from US\$2.50 to US\$34.00 per barrel
- 1974 - T&T government introduced taxation measures to increase government revenue from oil resources

These events precipitated the ‘oil boom’ period of 1974 to 1984 wherein the petroleum industry's contribution to GDP increased substantially, and the total revenues from petroleum

exceeded US\$12 billion over the same period (a remarkable feat, given that the country's entire economy in 1970 was worth US\$863 million) (Mottley, 2008: 13).

The windfall earnings provided to the Government by the petroleum industry during the boom years fuelled unprecedented largesse in the form of public sector expenditure - public goods and services, and state-led industrial expansion. State enterprises established during this period spanned a range of productive sectors, namely: *“airlines, shipping, cement, printing, food processing, property development, hospital management, telecommunications, hotels, finance, quarries and the energy industry”* (Mottley, 2008: 15). In the economic decline that set in when oil prices stabilised after the boom ended such practices proved unsustainable. The ensuing economic depression and shock to the system of a populace reared with a dependency syndrome precipitated a massive political change: the incumbent PNM was ousted from Government in 1986 for the first time in the twenty-four years since Independence. As Pantin (1991: 78) put it:

“In December 1986, the PNM was literally swept out of office after a 30-year reign by the coalition NAR which captured 33 of the 36 Parliamentary seats. The NAR was elected on a Manifesto that promised to turn around the economic decline which had begun to exhibit itself from as early as 1982. Two trends dominated the first two years of the NAR in office. First, the perhaps unavoidable errors of learning, given the fact that only two of the NAR Ministers had any prior experience of holding office. Second, an increasingly bitter internecine struggle among members of the coalition, culminating in the expulsion of most of those who were previously associated with the predominantly sugar - and the East Indian-based - United Labour Front (ULF). The corrosive trend in the country's external accounts was ignored until mid-1988, when it became clear that foreign debt service payments could not be sustained. It is in this context that IMF Agreements were negotiated. The policy conditionalities attached to these IMF Agreements, as well as a Structural Adjustment Loan from the World Bank, have had a, by now well-known, negative impact on the most vulnerable groups in the society.”

Although generally characterised as a laid-back society, before this period Trinidad and Tobago's citizenry had previously expressed their proclivity for social unrest during the 1970 Black Power Revolution. Back then, just as in the mid-1980s period summarised above by Pantin, one of the main bones of contention between the general public and the politicians was the perceived slow pace of progress, and the uneven distribution of wealth, which was considered particularly unacceptable in a post-colonial environment. In the intervening period since independence, many felt that not enough was done to turn the country's fortunes around, and that what little progress was made during the oil boom years had been squandered. And so it was that the policy

prescriptions of fiscal belt-tightening espoused by the Washington institutions made their way into the practice of Trinbagonian economic policy.

The 1990s into the early 2000s was a period of economic resurgence for Trinidad and Tobago, fuelled by a prolonged phase of the advance of "neoliberal" policy prescriptions, even across changes in administration. By neoliberal, I am specifically referring to an approach that espouses market mechanisms as the main growth driver, and that defines the state as facilitator through infrastructure and human capital development. This represented a notable shift from the approach taken during the previous decades, wherein the government had played the role of lead investor/entrepreneur. According to Farrell (2012: 180) all political parties that retained power during the period 1993 to 2008 [the UNC-NAR coalition, the UNC and the PNM] sustained similar policy motifs without explicit reference to ideological labels. Instead, in each administration, pragmatism took the lead in recognising the urgent need for foreign investment. As expressed by Farrell (2012: 181):

"Foreign direct investment was encouraged because the government did not have the resources to invest itself. Fiscal discipline and consolidation was emphasized because revenues were constrained, debt service was high, and the IMF and World Bank were active in monitoring macroeconomic policy. Exchange controls were to be abolished, not so much because of a commitment to free-market determination of the exchange rate, but because they had become bureaucratic, a source of corruption and a hindrance to business activity. What was clear was a shift in favour of supporting the private sector and business investment consistent with the Washington Consensus, and the notion that government regulations should be clear, simple and transparent."

The changes during this period were fuelled not only by policy but by more wide-ranging global developments such as calls for increased democratization, deepened integration of economic spaces, and technological changes that directly affected individuals as well as companies.

The World Wide Web burst onto the scene during this period, leading to the "dotcom" boom (and eventual bust) that entrenched the knowledge-based industries of the ICT sector in the public consciousness. These developments were followed swiftly by the expanded rollout of broadband Internet and mobile computing/telephony, both of which exacerbated the gap - aka the "digital divide" - between the digital haves and have nots, the former of whom were often more likely than not located in developed as opposed to developing countries.

The arrival of the Telecommunications Act of 2001 was the single most important legislative change that heralded the new phase of digital industrial development in Trinidad and Tobago. This Act sought to allow the entry of new providers of mobile telephony and broadband internet

services, interconnection between those providers, effective spectrum management - all under the oversight of an independent telecommunications authority. Shortly thereafter in 2003, the country's first national ICT for development strategy was released.

5.3. Chapter Summary

This chapter presented a broad landscape of contextual background information that is relevant for analysing this case. Trinidad and Tobago is a former British colony that has inherited many of Great Britain's political and legal norms, though in the post-war era, the United States has also had a significant cultural, economic and political impact.

Political power is concentrated in central government, and particularly in the Cabinet. Given that the culture of political dialogue tends to be centred on the electoral cycle, with minimal citizen engagement outside of those periods, the government's policymaking and Parliament's legislative functions are susceptible to capture by elites, making widespread corruption and the perceived inequitable distribution of energy sector windfalls a regular bone of contention.

The country is ranked as high income due to the fact that its economy is largely based on its oil, gas and petrochemical industries. However, very few of its citizens directly interact with those industries through employment. Out of the other productive sectors, services play the most important role, of which government services contributes the lion's share. Consequently, the country's internal economic system is one characterised by wealth redistribution facilitated by the government.

There is a diverse mix of ethnic and racial groups. However, while the general societal motif is one of multiculturalism and even cultural hybridisation, there are marked cleavages in the political system along ethnic and racial lines.

Trinidad and Tobago is paradoxical in its smallness. On the one hand its industrial makeup necessitates interaction with trading partners the world over, and there is a steady inflow of imported goods to satisfy local consumption patterns. There is also a significant and vibrant relationship with the Trinbagonian diaspora across the globe, even though they are largely concentrated in North America and Western Europe. Yet despite the country's geographical closeness to Latin America, there is relatively little done to foster productive relationships with countries on the South American continent, with primary external focus instead placed on English-speaking neighbours in CARICOM, and the aforementioned US and UK links. A consequence of this phenomenon that does not bode well for ICT-enabled growth strategies is

that opportunities for expansion of goods and labour markets, as well as recruitment of skilled resources from Latin America tend to wither on the vine.

Each of the issues discussed here presents opportunities and challenges for the use of ICT to organise society, politics and the economy in Trinidad and Tobago, hence the preceding discussion will allow us to locate the case within a specific historical, cultural and political context as it is unpacked in Chapter 6. The information will also be relevant for the theoretical discussion in Chapter 7.

We now move on to the case study.

6. Case Study: 3 cases of discursive construction of ICT4D policy in Trinidad and Tobago

This chapter presents the contextual case study of the construction of ICT4D policy in Trinidad and Tobago. This case study is structured as three sub-cases: telecommunications sector liberalization; public sector reform through the introduction of e-Government, and particularly, a Communications Backbone network; and, the development of Trinidad and Tobago's first national ICT strategy, dubbed *fastforward*. The sub-cases are presented in the order in which they emerged in real time, although strictly speaking, they are not necessarily sequentially linked. While there are periods of overlap across the three sub-cases, the data suggests that the actors and events described in each were only tangentially linked.

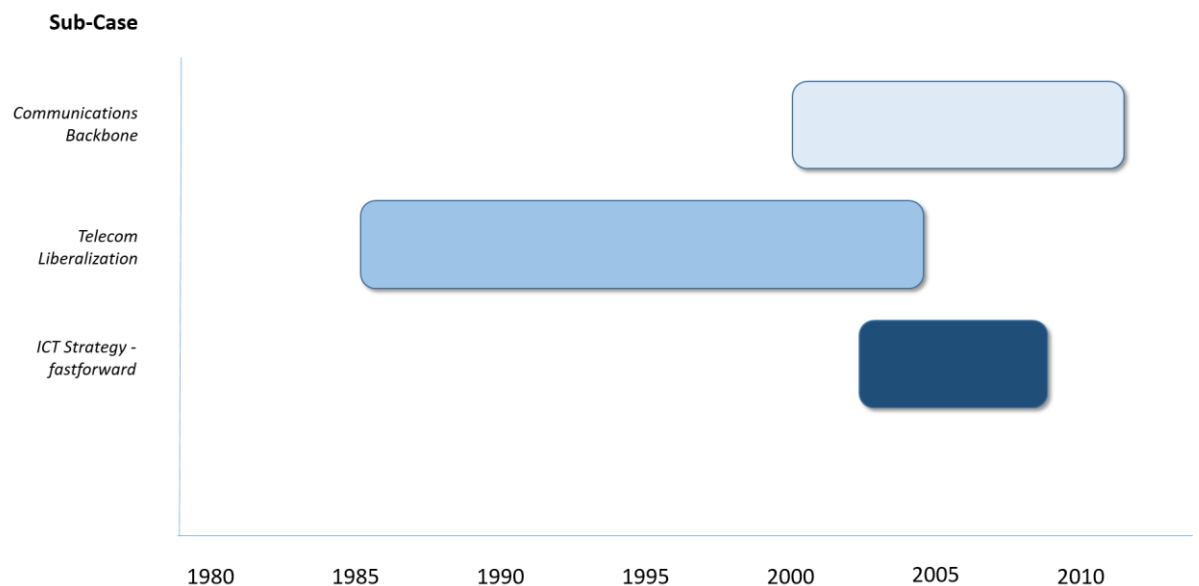


Figure 3 – Temporal windows of sub-cases

The temporal window of each sub-case is illustrated in Figure 3. The telecommunications sector liberalization sub-case is traced back to a significant discursive event in 1985 and the narrative is carried through until a significant legislative event that epitomizes the process occurs in 2005. The Backbone sub-case opens in 1999, also with a major discursive event and proceeds until the conclusion of the second phase of the network's installation in 2008. The *fastforward* sub-case formally commenced in 2002, but was pre-figured by some of the events that were chronicled in the telecommunications liberalization sub-case. It also proceeded until the end of the

strategy's execution timeline in 2008. In all cases, the events immediately succeeding the end of the sub-case are also presented and discussed.

Each sub-case exemplifies a particular configuration of events, texts, narratives and institutions, as per the theoretical framework developed in Chapter 2. The idea is to explore the construction of ICT4D policy along 3 dimensions: infrastructure upgrade (the telecom liberalization sub-case); e-Government-led public service reform (the Backbone sub-case) and societal change (the *fastforward* sub-case). Each sub-case is presented as a thematic narrative, so that the initial events are first introduced, then developed by showing how they produced key texts which in turn influenced a particular course of action. Those key texts embodied particular narratives, so that wherever competing narratives were identified, the competition between contested narratives was explored in some detail before closing off with a statement of the resolution of the sub-case, in so far as resolution occurred.

We commence the case study with the sub-case that chronicles the story of Trinidad and Tobago's telecommunications liberalization.

6.1. *Missing Link: catching up via telecommunications liberalization*

6.1.1. *Origins*

The mid-1980s was a period of major transitions in global telecommunications and this was no less evident in Trinidad and Tobago. There were two telecommunications operators in the country at the time with a very clear division of labour: **Telco** (Trinidad and Tobago Telephone Company Limited) that provided domestic telephone service, and which was 100% owned by the State; and **Textel** (Trinidad and Tobago External Telecommunications Company Limited) that operated the international gateway and provided the facilities to interconnect with the operators of all foreign countries, and which was 51% owned by the State, and 49% owned by British telecom giant, Cable & Wireless (C&W). Telco, at the time, served a user base of approximately 160,000 customers that were largely concentrated along the country's so-called East-West Corridor. Telco was regularly characterized as slow to respond to customer feedback, and in some cases, indifferent to customers' desires for cheaper rates on domestic and international long-distance telephone calls, since data communications had not yet become widespread. As the decade drew to a close both companies began straining under the pressure of increased demand for services which consequently necessitated the installation of modern (understood as digital electronic) telecommunications infrastructure²⁵.

The country's citizenry was just over two decades into celebrating its status as an independent nation and began demanding an accelerated rate of introduction of advanced telephony services (such as International Direct Distance Dialling, call waiting, call forwarding and conference calling) to accompany their aspirations to upward mobility. With the new services there was the expectation of a concomitant reduction in prices²⁶ since, at the time, telephone service was still widely seen as a luxury. Discontinuities were evident at multiple levels. On the global level in December 1984 the seminal '**Missing Link**' Report, also known as the Maitland Report²⁷, was published by the Independent Commission for World Wide Telecommunications Development, a commission that had been convened in 1982 by the Plenipotentiary Conference of the International Telecommunication Union (ITU). This report, which has since been cited by

²⁵ Although periodic incremental upgrades had been introduced since the 1930s, the major modern infrastructure upgrades actually started at the beginning of the 1980s, with Telco's owner, the Government of Trinidad and Tobago, turning to Nippon Electric of Japan and Northern Telecom of Canada for provision of the required lines, switches and other equipment to start the transition to a digital network.

²⁶ This demand was fostered by feedback from the growing T&T Diaspora that had settled in the metropolitan cities of the US and the UK, as well as a steadily increasing diet of American consumerism via television shows and other media.

²⁷ So named after the Commission's chairman, Sir Donald Maitland

practitioners and academics as a landmark document in the field, zeroed in on telecommunications development, and particularly the improvement of telecommunications infrastructure as a critical precondition for socioeconomic development.

In advancing a set of roles for telecommunications, the Report underlined the growing need for timely exchange of information in a range of applications: emergencies and health services; global travel and transport to facilitate commerce; and, increasing demand for improved efficiency of public administration systems to support economic activities.

One respondent summarised the events as follows:

“Back in 1985, there were not too many directives as far as national policy. Textel had responsibility for ensuring external or off-island communications, and so their focus was on ensuring that their service provision surpassed the demand. We were technologically way ahead of Telco - we had established the satellite earth station that carried most of the international traffic. The international networks were well in place, but they had bottlenecks with the domestic network. Around 1985 Telco was in the process of upgrading their equipment, while Textel had already gone fully digital since 1982. The end of the Shareholder's Agreement between GoRTT and Cable & Wireless in 1990 led to C&W buying into Telco and a new Shareholder's Agreement was put in place that covered both the international and domestic networks. This process resulted in the creation of TSTT²⁸ - specifically, Textel was vested into Telco.” – Interview with **Cris Seecheran**, CEO of TATT, discussing his time working at Textel

In Trinidad and Tobago, the receptivity to this new direction had been prefigured by another major player, the World Bank, to whom the Government of Trinidad and Tobago had turned for financial assistance to fund its telecommunications development programme in 1974. As the 1980s wore on the Bank became another significant proponent of telecommunications reform, calling for privatization of state-owned operators. The Bank's rationale for involvement in telecommunication have been recorded by Mitchell²⁹ (2007: 5–6) as follows:

- *"[telecommunication] has become a strategic investment for economic development, is a critical factor for the success of many bank operations, and results in efficiency gains throughout the economy;"*

²⁸ Telecommunications Services of Trinidad and Tobago Limited

²⁹ Peter Mitchell has worked for the Government of Trinidad and Tobago on telecommunications policy, and eventually ICT policy, since 1998, spanning a range of research and management roles across all the various ministries and departments to which the telecommunications policy portfolio was assigned. Mr. Mitchell is an economist by profession, and played an important role in advising the government during Trinidad and Tobago's telecommunications reform programme.

- "[telecommunication] requires a comprehensive approach to sector policy linked to overall country economic strategy, which commercial and bilateral organisations are neither inclined nor equipped to handle;"
- "[telecommunication] can lead cross-sectoral policy reforms, public sector restructuring and regulatory development;"
- "[telecommunication] can be an essential component of private sector development programmes;"
- "[telecommunication] offers tangible results and low project risks."

After the major upgrades of the 1980s were completed, the end of the Shareholder's Agreement between the government and C&W in 1990 led to C&W buying into Telco and a new Shareholder's Agreement was put in place that covered both the international and domestic networks. This process resulted in the creation of TSTT - specifically, Textel was vested into Telco – with a 51/49 ownership split between the Trinidad and Tobago government and C&W.

C&W's purchase of 49% of TSTT was not wholly positive, however, as it curtailed local determination of telecommunications development. One such example cited by Noguera (1998: 13) concerned the closure of Telco's R&D department:

"In the mid-1980s two government-owned telcos --the Trinidad and Tobago Telephone Co Ltd and Telesur, in Suriname, became the only two equipment manufacturers in the region.

T&T's then director of research and development, Dr Stephan Gift, developed a device, dubbed the subscriber pair identifier, to identify local faults on the main distribution frame. It was subsequently patented. A Canadian distributor has made it available to the small, regional telco operating companies in that country, and it has been sold to other Caribbean telcos. Influenced by Cable & Wireless, which became a 49 percent owner in 1991, T&T has eliminated research and development. The stated rationale is that it is too costly for a small country to undertake effectively."

Other entries within the literature that chronicled the negative impact of C&W on Caribbean telecommunications include Dunn (1991, 1995) and Sutherland (2009, 2010).

In September 1986 the **Uruguay Round** of multilateral trade negotiations commenced. This Round was part of the General Agreement on Tariffs and Trade (GATT) that spanned from 1986 to 1994 and involved 123 countries as "contracting parties". The objectives of the Uruguay Round included: reducing agricultural subsidies; lifting restrictions on foreign investment; and, most pertinently to this case study, starting the process of opening trade in services such as banking, insurance, intellectual property and telecommunications.

The conclusion of the Uruguay Round of GATT in 1994 resulted in the creation of the World Trade Organization (WTO) to serve as the new mechanism for multilateral trade negotiations. Criticism about the GATT process itself and its outputs was raised by a number of NGOs such as Oxfam, Health Gap and Global Trade Watch on the grounds that too many constraints were imposed on developing countries in the areas of intellectual property and industrial tariffs, thereby hampering the future policy-making initiatives of those countries. Finger and Nogués (2002) have advanced three factors which contributed to what they considered an unbalanced outcome for developing countries:

- The developing countries' lack of experience in WTO negotiations, particularly their lack of knowledge of how the developing economies would be affected by what the industrial countries wanted in the WTO new areas
- An intensified mercantilist attitude of the GATT/WTO's major power, the US
- A decision making structure within the WTO that went against the GATT tradition of decision by consensus by ejecting dissenting countries

The Uruguay Round also introduced the General Agreement on Trade in Services (GATS). When the Round ended in April 1994 it opened the way for GATS, which eventually took effect in 1995. At the time the Ministers with responsibility for telecommunications decided to extend negotiations on trade in basic telecommunications, with the aim of capturing the lessons learned from the regulatory reforms in telecommunications that were taking place at the time. The negotiations were undertaken by the Negotiating Group on Basic Telecommunications (NGBT) which comprised of 53 WTO member governments, with 24 governments that were in the process of accession to WTO participating as observers. These negotiations were scheduled to conclude in April 1996, but were then further extended to February 1997. This process produced the **Fourth Protocol**, which was annexed to the GATS and came into effect on 5 February 1998, at which time the commitments on basic telecommunication services became part of the overall **GATS commitments** that had come into force since the conclusion of the Uruguay Round.

The impact of GATS began to be felt at the domestic policy level in Trinidad and Tobago at the conclusion of the NGBT's work. The Fourth Protocol of GATS imposed legally binding commitments on WTO member countries concerning the liberalization of their telecom sectors. As a result, sixty-nine (69) countries which accounted for ninety-five percent of the global market for basic telecommunications services, including five CARICOM states (Antigua & Barbuda, Dominica, Grenada, Jamaica, and Trinidad & Tobago) confirmed their list of country-specific commitments to the WTO. GATS also provided a template for the required telecom

sector reform - the **Reference Paper on Regulatory Principles** - within which a key feature was the establishment of an independent telecom regulator. This move precipitated the need for a strategic approach to establishing a competitive domestic telecom environment, which for Trinidad and Tobago meant the creation of a telecom sector development plan.

To attend to the impact of the GATS commitments on Trinidad and Tobago a **Ministerial Committee on Telecommunications** was formed, which was headed by the Minister of Planning and Development. The Committee's role was to review the existing legislation with the aim of aligning it with the GATS commitments. To achieve its purpose, the Committee established a **Working Group on Telecommunications** which was chaired by the Governor of Central Bank, Winston Dookeran.

Another landmark event concerning telecommunications took place in 1997 as well. US telecommunications carriers lobbied the Federal Communications Commission (FCC) to reduce the termination rates that they had been paying out to foreign telecom operators, on the grounds that the rates were not in line with actual costs of service provision, and that the net effect was foreign firms being subsidized by American telcos. Developing countries had received about \$35 billion in net settlement payments from US telecom operators between 1985 and 1998, annual payments had been growing exponentially over that period (Wallsten, 1999) and as of 1995 some developing countries derived up to 50 percent of their telecommunications revenues from international settlements (Braga et al., 1999).

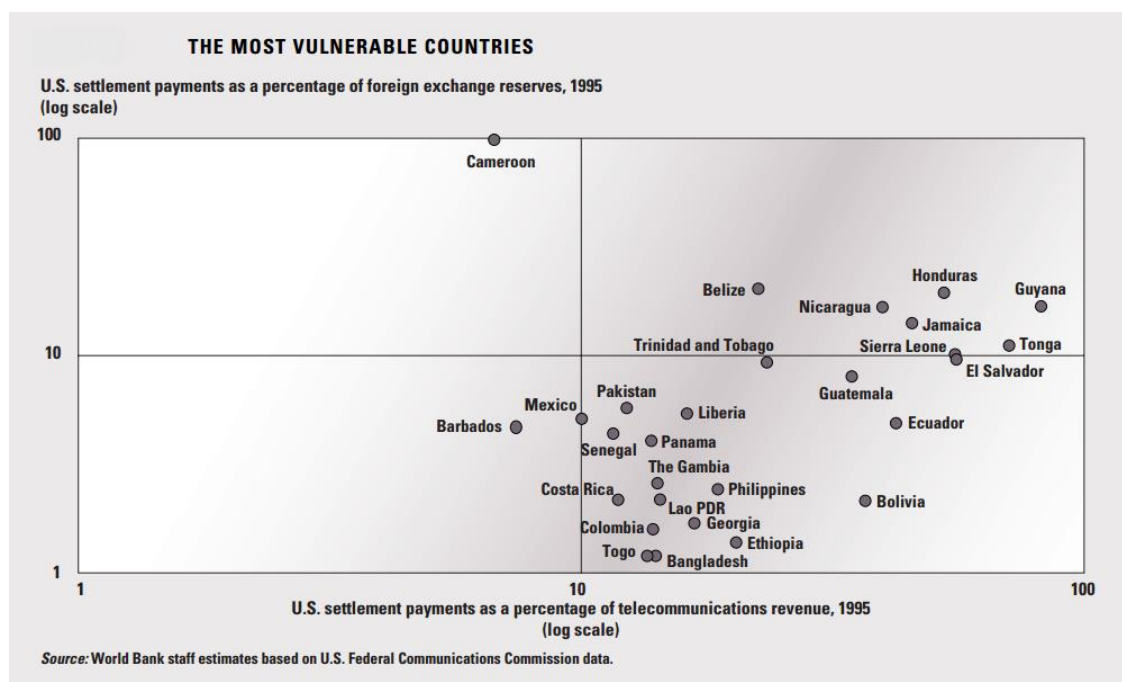


Figure 4 – Developing countries most vulnerable to telecommunications accounting rate reform, 1995 (source: Braga, Forestier and Stern, 1999)

In response to these circumstances, and taking into consideration the Basic Telecommunications Services Agreement that had been established in February, the FCC unilaterally established its **Benchmarks Order** in August 1997, which established settlement rates according to the foreign countries' level of economic development along with deadline dates for compliance by the US-licensed carriers, as follows:

Upper Income	15¢	January 1, 1999
Upper Middle Income	19¢	January 1, 2000
Lower Middle Income	19¢	January 1, 2001
Lower Income	23¢	January 1, 2002

The Order anticipated that US telcos would negotiate proportionate reductions in termination charges so that they scaled downwards to the benchmarks within the respective transition periods. This change netted significant savings for US telcos (and by extension, US consumers), while causing a significant decline in revenue for developing country telcos. In the FCC's view, high international telecommunications prices were caused either by obsolete regulation that hindered competition, or by artificial inflation of settlement rates that were significantly above cost since, in many cases, national carriers in developing country were state-owned and the revenues they earned were used for other development purposes (Cowhey, 1998). Unsurprisingly, this action generated a huge amount of policy debate, both leading up to and subsequent to the publication of the Order, with developing country telcos claiming that the FCC's decision (especially when seen in the context of the new overarching GATS regime) would substantially hamper the development of their telecom sectors (Finger and Schuler, 1999). Despite strenuous objection, this notion was debunked by Wallsten (1999) through empirical analysis of settlement rate changes, telecom traffic and investment into telecom infrastructure across 179 countries from 1985-1998. He concluded:

"I find that telecom traffic is sensitive to settlement rates. Reduced settlement rates lead to increased telecom traffic, and the biggest price effects occur in the poorest countries. That is, the poorest countries are likely to see the largest increase in telecom traffic as a result of decreases in the settlement rate. I also find no evidence that settlement payments are used to fund telecom investment. Settlement payments, while significantly correlated with telecom revenues, have no effect on mainline growth or imports of telecommunications equipment. In short, the data suggest that, contrary to conventional wisdom, settlement payments have not been invested in domestic telecom networks in developing countries." (Wallsten, 1999: 18)

In addition to the FCC's Benchmark Order itself, the case put forward by Wallsten (1999) played a key role in delegitimising the common practice among developing countries of generating

extraordinary revenues from international settlements to use for other development purposes. Hitherto, any counter-productive effects of such practices (for example, discouraging foreign direct investment and hindering the development of local telecommunications-based industries) were overlooked by developing country governments as they looked to international telecoms to extract their share of the global telecommunications pie by extending taxation to those with the ability to pay and to compensate for the difficulties in collecting revenues from forms of taxation. In effect, that practice was bound to come to a close since it was contrary to the general neoliberal argument against cross-subsidisation. Having US telcos act in a coordinated fashion to break the cycle with the backing of the US Federal Government in defence of US business interests was simply inevitable.

By the following year, in 1998, the Trinidadian Working Group on Telecommunications completed their analysis and produced what came to be known as the “**Dookeran Report**” – a strategy for domestic telecommunications development. The Report has been cited as Trinidad and Tobago’s first formal foray into telecom policy:

“The Dookeran Report was the very first time we ever had a - what I would call - a codified telecom policy because before that we relied on statements by the Minister, so that prior to the Dookeran Report there was no single telecom policy framework or document to refer to. The closest reference was the Macro Planning Framework '89-'95 in the NAR administration, but it only had a paragraph in terms of what they planned to do. It didn't say anything about policy, just what government was planning to do in telecom and that was more or less focused on TSTT.” – Interview with **Peter Mitchell**, on T&T’s early attempts at formalising its telecommunications policy.

The Report advocated for elevation of T&T’s position in the global marketplace through *“management of the evolution of an information-based economy [which] would offer significant export opportunities and earnings, create new and challenging employment opportunities, diversify the economy and contribute to rural growth”*. The report authors opined that the state of the telecom sector at the time was a hindrance to such an information-based economy since the sector was characterised by *“poor quality of service, low penetration rates, relatively high prices and inadequate access to modern telecommunication and information services.”* In the report the Working Group further noted that the globalisation of telecommunications services and the resulting interdependence of countries meant that Trinidad and Tobago was not sequestered from the major changes taking place globally. This framing put forward by the Dookeran Report endorsed and therefore conflated two parallel narratives. On the one hand it invoked speculation concerning the benefits of the ‘information-based’ economy which were

not guaranteed to be reaped by T&T. At the time there was no direct path to achieve the elevation in the global marketplace since there was only one globally competitive industry operating in the country³⁰ and even in that regard, T&T was a relative minnow. On the other, the Report set out an argument for modernisation that had a broader political appeal. Approaching the year 2000 it would have been foolhardy for any developing country politician not to have espoused similar rhetoric.

Although initially convened to treat with the GATS commitments the Dookeran Committee was no doubt influenced by the impact of the FCC Benchmark Order. Specifically, the Dookeran Report's conclusions mirrored the arguments of the WTO Reference Paper on Regulatory Principles in recommending new legislation to liberalise the telecom sector and the creation of an independent regulatory agency as a means for modernising the sector. However, in this regard, the Dookeran Report also served as the mechanism for translating the FCC's rationale for the de-legitimisation of leveraging excessive international settlement fees, i.e. buying into the prospects for market growth in an information-based economy rather than extracting tax revenues. In one fell swoop, TSTT went from being perceived as a national darling that was the country's primary window to the outside world, as well as a popular provider of "safe permanent employment", to being the biggest hurdle in the country's way of becoming a major player in the global information society. The stage was set for a new telecom regime in Trinidad and Tobago.

6.1.2. Contestation

Despite the publication of the Dookeran Report in 1998, it would be three years before its recommendations came to be reflected in legislation as a key milestone on the way to bringing them into effect. The delay was due in part to the unexpected furore caused within the Public Service by the Y2K bug³¹, and in part to the disruptive shuffling and re-assignment of Cabinet responsibility for telecommunications policy, and eventually, ICT policy among various ministries as follows:

³⁰ That is, the oil and gas industry which was not geared to generate significant knowledge spillover effects

³¹ The Year 2000 Compliance Problem, or Y2K bug, concerned the manner in which dates were stored in computer systems that resulted from the practice of truncating a four-digit year to two digits. This made year 2000 indistinguishable from 1900 to a computer, resulting in various errors concerning, in particular, the automated ordering of dated records or real-time events. In Trinidad and Tobago, a Year 2000 Compliance Committee was established by Cabinet Minute No. 1931 of July 31, 1997 within the National Information Systems Centre to lead the process of identifying the extent of the problem and finding solutions to it.

- 1998 – Ministry of Information, Communications, Training and Distance Learning
- 1999 – Office of the Prime Minister
- 2000 – Ministry of Communications and Information Technology
- 2002 – Ministry of Science, Technology and Tertiary Education
- 2002 – Ministry of Public Administration

While the first re-assignment ostensibly occurred as a result of increasing pressure to act due to the GATS commitments, the subsequent reshuffling of Ministerial portfolios could have represented one of at least three different realities.

Firstly, there were evolving perspectives on telecommunications policy, the convergence of telecommunications and ICT, and the role of the latter in development, all of which would have been weighed among a number of competing priorities faced by the Cabinet. This may have been exacerbated by a lack of understanding within Cabinet of the nature of ICT policy, the prospects for short term gains from moves toward the information-based economy and eagerness among politicians to demonstrate tangible results. The comments from a former Permanent Secretary who worked under multiple administrations supported this view:

“When I went into Public Admin I had Wade Mark [as minister] who came from IR [industrial relations] but not public admin systems. Now, although Dr. Saith didn't have public admin [qualifications], engineers understand systems and building blocks, so he got it. I'll give you an example, because I try not to judge anybody - Wade Mark had seen an example of the ttConnect Service Centres working in Bahia, in Brazil. He saw these mobile buses going out fully loaded that could deliver services to people in rural communities. And he gave us three months to initiate something like that in Trinidad. We didn't even have the Backbone yet. And therefore you know there was no way that was going to happen. So I don't know what he was committing to the Cabinet, but based on that lack of understanding of systems and change he might have communicated expectations that were not achievable.” – interview with **Jacqueline Wilson**, on unrealistic expectations of policymakers

A second perspective is that changes in the Executive arm of government as a result of general elections tend to bring about realignment of ministerial portfolios, and in this case it should be noted that general elections were held three times in as many years (2000, 2001 and 2002) during a period of unprecedented instability in Trinidad and Tobago's Parliament.³² However, a senior public officer who worked in telecom policy through that period offered a dissenting view:

³² In 2000, the UNC won the general elections 19-17. But in 2001, the UNC Government collapsed after three of its MPs Ramesh Lawrence Maharaj, Trevor Sudama and Ralph Maraj fell out with the party. Prime Minister Basdeo Panday was forced to call an election which ended in an unprecedented 18-18 tie. President Arthur NR Robinson, acting in accordance with section 76(1) of the constitution, appointed PNM leader Patrick Manning as Prime Minister on December 24, 2001. But Manning was unable to govern as

*“Our commitments to WTO gave us certain stability in policy between the UNC and PNM. Nothing changed when Dr. Saith took over [as Minister of Public Administration]. What would have caused the break is the internal capacity. In doing some research I came across some authors who suggest that the change in government may not have been the cause of delay for some countries in coming to liberalize, but maybe [the problem was] the capacity of their resources. And knowing how Trinidad operates - if you don't understand how to get through ... how to get Notes to Cabinet and so on... [you won't be successful]” – interview with **Peter Mitchell**, on policy stability through changes in political administrations*

This then lends support to the third perspective, which is that while the Public Service personnel involved in this area were sufficiently capable of operating within a known context, they lacked the required technical and organisational competencies to deal with the changes brought about by liberalization, hence the perceived need by politicians to shift things around to try to find a right fit.

*“I think also we were not ready. We didn't know what we didn't know. That is an important point. We didn't know what we didn't know. What do I mean? I'm saying that you hear 'competition' but you didn't know what that means. You didn't know the steps that were required. You couldn't just take the Canadian or the UK [model] and just bring it here. The conditions were totally different. And the circumstances. So we didn't know what we didn't know and therefore as you came up to it [you had to deal with unforeseen problems]” – interview with **Cleveland Thomas**, former National Chief Information Officer (2005-2011)*

Peter Mitchell, who was involved throughout the period as a senior technical resource, provides a perspective on what the changes felt like at ground zero:

“Prior to 1998, telecom policy never had a "home". We had ministries overseeing the Telecoms Division, when Ragbir was in charge. Now, Ragbir was both regulator and policy maker, which was an untenable situation. It's only when Dr. Prince became PS he recognised that he needed to have a Policy Unit to do the research - because Mr. Ragbir was not from the research side, he was more technical. And the reform programme was getting very intense at the time with all the conferences about creating regulatory agencies, and interconnection reared its head for the first time. So we created a Research Unit in 1998 under Dr Prince and I was involved in that and the rest is history. From that moment on it was me alone and then when telecoms went back to the Prime Minister's office for a brief moment we created a Unit that had a lot of people to deal with telecom reform issues. That's when Carol Clark became PS and Dr Prince went to do his secondment to ITU. Of course, for one year there was a separate ministry for ICT under Ralph Maraj, and I was Acting Director of Research and Planning for that. And then it was merged with Human Development

the House of Representatives was unable to elect a Speaker, and consequently had to call another election in December 2002, which the PNM won outright, garnering 20 seats to the UNC's 16.

to form what we know today as [Ministry of] Science, Technology and Tertiary Education, which ICT [policy] has gone back to because it was originally part of that ministry. The Ministry of ICT existed for about one year from December 2000 to November 2001. In that one year everything got more intense because we were really focusing on the whole reform thing and we had a lot of meetings with the CTU and ITU regional meetings. In November 2001 we had the regional conference in Trinidad for the first time - the Region 2 meeting - that provided the input into the [ITU's] Plenipotentiary Conference and the World Telecommunication Development Conference [2002]. Most of the time during that period when we were a separate ministry for ICT was spent laying the ground work." – interview with **Peter Mitchell**, on the whirlwind changes in ministerial arrangements to support telecom policy after the increased emphasis on telecommunications reform took effect.

An example of the many meetings Mr. Mitchell described was the one hosted by the Caribbean Association of National Telecommunication Organisations (CANTO) in November 2001 (Figure 5). These served an important discursive purpose - to reinforce the WTO's dominant narrative by facilitating the interaction of local, regional and foreign subject matter experts, thereby allowing them to connect and integrate their localised narratives with the global one.

CANTO discusses telecoms

By Caribbean Media Corporation
Tuesday 20th November, 2001

The Caribbean Association of National Telecommunication Organisations (CANTO) will stage two seminars in Antigua from today to Wednesday for the benefit of telecommunication operators, regulators and policy administrators in the Caribbean. The region is at the cross roads because most governments currently are developing policy to open up the telecommunication sector to competition not only to satisfy their obligations to the World Trade Organisation, but also because they genuinely believe the sector is an important driver of economic and social development," it said in a release Friday. Policy makers also believe a competitive telecommunication environment would facilitate their developmental goals."

An inherent aspect of a liberalised telecommunication sector is the establishment of a regulatory framework that ensures the orderly development of the sector. Inter-connection of networks is a key requirement in an open telecommunication market. While inter-connection is recognised by both operators and policy makers as a requirement, it does pose challenges that must be understood and appropriately addressed, Canto said. Inter-connection Challenges for Operators and Regulators" will be held at the Jolly Beach Hotel. The seminar will cover regulatory rules, technical aspects of inter-connection, costing and pricing issues and inter-connection agreements. Dr Jeff H Rohlf and Joseph H Weber of the Strategic Policy Research Inc will conduct these sessions.

On the second day, Dr Mark Jamison, University of Florida, will discuss two cases in telecommunication regulations:

- **Interconnection Dispute Resolution**
This case examines the roles regulatory commissions play in inter-connection. The regulator must deal with competitive issues, transparency, legitimacy and credibility, while being objective and impartial to the incumbent and the new entrant.
- **The Aftermath of Entry**
This case considers the policy issues and technology developments that regulators face as telecommunications competition develops beyond the initial entry phase.

On the third day, Dr John Prince, the ITU representative based in Barbados, will update participants on the various cost models that have been developed by the ITU to help developing markets to cope with a competitive telecommunication environment. The second seminar will be held on the November 26 at the same venue. [/end]

Figure 5 – Article published in the Trinidad Guardian on 20th November, 2001³³

During the period 1998 to 2000 the new Telecommunications Act was drafted, with technical assistance from the ITU and the Commonwealth Telecommunications Organisation (CTO). Financial assistance for the initiative was provided by the Inter-American Development Bank (IDB) which was used to hire an American legal firm to assist the Government in its negotiations with Cable & Wireless to bring the latter's monopoly operation to an end. Funding was also used to draft attendant legislation to the Act that conformed to GATS commitments.

The Government did not have an easy time making the Telecommunications Bill into law, however, as they fielded significant debate from both the Opposition and Independent benches

³³ Please note that due to the format in which the Trinidad Guardian Ltd.'s archives were output, no page numbers are available.

in Parliament during the debate on the Telecommunications Bill. Most of those concerns raised stemmed from questions relating to the power ascribed to the Minister to interfere in the operations of the Authority. As one independent senator put it: *“the Authority as proposed, might be nothing but a working servant to the Minister; a domesticated animal with the heavy hand of the Minister breathing down its neck. We’ve moved from a semi-independent authority to a quasi- independent authority”,* with the major risk being that *“an amalgam was being formed between the Minister and the Authority... [because of which]... the Authority could run the risk of sending mixed signals and stymie the reform process it is supposed to facilitate.”*³⁴. While another commented, *“certain clauses in the Telecom Bill suggested the Minister was the bossman and denoted an antiquated outlook, [harkening] back to the colonial days”*³⁵

In response, the Communications Minister Ralph Maraj, the main driver of the Bill through Parliament, responded that *“government was not trying to enforce dictatorial control over the proposed Telecom Authority, but said the Minister should not sit by and allow a loose cannon to develop”*³⁶. By “loose cannon” the Minister was alluding to a probable situation whereby the Telecommunications Authority, as a State agency, would have unfettered freedom to act without opportunity for political oversight – a potentially troubling thought for the Government, given that, at the time, they still maintained 51% ownership of the main telecom operator, TSTT. Such statements conflicted with Minister Maraj’s earlier comments that: *“...the bill will facilitate the implementation of pro-competitive policies. Today, as we all know, our overseas services are currently priced well above international norms. These current high calling tariffs do not serve the best interests of our population and artificially depress the number of calls we would make to friends and relatives and to potential business partners overseas.”*³⁷ Through this and similar utterances he had demonstrated that he was enrolled in the prevailing narrative communicated through the Dookeran Report about the importance of a liberalized sector, and further that he had bought into the speculation concerning knowledge-based economy prospects, clothed as it was this time in the more populist terms of communicating with ‘friends and relatives’. Nonetheless that enrolment had not translated into an imperative for the Government to relinquish its majority ownership of TSTT in the face of a soon-to-be-liberalized telecom sector, even though it was widely accepted that TSTT’s monopoly status was contributing to the retardation of the country’s development.

³⁴ “Senators question the role of Minister in Telecom Authority” – Trinidad Guardian; 14th March, 2001

³⁵ “Valere sees harking back to colonial days” - Trinidad Guardian; 5th April, 2001

³⁶ “Maraj: No Govt dictatorship in Telecom Bill” – Trinidad Guardian; 10th April, 2001

³⁷ “Telecommunications Bill in Senate Tuesday” – Trinidad Guardian; 12th March, 2001

The critical review of the Bill as it made its way through the Senate yielded over eighty amendments – most having to do with reducing the Minister’s control over the Authority’s operations - before it arrived at the Lower House for debate and eventual passage.

The Dookeran Report’s recommendations finally came to fruition with the passage of the Telecommunications Act in both houses of Parliament in 2001. This landmark event in the development of domestic telecommunications ushered in the modern age of telecommunications for Trinidad and Tobago. The Telecommunications Act of 2001 set out a framework that allowed for the liberalization of the sector, by repealing the previous legislation that governed telecommunications since the pre-Independence era - the Wireless Telegraphy Ordinance and the Cable and Wireless (West Indies) Limited Ordinance. Specifically, the Act established a formalised legal structure for promoting, authorising and managing an open market for the provision of telecommunication services in the country. Prior to the official proclamation of the Act, the dominant domestic provider of telecommunication services, TSTT, operated as a monopoly or quasi-monopoly in the various product markets it served - international voice telephony, international data communication, domestic voice telephony and domestic data communication. In the markets where it was not actually operating alone – such as internet access – it still exercised quasi-monopoly power. Since 1995, other vendors had been allowed to retail Internet access domestically, but they all purchased their uplink connections from TSTT whose wholesale pricing structure for international trunk lines and total control of essential infrastructure – such as the *international gateways*, or landing points for submarine optical fibre and satellite earth stations – meant that any other operators were effectively restricted to small market niches, often associated with geographic areas of the country in which TSTT had not yet installed the required facilities.

In an attempt to signal to stakeholders their seriousness about telecom reform, Cabinet moved swiftly to establish an interim Telecommunications Advisory Team immediately upon the Act’s passage as an interim measure until the full Telecommunications Authority could be instated. The Team’s mandate was:

“To review and evaluate recommendations of the Telecommunications Division with respect to the issuing of license to ensure consistency with the policy objectives regarding the telecommunications sector and to advise the minister on the granting of such licenses.

To consider matters referred to it by the Minister or Permanent Secretary, with a view to rendering strategic advice on telecommunications issues and

To assist the Ministry of Communications and Information Technology in the establishment and operationalisation of the Telecommunication Authority.”³⁸

Cabinet’s main aim was to ensure no delay in implementing those short-term policy measures which did not require further legislative change, such as instituting a fair and transparent approval process for telecommunications licences.

The passage of the new legislation in Parliament turned out to be only the first hurdle to be crossed in achieving liberalization of the Trinidad and Tobago telecommunications sector. The newly created regulator, the Telecommunications Authority of Trinidad and Tobago, encountered its own teething problems as a result of criticism drawn from than the former Director of Telecommunications-turned-Consultant, Winston Ragbir, and former minister with responsibility for telecommunications, Roodal Moonilal, both of whom been displaced by the general elections of December 2001 (Figure 6 & Figure 7).

³⁸ “Telecommunications advisory team named” – Trinidad Guardian; 17th May, 2001

Moonilal: Put a hold on Telecom Authority

By Sherry Ann Singh

Sunday 3rd February, 2002

Former Telecommunications Minister Roodal Moonilal is advising government to hold its hand on the appointment of a Telecommunications Authority.

He says such an appointment would be pointless unless Parliament can be convened. Provisions were made under the Telecommunications Act 2001 for the establishment of the Authority to govern the sector as it moved towards liberalisation. And last week, Hedwige Bereaux, the Minister who now has responsibility for telecom, said he will shortly go to Cabinet with recommendations for the setting up of the authority. However, Moonilal said the Authority will be incapable of functioning since their job entails the drafting and implementation of regulations to govern the sector, and this would require parliamentary approval.

Without parliamentary support government may not be able to implement the telecoms authority act and this is another delay the government is forcing upon an industry earmarked for growth," he stated.

Moonilal, like outgoing Director of Telecommunications, Winston Ragbir, has also suggested that government may have no choice but to grant licences to all thirteen companies that applied for cellular licences. He suggested the Minister seek proper legal and technical advice on how to proceed now that it is no longer pursuing a Privy Council appeal of a constitutional motion brought against it by Caribbean Communications Network (CCN). CCN failed to make the government shortlist for a licence but was successful in its constitutional motion in both the High and Appeal Courts. This is not as easy as withdrawing the appeal," Moonilal said. While the courts ruled CCN should be considered for a licence there were nine other applicants who did not meet the criteria and a few of the nine were rejected on the same grounds as CCN. So if you go the way of considering CCN, then all the other applicants may also have a case." Moonilal added that the International Telecommunications Union advisors had supported two of the nine rejected applications and may also have a claim under the new dispensation. [/end]

Figure 6 – Article published in the Trinidad Guardian on 3rd February, 2002

The objections of both Moonilal and Ragbir stemmed from the fact that, according to the Act, any new operator authorised to operate in Trinidad and Tobago had to do so in accordance with regulations made pursuant to the Act. Such regulations were meant to govern issues such as interconnection between networks, the requirement to contribute directly or indirectly to universal service across the entire country, and most importantly, authorisation to use any radio frequency spectrum to deliver a telecommunication service.

Ragbir raises concerns over telecom body

By Sherry Ann Singh
Thursday 8th August, 2002

Even as a new supervisory Authority picked up the telecommunications reins on Monday, questions were being raised about its ability to control the sector in the absence of regulations.

Telecommunications Consultant Winston Ragbir has questioned the ability of the Telecommunications Authority to function under such circumstances. The Authority was given life under the Telecommunications Act 2001, but the Act has failed to outline the rules and regulations by which players in the industry must operate. Ragbir says this is the reason only part of the Act those sections relating to appointments and staffing were proclaimed automatically when the Act was passed in Parliament. He said other sections relating to licensing could not be proclaimed without rules to govern the players in the industry. He said that leaves the Authority in a catch-22 situation. That's because in the absence of a sitting Parliament, regulations for the sector cannot be drawn up nor made into law.

On the other hand, even if the second part of the Act were proclaimed, the Authority would still face the same problems. Proclaiming the act in its entirety would result in the repealing of the previous legislation, the Wireless Telegraphy Ordinance Chapter 36 (2) under which companies previously operated. But Ragbir says when that is done, the new act has to kick in and that cannot be done without regulations. But the absence of regulations for the telecommunications sector will not hamper the operations of the Telecommunications Authority, newly appointed Chairman Dr Ralph Henry stated.

Henry said although regulations to accompany the telecommunications Act 2001 have not yet been drafted, the Authority will still be able to carry out its duties. While the regulations may not be fully elaborated at the moment, I'm sure the Board is going to have a sense of what is appropriate in the present and evolving circumstances," he said in an interview following his appointment.

He was one of 10 people appointed to the authority that will govern telecommunication matters, make recommendations on the granting of concessions and ensure there is compliance in the industry. Henry says the absence of rules ought not to be a problem. [/end]

Figure 7 – Article published in the Trinidad Guardian on 8th August, 2002

Given that such regulations could only be passed in Parliament, which was an impossible task during 2002 due to the Parliamentary deadlock mentioned previously, their objections were understandable.

6.1.3. Resolution

After the December 2001 elections the incoming PNM administration continued the thrust of telecom sector liberalization by adopting the **Medium Term Policy Framework** for the period 2002-2004 which had been published in September 2001 by the previous administration. As a means of creating a “*globally competitive and technologically-driven economy*” this document emphasised the implementation of the Telecommunications Act of 2001, starting with the full establishment of the Telecommunications Authority, and setting out a plan to approach the Inter-American Development Bank (IDB) to provide financial assistance by way of its Multilateral

Investment Fund (MIF). This funding was to be used to procure “*technical assistance in the form of legal, economic and engineering consultancies to strengthen policy formulation in implementation and regulatory management*” (Finance, 2001: 18). The MTPF also prefigured the development of a National Information and Communication Technology Strategy and the continued execution of the National e-Commerce Action Plan by the National Electronic Commerce Secretariat that had been established in 2000. Both the IDB funded “Modernization of Telecommunications” technical cooperation agreement and the National e-Commerce Action Plan kicked off in earnest during 2002. Once again, the cycle of externally-mediated policy change was about to begin, as it had five years before:

*“Everything turned on its head with the Uruguay Round when trade in services in telecom came in. It was the **Uruguay Round**, particularly the **Reference Paper on Regulatory Principles** that set the framework for **how we were supposed to reform**, where ‘your regulator must not be aligned to your operator’, and ‘you must have transparency in licensing’ and ‘interconnection must be at the most feasible technical point’... **those principles**. Like everything in Trinidad it was **that external force that pushed us to come up with a telecom policy to conform.**”* – interview with **Peter Mitchell**

Mr. Mitchell’s comments were echoed by the former National Chief Information Officer:

*“...looking at what was happening in the world and recognising this whole thing called liberalisation and I think the impact of the **WTO** for our Region really had tremendous influence in the next steps. That through the international trade agreements and the uniting of continents, to compete **there was a need for a shift to keep up with the type of development**. [Therefore] we knew we had to do something different. I believe that **external** [forces more] than internal, **pushed the Government of Trinidad and Tobago** to look at a national strategy and plan. Now that external plan was based on **best practices** [which proposed certain benefits of liberalisation] versus monopoly, because monopoly [gave rise to] a lot of waste, limited resources, no choice, high prices... all the negatives. Whereas competition [provided] efficiency.”* – interview with **Cleveland Thomas**

The pattern suggested here is that despite localised discontinuities that added fuel to the fire for change, the main driver was the force of the WTO-mandated reform. Even in the face of rising evidence of local origin that telecom reform was required, this change was not instituted without external influence. There was insufficient political will and organisational skill within the Public Service to effect telecom reform prior to the GATS. The WTO Reference Paper on Regulatory Principles, on the other hand, provided a set of principles that was founded on international best practice (a powerful institution and rationale for action within the government). Possibly also contributing to the inertia in telecommunications development prior

to 2001 was the fact that there were no alternative narratives with which to mobilise some alternative vision of how this reform might proceed. In this way, it can be argued that the narrative of the "Missing Link" Report, as expanded and embedded in the WTO Reference Paper on Regulatory Principles, was finally institutionalized via the passage of the Telecommunications Act (legislative change) and the creation of TATT (organisational change). The narrative was operationalized via publication of a series of regulatory documents that were produced pursuant to the Act (e.g. Interconnection Regulations, Spectrum Management Plan, Pricing Regulations) to herald the start of the sector liberalization process in Trinidad and Tobago.

As a demonstration of the effect of this action, the following chart (Figure 8) shows the growth in ICT users (specifically, mobile subscribers and Internet subscribers) over the decade 2000-2010. For mobile, the significant jump post-2004 (the year TATT was created) is telling.

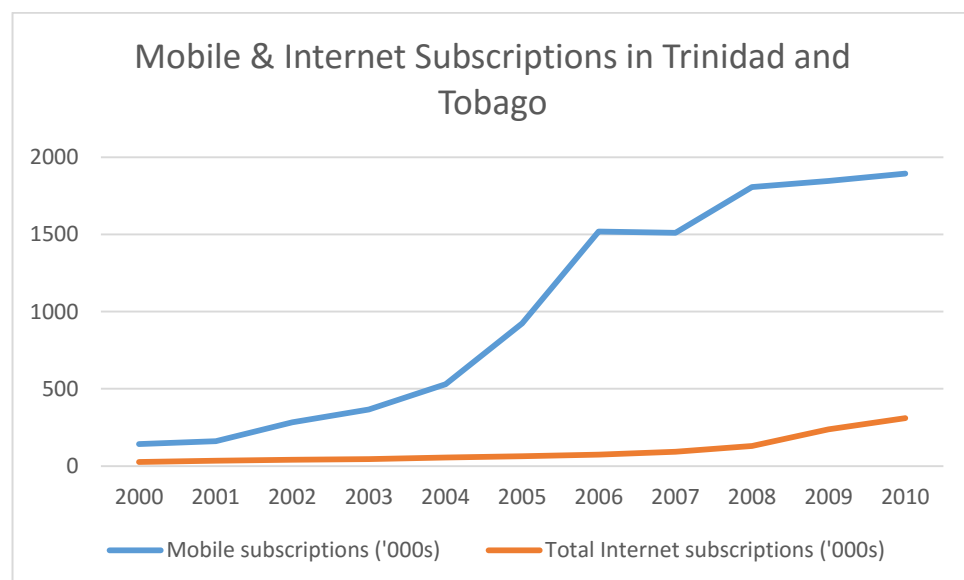


Figure 8 – Mobile & Internet Subscriptions in Trinidad and Tobago (2000-2010) [data source: TATT Annual Market Report 2010, available via <https://tatt.org.tt/>]

6.1.4. Sub-case Summary

This sub-case demonstrated some interesting themes for the discursive construction of policy. Firstly, as the first formally codified telecom policy document, the Dookeran Report represented a shift from the previous paradigm of telecom policy being whatever the Minister pronounced it to be. The Report was also an important mechanism for translating the WTO's liberalization narrative into the local context, and for delegitimising a previously popular, if counterproductive, action as regards international telecommunications settlement rates. We also examined globalization's effect on the country's sovereignty and the subsequent impact on local policymakers' ability to determine the country's telecommunications development

pathway. And finally, we explored the process of shaping new legal & regulatory institutional changes, especially how that process was mediated by subject matter experts who were engaged both directly (as a result of the IDB support programme) and indirectly (at the various regional meetings that occurred to discuss approaches to liberalization). Next, the sub-case on the Communications Backbone project is developed and presented, to highlight a case of attempted public sector reform through a technology initiative.

6.2. **One Stop Shop: reforming the Public Service through e-government**

6.2.1. Origins

With the journey to create an information-based economy underway, it followed that the subsequent policy step was to attempt to encourage electronic commerce, or e-commerce. In 1999 the Ministry of Trade, Industry and Consumer Affairs established a **National Electronic Commerce Policy Committee (NECPC)**, made up of key Private and Public Sector representatives, small, medium and large business enterprises, NGOs, and other interest groups. The Committee's mandate was to develop a policy to guide the development of Electronic Commerce in Trinidad and Tobago. The NECPC produced an interim report in 1999 that called for immediate attention towards strengthening voice and data communications infrastructure, increasing e-commerce, clarifying marketplace rules, and building marketplace confidence in e-commerce. The NECPC's final report produced in June 2000 also recommended the establishment of an Electronic Government Unit to take responsibility for improving the speed and efficiency of government operations. This work took place in parallel with, and largely separate from, ongoing efforts at the time to liberalize the telecom sector as set out in Section 6.1. Kenwyn Austin, the first Director of the e-Government Unit, recalls the initial sequence of events as follows, starting with his time at his previous employer – the state-owned oil company, Petrotrin³⁹:

"Around 1999 the government had gotten interested in an ICT strategy. They had encapsulated it into a document - an e-Commerce policy document. In that document they identified a role for electronic government. At that time the popular term that was being bandied about for this automated technology that was a tool to do business was 'e-Commerce'. So in our computer department in Petrotrin we got introduced to this term 'e-Commerce' and we had one or two little discussions and seminars and people came and spoke about what e-Commerce was, what were the implications of e-Commerce, and how we would know whether we were joining the wider world in participating in processes that were really involving e-Commerce, and whether e-Commerce was going to help us do business in Petrotrin and whether, by extension, it was going to help business in Trinidad. What were the issues? Ok, it was a nice term, but how would we jump on this bandwagon - what was needed?" – interview with **Kenwyn Austin**, on the introduction of 'e-Commerce' into the business vocabulary of a major state-owned enterprise, and subsequently, the government

³⁹ Petroleum Company of Trinidad and Tobago Limited (Petrotrin) is a state-owned oil company in Trinidad and Tobago. The company was established in 1993 by the merger of Trintopec and Trintoc, two state-owned oil companies.

Mr. Austin's somewhat sceptical insight most likely came from his long career in the private sector (albeit a state-owned company) and thereby having been exposed to multiple change initiatives. As such he was wary of putting too much stock into new trends. He provided a glimpse into the mind sets of both the senior public service leaders who advanced the National Electronic Commerce Policy, as well as the anticipation of the somewhat more business-oriented executives at the national oil company when grappling with the introduction of the latest 'hot topic' in ICT4D.

He went on to characterize his early days upon entering the government service as follows:

"I find that in the ICT world a lot of things are encapsulated in terms and then you spend a lot of time trying to define the terms. One of these terms was 'the digital divide'. We started getting invited to international fora on 'the digital divide' and I spent some time trying to understand other countries' concepts of 'the digital divide' and how they measured it. At that time they were caught up with these enterprise-wide systems, and without knowing well what they wanted to do with these terms - 'e-Government' and 'e-Commerce' - they wanted standalone systems. They wanted systems that could serve more than one department or ministry. So they had these players - these computer vendors and business software vendors and strategists trying to sell products. There were some popular brands of enterprise-wide software that were going to solve all your problems. At that time they were talking about things like 'Total Quality Management' - more ways of getting people to do more work for the same pay, to produce more with the same faculties that you had. And clouding it with nice terms like 'training' and 'development' to get you to work harder - to give more of your time to the companies. So that was the environment in which I went to work for the government.

I was seconded from Petrotrin for the last three months of my term there, and officially retired on November 30, 2000. On December 1, 2000 I started as the Director of e-Government, but was largely involved in the evaluation of the Integrated Human Resource Information System (IHRIS) that was based on Peoplesoft. The hot thing in the country was the development of a telecommunications network based on IT, separate from telephones. By then, information technology and telecommunications had been incorporated into the same discipline, whereas before they were separate disciplines. We were good at the telecommunications part of it - telephone systems and so on - but we were babies as far as international data network access. Around that time the term 'intranet' became common and people started having these little closed networks where they connected their PCs together, and then started thinking about linking their networks together via dialup connections. So that was the environment in which the government found itself when it started looking for an international human resource information system. The packages that were being sold were based on Internet technology. It was topical, it was fashionable and it was what the government felt it needed to do to keep up with the world of technology and close their position in the

digital divide, which at that time was being measured by a few spurious metrics - the number of PCs in the country, the number of televisions in the country, the number of people with access to telephones, that kind of business. They were using that as a yardstick to create indices to determine where we were." – interview with **Kenwyn Austin**, on the major events and organizational environment at the start of his tenure as Director of the e-Government Unit

In seeking to implement a government-wide HR management system the government was embarking on familiar road to ICT development that had been tried elsewhere. The sarcasm in Mr. Austin's comments ("*these computer vendors and business software vendors and strategists trying to sell ... some popular brands of enterprise-wide software that were going to solve all your problems.*") also demonstrate his wariness about the potential for proceeding along a technology development path that may have been appropriate in its original text but less so in its transplanted context. These comments can be identified as part of a narrative of 'catching up' in the context of the speculative gains on offer from widespread investment into ICT. Mr. Austin's recollection of events coincided with the account offered by other key informants, such as Peter Mitchell, as well as documents such as Cabinet Minutes, but offers valuable critical insight into the way the narratives surrounding various ICT4D terms were being perceived in government.

Immediately following the publication of the NECPC's report, Cabinet decided to develop a **Communications Backbone** for the Public Service (confirmed in Cabinet Minute No. 1176 of 28 June 2000). According to a report⁴⁰ written by Mr. Austin, the Request for Proposals (RFP) for the Communications Backbone not only set out the purpose of the infrastructure to be procured for the network, but re-established the vision for a new way of operating the Public Service that had been espoused in the National Electronic Commerce Policy. Specifically, the Communications Backbone was envisioned as an intranet that was meant to: "*increase the efficiency and effectiveness of Ministries and Departments; improve communication between Ministries and Departments; and, improve the quality and delivery of service to customers*" (Austin, 2005: 7). The report went on further to describe the government's vision for the Public Service and ICTs, as well as imperatives for the programme of public service reform that was being embarked upon:

Vision for the Public Service: the Public Service [will] be transformed into an Electronic Governmental Organization operating in an accessible, responsive and interactive

⁴⁰ The Report was written in November 2005 as a deliverable of a short term consultancy for which he had been engaged by the Ministry of Public Administration and Information during the period 1 September 2005 to 30 November 2005.

environment, enabling G2G, G2C and G2B communications and services, through the establishment of a Public Service Information Architecture.

Vision for ICTs: ICTs will be used to improve the education system; improve family health and safety; promote economic prosperity; improve the quality of life; and promote good government” (ibid)

Consequently, the Public Service imperatives were identified as (ibid):

- *Show greater dynamism and be more responsive to customer expectations*
- *Review the existing structures with a view to eliminating where necessary and appropriate, existing bureaucratic hierarchies*
- *Place more emphasis on commitment than on command and control*
- *Be open and networked*
- *Evolve into an environment of empowerment, using technology to enable the sharing of information, intelligence and decision making with and amongst end users*
- *Establish and maintain policies and standards*
- *Begin with the transformation process now*

Within the context of these expansive vision statements and in support of achieving the above imperatives, ICT was framed as an extremely beneficial and powerful information society imaginary - a public utility service like water, electrical power and telephones, that was expected to: *“link all Government buildings, departments, agencies and institutions, to and amongst themselves and the wider community, and facilitate interactive collaboration across physical and bureaucratic boundaries, and islands of information and services; with citizens evolving from being customers ‘in line’ to becoming customers ‘online’” (Austin, 2005: 7).*

Seven *critical success factors* were identified to ensure the transformation of the vision into reality: infrastructure; access; understanding; trust; resources; executive commitment; management. The Communications Backbone was targeted at addressing the first factor. Specifically, Phase 1 of the project dealt with infrastructure to enable email, messaging and scheduling, while Phase 2 was aimed at providing general information such as contact details on government representatives and a list of services offered per ministry⁴¹. No additional evidence was available in the Report to inform how the rest of these monumental goals were to be achieved⁴², nor what exact role the successful bidder for the RFP would play in bringing all of

⁴¹ Phases 3 and 4 were, respectively, supposed to deliver web-enabled services to automate standard services such as applications, and re-engineered business processes to take advantage of Internet technologies.

⁴² Except for a passing reference to need for *“the appropriate change management initiatives, including the necessary training and communication strategies to ensure success”*

them into reality. What was clear was that the expected outcome of the efforts could be summed up in a single term: “*a one stop shop*” for government services. Judging from Mr. Austin’s quote below, all emphasis appears to have been placed squarely on the infrastructure element:

“A tender was being prepared to go out at around the time I joined. Some people had already developed a framework of what they wanted in terms of connectivity. They had it packaged and ready to go out to invite firms to tender to create this telecommunications network. When I came in, part of what I had to oversee was the continuation of that process. The tenders went out and I became involved in the evaluation committee. Eventually I became head of the committee as a result of a few accidents. Then I oversaw Phase 1 of the Backbone project, as it was then being called.” – interview with **Kenwyn Austin**

Due to slow bureaucratic processes and ‘normal’ Public Service behaviour (e.g. irregular convening of evaluation committee meetings, low visibility and weak ownership of the Project by senior Public Service executives, inordinate delays in the responses from the Central Tenders Board) there was a **three year gap** between the close of tenders (Dec. 2000) and the start of project implementation (Oct. 2003) (Austin, 2005: 12).

What is noteworthy is that while the entire thrust towards e-Government had initially taken off with the intention of improving government operations as a complement to the parallel push for encouraging e-Commerce⁴³, in the intervening period the responsibility for driving e-Commerce had been devolved to a separate **e-Commerce Secretariat**, leaving the new e-Government team to focus only on public sector reform through implementation of the Backbone project. It is arguable that given the limited number of personnel with the requisite technical and managerial skills available in the Public Service at the time, this move was counterproductive since it resulted in multiple embryonic initiatives taking place in parallel without leveraging an opportunity to exploit economies of scale, benefit from shared learning or establish communities of practice.

The gap in implementation unearthed a separate set of issues, as described below:

“Because that project took three years to procure, the technology that was accepted as the proposal was submitted, was three years old. So at the point of implementation, you’re implementing technology that was three years old. And that was a big...challenge. Because, really and truly, if at the point of implementation it’s three years old - and implementation itself was carded to take a year and a half – then at the end of the project you’re really looking at four-and-a-half-year-old

⁴³ Ostensibly on the grounds that e-Commerce was seen as a major means of “*elevating the country’s position in the global marketplace*”

*telecommunications infrastructure that you're putting in that is supposed to address the needs of Government moving forward. **So there were major contradictions in that whole approach.** So we met with the Minister, Devindra, the Permanent Secretary... and we fought major battles. And, the challenge was in the procurement side of things, because [we realised that] if we were to say at that point in time – [given that] the budget was also a major restricting factor - "We don't have money for the upgraded technology and let's go back through the procurement process", it literally would've taken another three years. So you have a choice. You could either implement something that will partially address the needs and then, grow it, so to speak. So, change it out modularly. And that was what was agreed to by the Minister. So, eventually we said 'ok let's go, we moving'. This was the first ICT project, I think, that Government really implemented that involved such a wide base."* – interview with **Adam Montserin**, former Executive Director of the e-Government Unit (after Kenwyn Austin's initial tenure), on the initial procurement delay that hindered Backbone implementation (emphasis added)

Here Mr. Montserin highlighted a point that came up repeatedly in discussions with other respondents throughout the data collection process – the information asymmetry between the **politicians** who wanted to achieve significant technology-driven change, the **public service officials** who were tasked with implementing the political agenda, and the **private sector vendors** who sold the hardware and software led to notable inconsistencies between the objectives and implementation approach for these types of projects.

Another key factor which contributed to the delay was the result of the Parliamentary instability referred to in Section 5.1.

"The political climate was unstable, Ministries were being restructured, redefined, and in some cases dissolved and then recreated; senior public officers were being transferred and reassigned; Divisions, Departments, projects and personnel were being transferred to new Ministries; new Senior Public Officers were being appointed, etc." – (Austin, 2005: 12–13)

Despite all the pronouncements made by the associated Ministers at the time, and the significant bet put on ICT in general and the Backbone in particular (as per the vision statements above) to be the catalyst for reform, and despite the assertion that the Backbone was *"the largest ICT project that Government had engaged in to date"*, even after the perilous delay in procuring the equipment, the e-Government Unit was initially staffed with only a skeleton crew of "specialists" (who had no actual experience implementing e-Government projects) augmented by a team of "On The Job Trainees" (graduates who were fresh out of university or technical schools), thereby signalling a lack of support from the administrative arms of Government. During our interview, Mr. Montserin explained the situation as *"the Permanent Secretary wasn't really interested in e-Government or those type of things"*. Specifically, the lack

of support demonstrated that the Permanent Secretary had not really been enrolled into the expansive vision, and possibly saw the effort as incidental to his primary responsibilities.

Nonetheless, the e-Government Unit engaged in a considerable effort to try to obtain buy-in from all stakeholders to get on board with the public sector reform initiative, as explained by one of the e-Government specialists.

*"NISC had given us a little trouble but we worked with them. They were already established and when they saw us they were probably wondering 'where are these people coming from?' They would have looked at us like a bunch of individuals doing work that they figured they were supposed to do. In the end it all worked out, however, because all of that is part of stakeholder engagement. We got a lot of respect, we had really good relationships with all of the ministries, and that was because of our approach. It wasn't a dictatorial approach, it was 'Hey, this is what we're trying to do. Come let's show you the benefits. This is a project that will benefit government as a whole, and there are agencies and ministries that are lagging behind, so this will help everyone. We want to help everybody to standardize the infrastructure across the Public Service.' We met with every single IT Unit and agency. We did a schedule and sat and talked with everybody. We didn't go in with an attitude of 'Hey, we know everything, we're the experts'" – interview with **Joy Lange-Syriac**, former Strategic Information Systems Planning Specialist with the e-Government Unit*

The team therefore pushed forward using the goodwill garnered through the initial stakeholder engagements.

6.2.2. Contestation

Technical challenges plagued the project implementation, thereby weakening the legitimacy of the project team with their stakeholders. Even though large and supposedly reputable vendors⁴⁴ had been selected to implement, their local personnel apparently lacked the technical capability to integrate the disparate components of such a large scale project. Given the monumental expectations of what the Backbone was supposed to deliver, and in the absence of being able to review the final contractual arrangement, I can only surmise that the source of the problems can be traced back to the procurement process, particularly unspecific user requirements, hard limitations on expenditure (a fixed-price contract was issued) and the requirement to work through a Central Tenders Board which itself had not yet benefited from the renewed focus on responsiveness to customer expectations that the Backbone project was trying to engender. Here again, however, Mr. Austin's report provided some additional context, which suggested

⁴⁴ Namely a joint alliance between TSTT and Fujitsu, with Microsoft, Nortel, Checkpoint and local firm Infotech selected as sub-contractors

that the incorporation of new technical members on the side of the Government's team also contributed to delays as the new members sought to put their stamp on the scope of works by questioning all foregoing decisions:

The latter stages of the selection process, attracted the attention of some new, highly qualified professionals in the ICT arena who had just entered the Public Service as contract officers, eager and thirsty to contribute and add value. There was an uncanny but perhaps not totally unexpected rush to review, comment and make recommendations on any and all aspects of the Government Backbone – whether it was the composition and work of the evaluation team itself, the selection process, the selected Contractor Alliance, the proposed technical network design (already recommended and accepted by the CTB), the technology being employed, the carrier services to be used, the reputation, capacity and capabilities of the firms which comprised the selected Contractor Alliance, the accepted and approved solution versus a “broadband solution” – it did not seem to matter whether any or all of this made sense or not.... If ever there has been a real example of “Analysis Paralysis (AP)” in the Public Service of the Republic of Trinidad and Tobago, then this was certainly it. - (Austin, 2005: 13)

Mr. Montserin provided additional insight into the nature of the technical challenges faced by the contractors:

*“The technical side had significant challenges. Both because of the age of the technology that was being implemented, also because the providers... this was the first time a network like this was really being, you know, rolled out in the region. So it's not as though these people have ... experience. They are big companies and they have a lot of experience in a lot of different areas but this required all of it to come together as one. So, the integration of the network - real, real, real challenges. We set up, as part of the project, a test lab where we set up the actual network - physical network - on a small scale in the test lab. All of the components - the network layer, the edge devices... because the network also looked at security, which is antivirus plus firewall, which is Checkpoint, as well as mail. So, I mean real, real... when I talk about **real** challenges. Technical challenges, you know, in order to get the whole thing working smoothly. But eventually, those challenges were overcome. We actually failed one or two of the tests and had to go back into previous stages as the project moved forward. And that was, of course, I mean a major source of contention with the contractors, you know. But it was really...things worked very, very well on their own, you know, but when you had that integration it was **real, real, real...real challenges**.” – interview with Adam Montserin, on the technical problems faced during the Backbone implementation that related to integration and customization of the equipment to suit the local context*

Further complicating matters was the resistance from the various IT Departments across the Public Service which was attributed to three causes: i) a perception that the quality of service being offered by the Backbone was inferior to existing solutions that were already in place; ii)

perceived infringements on 'turf' by the Backbone team (and the ICT Division more generally); and iii) because of a less-than-stellar job of managing such a massive change. The following interview excerpts provide some evidence for the lack of clarity concerning the nature of applications needed and the priority of technological capacity over user need.

*"Ministries still want to be able to do for themselves. So the question is 'do you want the ICT Division/coordinating agency to implement?' or 'do you want the coordinating agency to set guidelines, be facilitative, and leave the ministries to implement for themselves. Ministries felt dictated to about the choices made for the implementation of the Backbone. While we did stakeholder engagement, it seemed that for a number of them it still came from left field because they didn't see the point. Also, there were some key ministries who we felt we would have gotten a little more support from and it turns out those particular ministries felt that we were taking up part of their space. It was a ticklish phenomenon where we had responsibility to do 'X' but the ministries were saying 'let's wait and see what's going to happen'. I guess it was because of the immaturity of the Public Service at the time, because you're **now** finding that ministries are saying 'I don't want to deal with this ICT issue. You deal with this and provide me with the services I need'. Previously the talk had been about infrastructure... infrastructure... infrastructure. And the ministries were comfortable dealing with infrastructure themselves. You had IT managers within the ministries who were infrastructure people, so there was, in a sense, a kind of competition. Whereas our message was 'if we deal with the infrastructure, you can deal with the databases, applications and so on', but depending on the capabilities and comfort level of the individuals you faced in a ministry, you either got resistance or support." – interview with Joy Lange-Syriac, on difficulties faced by the ICT Division in their attempts to lead the public service reform effort through the Backbone project*

*"The major challenge was getting the agencies involved to buy in and really support it. Because you had agencies that were far ahead - Ministry of Planning and so on, they already had their network in; Ministry of Finance, you know, they had the financial network that was running financial applications together with the iHRIS [Integrated Human Resource Information System]. So, there were already sub-networks that were running across government. So a major change initiative was initiated as part of that project. Not as part of the contractor deliverables, but we took it on because we realised that unless you get the buy-in, you're simply going to have a network in place and people won't utilise it. So, we eventually expanded it to bring in some change consultants and we launched an initiative called 'the New Systems Facilitators Initiative' where the project looked at hiring 'change agents', in **every single** ministry that the Backbone was connecting to. To be able to really identify tangible ways to show, and to get the buy-in and the usage up, that kind of thing. That actually came on board about six months **after** the actual project started. And that was one of the flaws of the project. We didn't lead with the change*

*initiative. You know, we led with the technology implementation initiative... with the telecommunications implementation initiative. So, we met quite a bit of resistance and tried to address it through simply moving forward with the deliverables as opposed to the change initiative, and particularly, the grassroots approach which we had developed” – interview with **Adam Montserin**, on the early failings of the Backbone implementation team to lead the change across the Public Service*

Even the approach to utilise New Systems Facilitators (NSFs)⁴⁵, as belatedly as it was introduced, achieved some successes but eventually stalled, as recounted by the former Strategic Information Systems Planning Specialist:

*"The vendor had decided that they were not going to go forward with the change management framework they had originally proposed since that framework was discontinued. So we had to make a decision about how to handle the change. So we worked a lot with the Public Sector Transformation Division and it took some time for us to scope that deliverable. We also had to gain agreement between government and the vendor. We wrote the Cabinet Note and went through the whole process of hiring the NSFs. It was really new. We looked at how change management had been done in the Public Service, and examined the learnings from the PeopleSoft implementation project, where individuals had been assigned to help out with change management activities in the ministries, but they had substantive positions. They had other work to do and the change management activities were considered extra work. They were therefore being asked to do something in which they had no vested interest, and still do their regular jobs, so that approach didn't work. That's why the idea came in to have people dedicated to the function, who would have dual responsibility to the ministry in which they worked, and to the Ministry of Public Administration. The difference was that these people would be based at the target ministries, so they would have been perceived as being part of those ministries rather than an imposed outside force. They would have been acceptable to the ministry. They were expected to operate at a level where they could influence Permanent Secretaries and thereby work on projects of the ministry. As it turns out, there were some instances where there were problems because of how the NSFs were viewed within the ministries. There were one or two cases where the PS in a ministry would not work with them, and so on. Others, however, were quite effective - it depended on the individual... how they approached the work and so on. It was the first time that this was tried and I think that it was fairly successful. Where things went haywire is when the Head of the NSFs demitted office. That person had all the institutional history and rationale for why the NSFs were needed, and that knowledge wasn't transferred. When that person left the momentum changed. There was no longer a clear understanding of what to do. It was something that suffered from a lack of leadership." – interview with **Joy Lange-Syriac**, on the origins of the idea to use New Systems Facilitators, and their effectiveness in easing the transition*

⁴⁵ Approved via Cabinet Minute 1646 of 17 June 2004

Lofty ideals, lack of specificity about requirements, inefficient bureaucratic processes and a botched change management process all interacted during the Backbone's implementation phase, resulting in missed targets and frustration. Poor communication and ineffective leadership appeared to have characterised the order of the day during the period. The next section, however, addresses how the conflicts were eventually resolved.

6.2.3. Resolution

As it turned out, the Backbone and the other major government ICT project at the time, the **e-Government Portal**, were both finally installed - though behind schedule and over-budget – connecting all the various Ministries and Departments via a unified communications infrastructure, and providing a single source of *information* on Government services (though, not actually allowing end-to-end online delivery of *e-services* as was originally envisioned) through a web interface. The main objectives of the projects were to unify the various ministries and departments in their use of a common IT infrastructure, and to facilitate a single point of contact, or “one stop shop” for users to access and utilize government services. Had those objectives been met? When asked about this during an interview (in 2011), nine years after they had commenced on the journey to e-Government, but thirteen years after the initiative was first fomented, one specialist who had been involved with the Unit from inception was unable to say that they had:

"You realise [now] that ministries are pretty much hampered. Not only from the perspective of coordination - which is still not there - but the level of cooperation and communication that takes place across government hasn't reached to the point where I think you can really reap the benefits of having interconnectivity and interoperability and the like. Ministries are still very much operating competitively... they are still competing for resources. The question is always 'who's driving?' I remember we always had this discussion about where ICT [policy] was supposed to be placed. Should it have been placed in a higher authority to give it more prominence so that it could be driven from the top? From the Office of the Prime Minister, for example? Maybe that will make the case, but I'm not so certain that even if you placed it in the Office of the Prime Minister and just dictated [to ministries] that the ICT development would happen" – interview with Joy Lange-Syriac, on the effect of the purported 'one stop shop' approach, via the Backbone and Portal projects, to public sector reform.

More telling, however, was the summary of lessons learned and recommendations documented in Kenwyn Austin's Final Report as the lead Consultant⁴⁶ on Backbone Phase II, after he had been brought back in to oversee the final stages of implementation of the Backbone and Portal. All

⁴⁶ His 3rd stint with the e-Government Unit, which ran from January to July 2008

his points speak to the perennial inability of Government to implement complex projects of this nature, and some of his recommendations were not dissimilar to those raised three years prior (Austin, 2008: 23–24):

- *a thorough current state and functionality assessment, inclusive of the length and breadth of the services that are currently in production, should have been completed*
- *All necessary authorizations and privileges should have been obtained by or on behalf of the implementing contractor beforehand to minimize the risk ... of possible resistance or diminished enthusiasm*
- *Arrangements should have been made to secure the appropriate human resources*
- *Ensuring effective leadership and team building should have been a priority*
- *The procurement phase was interminably long, and was actually longer than the implementation phase*

By the concluding remarks of the Report, Mr. Austin's exasperation with the entire experience was palpable: *"If all that has been achieved by the foregoing is the agony of the reader having to peruse material that is not new, then I believe that I have achieved my intention. And that is to demonstrate through this medium that perhaps absolutely no skill is necessary to achieve astounding success in a number of very important areas, except perhaps the ability to sustain the commitment that is necessary for success, and to rigorously follow the steps and processes that are established, especially if we assume shared ownership of them."* (Austin, 2008: 28)

Even though the project was completed, the broader objective to which the narrative of e-Government alluded was only partially achieved because the narrative did not fully translate into an institution to influence the action of the intended stakeholders – the public officers within the Public Service.

6.2.4. Sub-case Summary

This sub-case chronicles the role and discursive strategies of various actors (such as public service technocrats, and sales and marketing personnel from commercial ICT hardware and software vendors) in contributing to the paradox created by major ICT4D projects such as the Backbone. That paradox can be characterised as the competition between competing narratives. One pair of narratives was the "centralisation of power in the determination of public service reform priorities, resulting in a perception of almost dictatorial control thereby leading to lack of user engagement and take up" versus "distributed, 'democratic' user-needs direction with perpetually slipping timelines and expanding budgets owing to unspecific, 'everything but the kitchen sink' requirements specifications". Other narratives that were exposed and which had a

material effect on the outcome of the sub-case are: technological determinism (“the introduction of ICT will improve our capabilities, and ultimately reinvent the Public Service”); modernisation (“fear of being left behind as a motivator for change”); and incomplete translation of objectives from political directorate down through the ranks of the public service (“we don’t know why this project is being done, so we don’t agree with it and we won’t cooperate”). In the next section the sub-case on the National ICT Strategy, *fastforward*, is developed and presented, as a case of societal change towards establishment of an information society.

6.3. *fastforward*: drawing “the blueprint for a knowledge-based society”

6.3.1. *Origins*

Prior to the Dookeran Report, T&T did not have any sort of formal telecommunications policy document. Even that Report was not considered a full-fledged policy document by those who received it, but rather a framework to guide the critical activity of telecom sector liberalization. Given that convergence was making the distinction between IT and telecommunications obsolete, the next big jump for T&T was to create a policy for ICT development – a process which started in 2002. Engaging productively with the Internet for education, commerce, public services and social communication figured largely in the objectives, and subsequently, the details of T&T’s first National ICT Strategy.

The early foundations for such a strategy, however, first appeared during the mid-1990s as various rationales were advanced via the press to justify an IT-enabled national developmental agenda (Figure 9).

[...] The windfall profits enjoyed by the local banks over the past few years have made it possible for financial institutions to lead the private sector's thrust for new business technology. The competition within the local banking system has forced market players to continually strive to maintain an edge. And, more bankers are realising the competitive edge that technology can give. The focus on technology is not new but it has only started to pick up over the past five years. The first bank to install an automatic banking machine (ABM) was Workers' Bank on their Charlotte Street Branch in the early 1980s. In the subsequent years, the other banks continued to pay little attention to technology. The belief then was that Trinbagonians liked the personal touch of tellers, so the banks focused on providing personal banking services. The banking industry is still customer driven, but today's customers seem to be asking for convenience, security and ease of access to their money. This is reflected in banking policies. The trend towards a more high-tech service is also part of the local financial community's quest to keep up with advances made by their international competitors and partners. As a result, by the mid-1980s all but one of the local commercial banks had established an on-line ABM network. [...] – excerpt from article titled “Technology: the competitive edge” published in the Trinidad Guardian on 23rd July, 1995

[...] Works Minister Colm Imbert has said that his Road Improvement Programme is being hampered by public utilities digging up newly-repaved roads. And any motorist knows the frustration of having traffic backed up for miles because of work in progress". Very often, the utility involved is the target of complaints and abuse. A public utility in the United Kingdom has found an answer to that problem. Welsh Water, a privatised water company, is using virtual reality to show customers why a busy road must be absolutely dug up and how this will affect local communities. The system has replaced costly" and less flexible" rigid models of the proposed work. [...] Such a system could soon become a reality in Trinidad and Tobago as well, with the growing popularity of Geographic Information Systems (GIS) locally. In fact, the Water and Sewerage Authority (WASA) is reported to have already spent some \$5 million to map its underground water mains all over the country on computer and is currently working on making full use of other aspects of the GIS. [...] – excerpt from article titled “Virtual repairs for the hole in the road” published in the Trinidad Guardian on 21st May, 1995

[...] Computers are changing the way in which people interact. While computer technology will not replace old fashioned Trini liming", it can broaden our scope of social interactions, and we don't even have to leave the room. Bulletin board systems and internet enables us to interact with someone in another part of Trinidad or another part of the world. Benefits are reaped not only by businessmen, but anyone with access to a computer. New friends can be found or maybe something more... anything is possible. This might sound fantastic to those of us who believe in the traditional way of meeting-actually going out and socialising and talking to people face to face. But lo and behold! People abroad have already begun placing ads on the internet, in the manner of the personals we see in the newspaper. Men and women seeking companions and spouses place notices on the net with the hopes of finding a suitable match. The long distance relationship is nothing new. The difference is that technology makes communication more immediate, faster, frequent. Kathryn and Michael provide a good example. Kathryn is Trinidadian, Michael lives in England, they have known each other a year, are engaged, even though they have met only once. Sounds uncanny? Well, the truth is stranger than fiction. [...] – excerpt from article titled “Long distance love affair” published in the Trinidad Guardian on 22nd October, 1995

Figure 9 – Excerpts from newspaper articles published in the Trinidad Guardian

Each of the above examples is emblematic of a narrative that appealed to the needs and desires of a different group of stakeholders - the private sector's drive for improving competitiveness in the face of ever-increasing competition; the civil servant's desire to deliver public services without incurring the complaints of the customer; the private citizen's search for amorous exploits. Almost universally, these rationales subscribed to a very technologically deterministic narrative that suggested "ICT is capable of changing the world we live in and make our lives better."

Politicians were not far behind the technophiles in expressing interest in capitalizing on the promise of new information technology. While addressing a symposium on the development of a National Information Infrastructure in **May 1996**, **Prime Minister Basdeo Panday** in an unusually apologetic tone promised an uptake in the integration of IT into the public sector so as to improve the quality of service to the public:

"It is imperative that governments in developing countries promote the diffusion of information technology at the national level by setting an example and using it extensively. This would be a sure way of increasing speed, volume and accountability of transactions. Speaking for myself, I regret very much that, in the past few years, we have placed such high demands for service on our public sector. Unfortunately, however, the tool to improve the level of customer service, information technology, was not generally widely available to the public service." (Trinidad and Tobago Guardian, 15th May, 1996)

Shortly after the Prime Minister's address a committee comprising senior officials of both the public and private sectors was convened to develop an **IT Policy for the Public Service**. While addressing the inaugural meeting of the committee, and after charging them with the specific responsibility of distilling their deliberations into a policy document and action plan for the attention of Cabinet, the Minister of Public Administration, Senator Wade Mark, remarked: *"I expect that this gathering will also address the issues pertinent to human resources and human capital. For example, training, academic qualifications, compensation, position descriptions, and the whole range of human resource management issues specific to IT."* He further added: *"If anything can re-invent and re-engineer government, it is IT used to its maximum potential."* The Policy document was eventually completed and accepted by Cabinet in July 1997, with the expectation that it would be summarily disseminated. The expectation did not, however, match the outcome in producing the desired transformation, as recounted previously in the Backbone sub-case.

As the world approached the new millennium, the task of catching up to the world's more developed countries via technology upgrading increased in importance for T&T's policymakers. Momentum was being built towards the formulation of a grand strategy for ICT development. ICT-related terms became regularly injected into public pronouncements by local politicians and other public officials as they sought to show themselves to be knowledgeable about contemporary development strategies and thus, legitimate holders of the power afforded them by their offices.

Building practical action upon the rhetoric was a more difficult task, however. The challenges in coordinating the policy activities of the various ministries with some form of responsibility for elements within the overall context of national ICT4D was introduced in the previous sub-case, and has been cited by knowledgeable persons as part of the reason for the decade-long delay experienced between the initial recognition of the importance of ICTs and the eventual formulation of an ICT4D strategy.

By 1999, a number of initiatives to encourage IT's spread throughout society had been put in place by the Government to complement its broader national development plans:

- Development of policy guidance for the impending liberalization of the telecommunications sector
- Provision of interest-free loans for the acquisition of Personal Computers by public servants
- Removal of Value-Added Tax (VAT) and Customs Duty on computers and peripheral equipment
- Establishment of distance learning programmes at state-operated institutions of higher learning

Intertwined with all the technophilic narratives advocating the benefits of ICTs, were others that brought balance to the discourse by highlighting the negative effects of ICTs. The key point they sought to assert was that the technology had wide-ranging effects on various aspects of human life, such as family, romantic relationships, privacy and identity. Up to that time the societal impact of ICTs had been multi-faceted and unpredictable, especially in developing countries where these technologies were mainly adopted rather than being designed or developed.

As an example, the prospect of using the Internet in T&T brought with it new problems (such as hacking), new perspectives on old problems (the negative impact of the abuse of Internet pornography on the traditional family structure), and even questions about the nature of the further progress of society (such as disruptions to the labour market). These questions were not

openly or fully addressed as the modernization machinery rolled on, thereby resulting in missed opportunities for dialogue that could shape the trajectory and refine the pathways of progress.

As it related to employment and the sustainability of businesses, calls were made by the Ministry of Labour for trade unionists to “*step up to meet the challenge of [information] technology*” in response to its threat of “*outstripping our capacity to cope, making our laws inadequate, transforming our mores, reshuffling our economy, reordering our priorities, shifting our concept of reality and redefining our workplace*” (TT Guardian, 13th December 1995), while similar calls were made to bankers by the managing director of hardware and software vendor, Fujitsu ICL, Dr. Terrence Farrell, who claimed that “*Information technology is the most insidious and dangerous challenge facing the banking industry*” (TT Guardian, 2nd April 1996).

The similarity between both perspectives on the potential impact of ICT introduction is that technology was being perceived as an autonomous agent of change that had both positive and negative effects on people’s actions, rather than the output of a co-production with humans that could therefore be modified to suit the prevailing conditions.

Joining the growing collection of local policy documents that advocated for a strong push towards ICT was the **Medium Term Policy Framework for 2001-2003** that was published in 2000. The Framework set out a challenge for T&T to compete successfully in the “new knowledge-driven economy” and emphasized the importance of a competitive ICT industry to facilitate that goal.

6.3.2. Contestation

The early 2000s was a period of significant acceleration of the government’s efforts to get its “knowledge-based society and economy agenda” out of the blocks in earnest. Apart from trying to evade the growing impatience of citizens and the private sector, the policymakers were chastened by the less-than-stellar image of Trinidad and Tobago painted by a growing number of indices and ranking schemes that were published by the multilateral organisations. A number of those organisations began to exercise their influence on the emerging information society discourse by proffering narratives that put a different spin on the main narrative previously advanced by the WTO during the early days of the telecom liberalization thrust. The **United Nations Development Programme (UNDP)**, for example, emphasised the integral role of information for “human and societal development”, but as “only one of many needs”. The **Inter-American Development Bank (IDB)** advanced a view of ICT primarily as an enabler of other functions, while the **United Nations** sought to combat the emergence of a “two-tiered

information society”, and hence, a widening and deepening of the digital divide. Let’s examine each of these in turn.

In 2001 the UNDP released the strategic framework arising from their **Digital Opportunity Initiative (DOI)**, entitled *"Creating a Development Dynamic: Final Report of the Digital Opportunity Initiative"*. The framework was defined in terms of: infrastructure, human capacity, policy, enterprise, and content/application. The UNDP advocated for multi-faceted interventions and claimed that interactions between strategic interventions in each of the various areas would have greater potential for success than individual efforts in any single area. Such interactions would purportedly produce a “development dynamic”.

The DOI Framework emphasised the society-changing/human development aspect of ICT, with a primary narrative being ICT’s role in “enabling empowerment and raising productivity”. Their work proposed “the poor” as the primary beneficiaries of ICT initiatives.

Accompanying the DOI Framework in 2001 was the UNDP’s Human Development Report, which included a new measurement of development called the **Technology Achievement Index (TAI)**. In the inaugural rankings, Trinidad and Tobago was placed 41st out of 72 countries. Speaking in response to the launch of the Report, Minister of Communications and Information Technology, Ralph Maraj echoed the UNDP’s sentiment that “information was vital to human and societal development” and pointed to the legislative foundation provided by the recently passed Telecommunications Act 2001 to “provide a strong platform for the growth of ICTs”.

A notable perspective on the UNDP’s characterisation of the information society is the fact that, at the time, there was limited empirical evidence of the efficacy of ICTs for reliably and sustainably reducing poverty (Heeks, 2010).

In March 2002, having reframed itself as the de facto development specialist agency for the Americas Region, the IDB published a report to recap its activities – one year after the 3rd hemispheric gathering of the Americas that had taken place in April 2001. The Report was titled **“Summit of the Americas: The Agenda of the IDB – Activities and Strategic Programs One Year After Quebec”**. The main narrative of ICT from the IDB’s perspective put ICT in service of other human pursuits such as self-sufficiency (through support for telecentres in rural communities to improve connectivity) and higher education (through support for the creation of digital libraries and modernization of educational agencies), on the grounds that such pursuits were at the centre of “democratic process and efficient, equitable and sustainable development.”

Priority investment areas identified by the IDB included (IDB, 2002: 34):

- *Regulatory initiatives to promote connectivity*
- *Telecenters program for rural connectivity*
- *Connectivity program for excellence in higher education*
- *Program for the democratization of information technology*

In November 2001 the **United Nations ICT Task Force** was formed by UN Secretary-General Kofi Annan. Intended to *“[h]elp harness the power of information and communication technologies for advancing the internationally agreed development goals of the Millennium Declaration, particularly halving the number of people living in extreme poverty by 2015... serve as a bridge between the ICT and development communities and examine how to use ICT to leverage and enhance development programmes and projects”*, the Task Force was comprised of representatives from the public and private sectors, civil society and the scientific community. Developing (and transition) economies were represented along with the most technologically advanced nations.

According to an archive of the ICT Task Force website⁴⁷, the objective of the Task Force was to: *“provide overall leadership to the United Nations role in helping to formulate strategies for the development of information and communication technologies and putting those technologies at the service of development and, on the basis of consultations with all stakeholders and Member States, forging a strategic partnership between the United Nations system, private industry and financing trusts and foundations, donors, programme countries and other relevant stakeholders in accordance with relevant United Nations resolutions.”*

The UN ICT Task Force’s activities included:

- Assistance to countries in designing national and regional ICT strategies
- Supporting universal participation in new international policy and technical issues raised by ICT and the Internet
- Promoting national and international efforts to support local content and application creation

47

https://web.archive.org/web/20040904182146/http://www.unicttaskforce.org/about/mission_statement.html and <https://web.archive.org/web/20040206223539/http://www.unicttaskforce.org/about/planofaction.asp> [both accessed on 15th January 2017]

- Promoting ICT for health care and in the fight against HIV/AIDS and other infectious and communicable diseases
- Fostering enterprise and entrepreneurship for sustainable economic development, including poverty alleviation

Following the close of the Task Force's work, the UN organised the **World Summit on the Information Society (WSIS)**, a landmark forum for the progression of ICT4D that also drew inspiration from the UN's MDG agenda. WSIS was held in two phases. The first phase took place in Geneva hosted by the Government of Switzerland from 10 to 12 December 2003, and the second phase took place in Tunis hosted by the Government of Tunisia, from 16 to 18 November 2005. The Internet Society⁴⁸ described WSIS as follows: *"The World Summit on the Information Society (WSIS) was a unique two-phase United Nations (UN) summit that began with the goal of achieving a common vision, desire and commitment to build a people-centric, inclusive and development-oriented Information Society where everyone can create, access, utilize and share information. The WSIS is a key event in the history of the Internet. It recognized that it is not only governments who should have a say in the development of the Internet's future, but also businesses, civil society, engineers, and everyone who can play a role in its future. Today, annual WSIS Forums are an integral part to the follow-up of the World Summit on the Information Society, which defined a set of targets, recommendations and commitments to build an inclusive, people-centric and development-oriented Information Society."*

The Geneva Round involved 50 Heads of state/government and Vice-Presidents, 82 Ministers, and 26 Vice-Ministers from 175 countries, as well as high-level representatives from international organizations, private sector, and civil society, and produced a Declaration of Principles and a Plan of Action. The former was a road map for achieving an information society that was accessible to all while the latter advocated a strong role for governments in ICT sector planning via the creation of national e-strategies, in collaboration with the private sector and civil society. The WSIS Action Plan outlined a series of targets to achieve the information society, which in turn were filtered down into national e-strategies. The targets were grouped according to action lines that covered critical elements such as governance, infrastructure, access, security, applications, and local content.

WSIS was touted as the umbrella framework for guiding global information society development. Yet, despite being framed in human-centric terms, WSIS was criticized for

⁴⁸ <http://www.internetsociety.org/wsisis>

attempting to advance a utopian, technologically deterministic picture wherein ICTs took on a “wholly positive view as tools of development”. Doing so, it was argued, oversimplified a complex phenomenon, and intimated a consensus on the role for ICT in development where none existed (Pyati, 2005). This was perhaps due to the fact that although the WSIS process was regarded as “inclusive”, because it was part of the UN system, only government representatives had primary responsibility for drafting the documents that came to be formally adopted as outputs of the process. Even though T&T policymakers participated in WSIS and the effects of that participation – particularly during the lead up to the events themselves – can be perceived in the localised process of creating T&T’s National ICT Strategy, there was insufficient engagement with the wider community of ICT stakeholders, including civil society.

Local civil society groups such as the Trinidad and Tobago Computer Society and the IT Professionals Society had been meeting since the mid-1990s and included representation from a wide range of early technology adopters and small firms that had been pushing the proverbial envelope as regards ICTs in Trinidad and Tobago. However, they had limited impact on the policy process. This was due, in part, to the lukewarm approach of the government to consultative and participatory policy design and to the shortcomings in the civil society groups’ attempts to lobby and advocate strategically. For the better part of the early 2000s within Trinidad and Tobago, policymakers and civil society representatives appeared to be talking past each other as neither side was able to effectively integrate their respective perspectives on the role of ICT in development so as to come to an agreement on how best to organize the various actors in the community.⁴⁹

At the regional level there was marginally more success in fostering engagement among governments and civil society through, for example, the Caribbean ICT Stakeholders Virtual Community (CIVIC) – a collection of representatives from the private sector, governments, civil society organizations and regional development organizations. In February 2003, in preparation for the WSIS Geneva Round, CIVIC published an advocacy brief (CIVIC, 2003) that set out an assessment of regional ICT challenges and recommendations, including: infrastructure and access, human capacity, policy, enterprise, gender and youth, and content and applications. It should be noted that CIVIC members were collectively and individually assisted in advancing their lobby through the support of international agencies such as the Canadian International

⁴⁹ A clear example of this ineffective engagement was the protracted and ultimately unsuccessful negotiations that took place between the Government of Trinidad and Tobago, and TTNIC, the company that was responsible for the registration and administration of Internet domain named under the TT (Trinidad and Tobago) Top Level Domain, over control of the .TT domain. TTNIC was formed by local Internet pioneers Patrick Hosein, George Gobin and Feisal Mohammed.

Development Agency (CIDA), USAID and the Institute for Connectivity in the Americas (ICA), which all contributed development funding and expertise for ICT projects in the developing countries in the Western hemisphere.

Further in-depth discussion on these issues, as well as a review of progress towards a regional ICT4D strategy at the time, is available in the following literature: Marcelle(2003, 2004) and Thakur(2009, 2012).

6.3.3. Resolution

By 2002 the Internet infrastructure bottleneck which was considered the major obstruction to the full rollout of the information society in T&T had started to clear as a result of the liberalization process that had commenced in 2001 with the passage of the Telecommunications Act (see Figure 10).

Keen battle for broadband

Local firms join with foreign partners to take piece of the pie ...with the products so similar, the technology will not be as important as the quality of service each company offers.

The race is heating up to provide wireless broadband services in Trinidad. Two products were launched over the last week: the Gillette Group's Proximity and Blue Sky from Lisa Communications. Although Blue Sky officially launched on Tuesday, it has been in operation since the beginning of the year and has eight customers. Earlier this year, Neal and Massy, re-branded as Illuminat, launched Helios, soon followed by Information Technology Alliance Ltd (ITAL).

Broadband provides an alternative to dial-up connections which we have become used to locally. While dial-up offers connection rates between 24 and 56 kilobits per second (Kbps), broadband gives permanent access at up to three megabits per second (Mbps). While all providers use different technology to provide their service, the main difference is in the speeds and packages they offer. [...]

Figure 10 – Excerpt from article published in the Trinidad Guardian on 17th May, 2001

By that time as well the government was gearing up to roll out a comprehensive national development plan, **Vision2020**, by reframing the Medium Term Policy Framework series as Social and Economic Policy Frameworks (SEPF). Taking a cue from the **Millennium Development Goals**, the first SEPF espoused three main focal areas: Human Development Agenda; Economic Growth and Diversification Agenda; Environmental Agenda.

In the new dispensation, the government linked ICT's role to the economic growth and diversification agenda, as the lynchpin of a new era of industrialisation founded on *“high-level technical skills, managerial and entrepreneurial capabilities as well as competence in the utilisation of sophisticated technologies”* (Finance, 2002: 1). The SEPF also outlined

government's role to *“invest, build and facilitate the development of information technologies, telecommunications and internet infrastructures in Trinidad and Tobago.”* (Finance, 2002: 100)

Following the early warning provided by the SEPF, before the close of the year Prime Minister Manning mandated the creation of a National ICT Strategy, and a Steering Committee of senior public service officials from various ministries and departments with some perceived relevance to ICT was convened to coordinate the task. This was not the first time a senior politician had called for the creation of some sort of “holistic national technology policy”, but it was the first time that action followed the call and produced such a well-published result.

“In November 2002, the Honourable Prime Minister convened a meeting of senior officials from Ministries and Departments that dealt with various aspects of ICT matters and mandated that a National ICT Strategy be developed. The Minister responsible for telecommunications, the Minister of Public Administration and Information was appointed to be Chairman of the Steering Committee comprising of Ministers and Permanent Secretaries from the relevant Ministries and Department. To streamline the institutional arrangements, responsibility for ICT matters was assigned to the Minister of Public Administration and Information (MPAI), who already had telecommunications as part of his portfolio. Electronic Commerce and Electronic Government were re-assigned from other ministries to MPAI in May 2003.” – Mitchell (2007: 19-20)

Following the guidance of the WSIS Action Plan, to ensure coverage of all the desired thematic areas, five Working Groups were established and tasked with developing sections of the ICT strategy as follows: Infrastructure, Human Resources, Economy & Finance, Government, and Legal & Policy. Each working group was chaired by persons who were knowledgeable and well-respected in the local landscape: Infrastructure – Mr. David Soverall; Human Resources – Dr. Noel Kalicharan; Economy and Finance – Mr. Ronald Harford (with Mr. Nigel Mark Baptiste as Ag. Chairperson); Government – Ms. Gillian Macintyre; Legal and Policy – Ms. Elizabeth Camps.

In December 2003 the National ICT Strategy of Trinidad and Tobago (2003-2008) was launched. It was branded ***fastforward*** and envisioned T&T in *“a prominent position in the global information society through real and lasting improvements in social, economic and cultural development caused by deployment and usage of information and communication technology”*. By the account of those interviewed who played a role in it, the process of creating ***fastforward*** was “inclusive and participatory”.

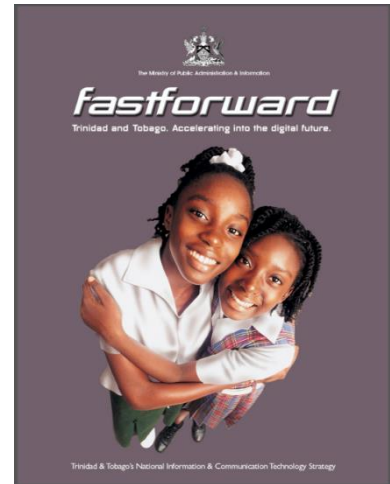
According to the document, the objective of the country’s national connectivity agenda was to:

- *Provide all citizens with affordable Internet access;*

- *Focus on the development of children and adult skills to ensure sustainable solution and a vibrant future;*
- *Promote citizen trust, access and interaction through good governance; and*
- *Maximise the potential within all citizens and accelerate innovation to develop a knowledge-based society.*

fastforward's targets to 2008 included -

- *All schools with high-speed computers and Internet access*
- *All libraries with up-to-date computers and high-speed Internet access*
- *Community Connection Programme in place*
- *All appropriate Government services available on-line*
- *Over 50% of homes with personal computers and Internet access*
- *Over 50% of population "regular Internet users"*
- *Over 50% of businesses on-line and seeing business benefits*



The proposed implementation approach consisted of a number of programmes and projects, including:

- *The Community Connection Programme, which involved the provision of Community Access Centres (CAC) beginning with a pilot study.*
- *The Legislative Review and Reform Programme, which will examine the existing legal and legislative framework and make recommendations to facilitate the promotion of e-business activities in Trinidad and Tobago*
- *The Knowledge, Innovation and Development (KID) Programme, will through the SchoolNet Project of the Ministry of Education, provide up-to-date computers and connect all schools in Trinidad and Tobago to high speed Internet service by 2008.*
- *The LibraryNet Programme to be executed by the National Library and Information System Authority (NALIS) will provide all libraries with computers and high speed Internet access.*
- *The e-Marketplace Programme will provide an avenue for Small and Micro Enterprises (SME) to conduct business online through a SME B2B e-Marketplace.*
- *The e-Government Programme will essentially complement the existing*
- *Government Wide Area Network (GWAN) Project, which is to connect all Ministries and Agencies over a public service communications backbone.*
- *The programme will see the creation of an e-Government Portal that will be the single point to access all appropriate government information and services by 2008.*

Given the prevailing national mood as regards a keen desire for societal improvement, it is not altogether surprising that the aims and objectives of **fastforward** appeared to be an amalgamation of the various global rhetorics that were in circulation at the time, condensed into a single text that was intended to be the playbook that set out the plan for T&T's arrival at its place in the global information society.

A former Permanent Secretary in the Ministry of Public Administration and Information recounted the formula that facilitated the process of creating and launching **fastforward**:

*"One of the great things that happened to our ministry at that time was having a minister like Dr. Saith - again a key part in your policy environment. Dr. Saith was easily the most respected minister in the Cabinet outside of the Prime Minister himself. He was the go-to guy in the Cabinet. Anything that was happening anywhere that was troublesome you would read in the papers 'Dr. Saith has been asked to intervene'. That made me know about it ... So that, we had respect, we knew we could get the funding for whatever we needed that made sense. There was nothing I ever dreamt about in terms of something that was for the development of our country that I did not get funding for. So, we were able to launch this [fastforward] on time." – interview with **Jacqueline Wilson**, on the role Dr. Saith's (Minister of Public Administration and Information, 2002-2007) leadership and power within Cabinet played in facilitating the creation of the National ICT Strategy*

Creating the Strategy was an important step, but it had to be followed up with the right team to implement it. Again, Mrs. Wilson's insight was helpful for understanding how the process worked:

"...we immediately went to Cabinet with a structure, but even then we stayed flexible. We advertised for a Project Coordinator to head up this ICT implementation. And the people who responded were all wrong. And I looked at it and said 'Gillian, we're advertising the wrong job. We don't want a technocrat in ICT necessarily. I want somebody who could talk to kings and talk to fishermen and inspire both of them. This person has to be hugely visionary and strategic, but not necessarily an expert in any one of the ICT areas. That would be the gravy, but that's not what we want. We want somebody who could build coalitions and get things to happen around them ... but to get that we can't call it this job. The job has to be big'. As a PS I had no problem in hiring people who would get more money than the PS because it didn't matter. What mattered was getting the capacity and the capability we needed for the country. And, we changed the job to 'National Chief Information Officer'.

So we went back out and we got two really exceptional applicants - Cleveland Thomas and John Mollenthel. We realised that Cleveland was higher on the policy curve than John was, but that they both would bring a lot of value. So we went back in-house and mulled over it because the positions at the Executive Manager level were not significant enough to attract somebody with John's expertise back to

Trinidad. He was in Canada when he applied for this job. And I said 'You know what, let us think this out some more because one of the failures of implementation in public service change initiatives has been an underestimation of the human capacity you need'. So I said 'Perhaps we need to create a position of Deputy Director and go back out for that one'. And that's what we did. We went back, we thought about it again - this is the position, this is what we want to do - and John got that. And then we stepped back and let them run with recruitment and so on. ...I believe strongly that the leader had to mould the team, and my job as PS was very clear - to be the articulator of the vision, ensure strategic implementation and guidance and foresight, get you the resources and leave you to do the job. I was never going to be interfering in what you would go on to do. So that was what we tried." – interview with **Jacqueline Wilson**, on the process of executive recruitment to run the ICT Division of the Ministry of Public Administration.

In both excerpts, the former Permanent Secretary emphasised the importance of holding firmly to a vision, yet exercising flexibility in the methods of implementation. What comes through clearly from the quotes is the importance of having powerful and savvy leadership at the top levels of the line ministry, and in Cabinet, to streamline the execution of policy objectives.

The **ICT Division** of the Ministry of Public Administration was subsequently created in **July 2005**⁵⁰ with two primary objectives: the provision of strategic guidance on national ICT development and the coordination of project implementation under the ***fastforward*** programme.

fastforward was implemented during the period 2005 to 2008. However, speaking with respondents and reviewing documentation in 2011 gave the impression that there were still loose ends. The techno-centric policy narratives embedded within ***fastforward*** did not appear to be fully translated into institutions that continued to affect action.

According to a number of young tech-savvy entrepreneurs I spoke with e-Commerce still is not a viable option for T&T firms since critical pieces of the legislative framework (such as the Data Protection Act and the Electronic Transactions Act, both passed in 2011) were hamstrung through partial proclamation, leaving other crucial elements – such as legal recognition of digital currency, and authentication of digital representations of identity – out of their scope.

Despite the eventual completion of the Backbone Project the Public Service was, in the estimation of some critics, not much closer to being 'joined up':

"You still get a sense that there's still things that need to be done. From a holistic perspective you find that there are still policy gaps. Individual ministries may want to do X, but when you look at it from a 'whole of government' approach you end up seeing the gaps. Most of the times, things hinge on legislation and there are

⁵⁰ As a result of Cabinet Minute No. 2466 of 2nd September 2004

implications for policy, implications for staffing, there are implications for a wide range of things for which the ministries sometimes just don't have the capacity to deal with." – interview with Joy Lange-Syriac

Even civil society representatives felt slighted by the manner in which the implementation process had played out:

"[Did we get to express our views while engaging in discussions with government entities and have our perspectives taken on board?] I would say "express", yes. "Taken on board"? You're never really too sure. Even if they take note of it [at the session] you always have to double check the legislation. While they would listen, and appreciate your point of view, I don't think we [as a country] are really at the point where [your perspective as a civil society rep] becomes part of the policy. There is still an idea of 'you separate business from civil society and government and you have three separate meetings, and then [the Minister] pick and choose which bits you want to put it in'. But to say that we all meet, and thrash out [our ideas] and we all appreciate and understand each other's perspective ... or even disagree with each other's perspectives... that is not done. It's still a 'divide and conquer' kind of mentality. If I'm civil society, it doesn't mean that I can't appreciate what the government is saying, or what a businessman is saying - he still has to eat! And I still have to live in the same society as both of them. So I don't understand why you have to waste [effort] gathering information instead of having one huge session broken up into sub-groups and at least get a mixed perspective coming out of it. And that not only builds rapport and quality of discussion, but it also builds a kind of softness... it softens me to the other person's perspective. It's psychological as well. – interview with Cintra Sooknanan, former Director of T&T Computer Society and Chair of the T&T Chapter of the Internet Society, on the experience of civil society while participating in government-led consultations on ICT policy

Ms. Sooknanan's lament spoke to a deep concern for wanting civil society to be meaningfully involved in the furtherance of Trinidad and Tobago's information society aspirations. The type of involvement that would produce social action and have a positive impact on the citizenry. Despite some improvements over time, in her view, **fastforward** had not turned the needle far enough. Further evidence that **fastforward** did not appear to resonate in the wider national community was provided by an article published by in November 2008 by Mark Lyndersay in the country's longest running ICT-centric column titled **BitDepth**⁵¹.

⁵¹ According to his website, "*BitDepth is the oldest continuously published column on technology in Trinidad and Tobago. It premiered in The Express in September 1995 and it ran there until November 1998, when it moved to The Guardian.*"

BitDepth 654 - November 18

17/11/08 21:04 Filed in: [BitDepth - November 2008](#)

The first five years of Fast Forward are an era of Internet development that the Government doesn't want to talk about.

What about Fast Forward 1?



Fast Forward, we hardly knew ye. After five years of planning and spending, the only public gravestone of the first Fast Forward project is a cobweb site that hasn't been updated for months.

Just over two weeks ago, a senior advertising executive contacted me about the National ICT Symposium that ends today. "Nobody I know," he said, "has heard of Fast Forward."

On his agenda was some curtain raising buzz about the symposium. Would I be interested in helping?

Of course, that's a no-brainer. Throughout the existence of this column, its one overriding reason for existence is the promotion of information and communications technology locally.

Unfortunately, the way that I interpret that goal sometimes comes into conflict with the mission of communications professionals and their clients.

There was a place for pre-symposium discussion of the Government's plans for ICT in Trinidad and Tobago, but any overture to the future needed to embrace an accounting of what happened over the first five years of the Fast Forward initiative, and that's what I asked for.

What ensued was two weeks of e-mails and calls that ultimately yielded no discernible interest in any discussion of the five-year-old Government initiative to build infrastructure, policy and services in support of a tangible improvement in Trinidad and Tobago's ICT profile.

Nothing would please me more than to be wrong about this, but there seems to be little hope that any part of the ICT symposium scheduled to run from its launch on November 16 to its final sessions on November 18 will spend any time evaluating what worked and didn't work for Fast Forward 1.

What was Fast Forward?

The Fast Forward initiative was born out of the Government's desire to fulfil crucial measures in order to achieve developed nation status by 2020. As part of the Vision 2020 plan, FF-1 was accorded appropriate front burner status and launched grandly in the last quarter of 2003, with splashy print and television advertising that sought to position the effort as hip, knowledgeable and inclusive. But from the outset, Fast Forward was created with only a dim understanding of what would really be necessary to achieve the intimidatingly long list of goals that the consulting committees created.

What the project needed was a champion equivalent to Ken Julien in the energy sector. Without that kind of leadership talking to the highest levels of Government, Fast Forward's work stumbled along, its few visible successes credited either to the bodies that actually implemented them or to the Ministries with line responsibility for specific areas of improvement.

The fast fade

What was left for the Fast Forward team were the soft and fuzzy bits that nobody wanted to claim, which included the ill-starred launch of a Government link aggregation portal meant to fulfil at least part of a mandate to link Ministries and Government agencies together and make their services available on the Internet.

My snarky representation of this unfortunate launch earned an angry response from an inside man on the team. "Until you have tried to get information from 20 some odd Ministries and tried to start the necessary process re-engineering to make this and other initiatives effective and efficient, then you can talk," wrote AD in a comment on my blog.

This, unfortunately, is where my concerns as a columnist diverge from those who have undertaken a responsibility to produce. Where AD found "a Gov't service which is still run by non-ICT savvy persons, with not enough daring to challenge the status quo," I find myself unsurprised.

The faltering status of Fast Forward I does not absolve the government of a responsibility to report on the results of five years of work and spending. At launch, the project had a five-year budget expenditure pegged at US\$82 million in 2003 and a long list of proposals that remain largely in limbo.

While it's important to look forward hopefully with this symposium, there remains outstanding an accounting of results against stated expectations, which even a champion of the project described as a "tooth and nail" but wholly predictable conflict between fast changing technology and government bureaucracy.

Figure 11 – BitDepth article published on 17th November 2008

Conducting an evaluation of *fastforward* is outside the scope of this thesis, so I will not attempt one here. What is instructive, however, about the view expressed in Mr. Lyndersay's article is the implication that the Government appeared to stop actively participating in the construction of the policy discourse, and hence on the construction of new institutions about ICT4D, after the project implementation had, by most indications, run into difficulty in delivering on its promises.

The former NCIO who led the effort to implement *fastforward* during the period in question had this to say about what was achieved:

"I think we have done some good work. We could have done better. We have done some good work in the sense that there was now connection of the ministries and departments. There was connection of remote sites and offices... Suddenly we started talking about reducing lines [of people waiting for service at government offices], now it can be done using technology. So passports, drivers licences, and so

on. So connecting ministries and remote offices became a priority. Connection was the emphasis at the time. We also started to utilise some of the people - scholars, trainers - to make use of their expertise. Get rid of all these [foreign] people that you continued to bring in - you could develop your own. We started to think about [ICT] being an alternative source of funds towards the GDP...there was tremendous room for diversification of the economy using ICTs. So that was our way of seeing some benefits there.

*We had our challenges too. Firstly, we needed to prove ourselves. [We had to prove] that this thing [ICT] is really worth it. There were limited resources, especially funds. So when the project said it needed one billion dollars [for example] you were getting piecemeal monies. You were getting a couple hundred thousand dollars and the bureaucracy in the process. There was also the disjointed approach to doing business because of the way in which government operates. I couldn't come into your ministry and tell you what to do, how to do it or when to do it. There was no single authority of government... If it wasn't a priority for that ministry [it didn't work]. Many times the budget was cut back. [We also] had the challenge that it was all new to all of us... we had to set up a whole [operation]. When I came in we were about fifteen people dealing with fastforward. By the time we left there were close to one hundred and two people. So there was a movement. The ranking [on international indices] started to move. We also found that it was slow in implementation. So we had all of this, but because of the system of government where you have [a series of bureaucratic procedures, and by the time you get through them all] the technology has changed. So technology did not have time for the typical, traditional way of doing business in government.” - interview with **Cleveland Thomas**, on the process of implementing **fastforward***

Mr. Thomas expressed a range of perspectives in his response. He was proud of what he had been able to achieve with his team in terms of influencing the construction of the new institution of a knowledge-based society in Trinidad and Tobago, given the numerous challenges they faced and the significant cognitive costs of doing so. He referred to partial, but incomplete institutionalization by way of the increase of staff at the organization, and hence an increase in the number of ambassadors for the new institution. He also, however, pointed to a number of issues that were found to be insurmountable, and which appeared to be conditioned by existing institutions, such as siloed government operations, slow implementation, and inconsistency between the rigid structure of government bureaucracy and the dynamic nature of ICT-enabled change processes.

6.3.4. Sub-case Summary

This sub-case chronicled the process of creating a vision for Trinidad and Tobago's information or knowledge-based society. As in the other two sub-cases an overarching techno-centric

narrative was evident – one that speculated on the positive benefits to be gained from investing in ICT. In this scenario, alternative narratives did arise, but did not gain support because they did not align with the national mood and they were not affiliated with other, more established narratives.

6.4. Chapter Summary

This chapter presented a case study in the form of three sub-cases: telecommunications sector liberalization; public sector reform through the introduction of e-Government, and particularly, a Communications Backbone network; and, the development of Trinidad and Tobago's first national ICT strategy, dubbed *fastforward*.

The first sub-case chronicled the process through which the WTO's popular telecommunication liberalization narrative was transferred into Trinidad and Tobago's policy environment, and embedded into new institutions, precipitating legal and regulatory change along the way. The second sub-case explored the paradoxes created through the introduction of the Backbone, which arose as a result of competing narratives. The outcome of which was incomplete adoption of the network by the beneficiary ministries, and consequently incomplete institutionalization of the desired electronic "one stop shop". Finally, the third sub-case recounted the attempt at developing and diffusing a vision for Trinidad and Tobago's take on a knowledge-based or information society. The vision was encapsulated in a techno-centric narrative but was not translated into the more widely dispersed societal change that had been anticipated.

Each section of this chapter presented a different case of discursive construction of ICT4D policy in Trinidad and Tobago, mapping out the iterative process of events generating texts, texts embodying narratives, narratives competing in discursive spaces, and the competition among narratives generating institutions, in some cases, which in turn enabled and constrained subsequent events. One of the strengths of a discourse analysis approach, however, is not simply understanding the deconstruction of power dynamics underlying policy language, but in the provision of mechanisms to allow policymakers to shape policy themselves. In the next chapter, more in-depth analysis and interpretations are presented to compare the processes and outcomes across the three cases presented thus far with the aim of developing generalised explanations of ICT4D policy construction.

7. Interpretive Analysis: Policy creolization as discursive construction of policy creoles and policy pidgins

This chapter presents an in-depth interpretive analysis to develop and refine the contributions of this thesis and ensure that those findings are generalizable beyond the contextual particularities of the case. In Sections 7.1 and 7.2 I conduct critical discourse analysis on the important events and key texts which frame the sub-cases described in Chapter 6, and examine the relationships between events and texts, texts and narratives, and narratives and institutions. In section 7.3 I interpret and explain each sub-case as a case of discursive policy construction, as a means of introducing a model of what I have termed *policy creolization* in section 7.4. The model categorises the two types of institutions present in the three sub-cases, namely *policy creoles* and *policy pidgins*, according to the two main factors that influence their emergence. I thereby offer policy creolization as a form of hybridization and recombination of existing narratives and externally derived narratives in the discursive construction of policy. Section 7.5 provides considerations for applying the policy creolization model in other contexts.

7.1. Events & Texts

The major events that were described in the three sub-cases, and the main texts they generated are represented graphically in Figures 12-14 below. For simplicity of representation and ease of reference, only the most significant events or texts in each case are referred to here, omitting the more mundane activities such as Cabinet meetings or Cabinet minutes.

In Figures 12-14, the following conventions apply:

- Each node on the timelines is colour-coded according to the sub-cases
- Rectangular shapes with the curved bottoms represent texts, while circles (whether solid or with a hole in the middle)⁵² represent discursive events.
- The relative size of the node is meant to give a rough estimation of the importance of either the event or text to the case.

⁵² The holes are artefacts of the software used to draw the timelines and do not have a specific meaning

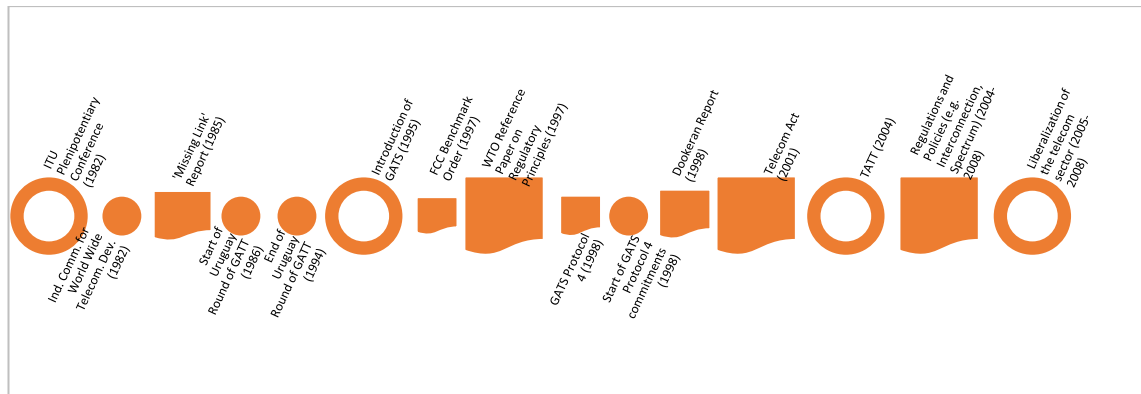


Figure 12 – Timeline of events and texts (Telecom Liberalization)

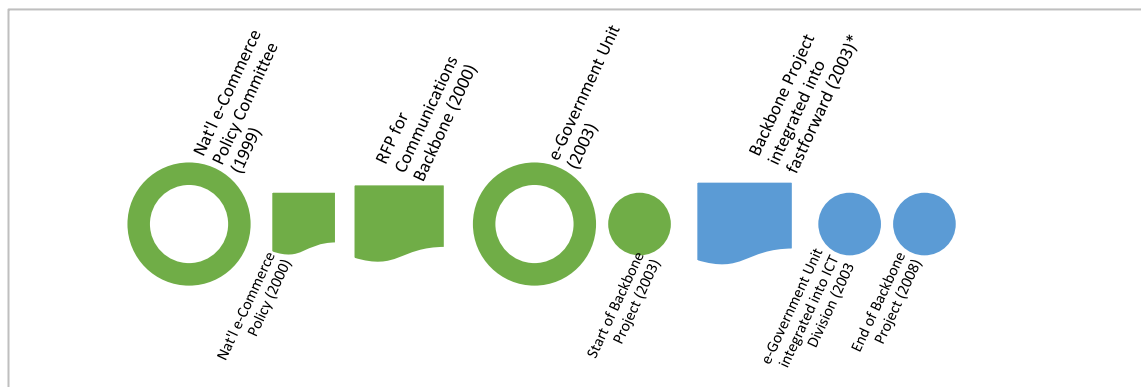


Figure 13 – Timeline of events and texts (Backbone)

*Crossover point

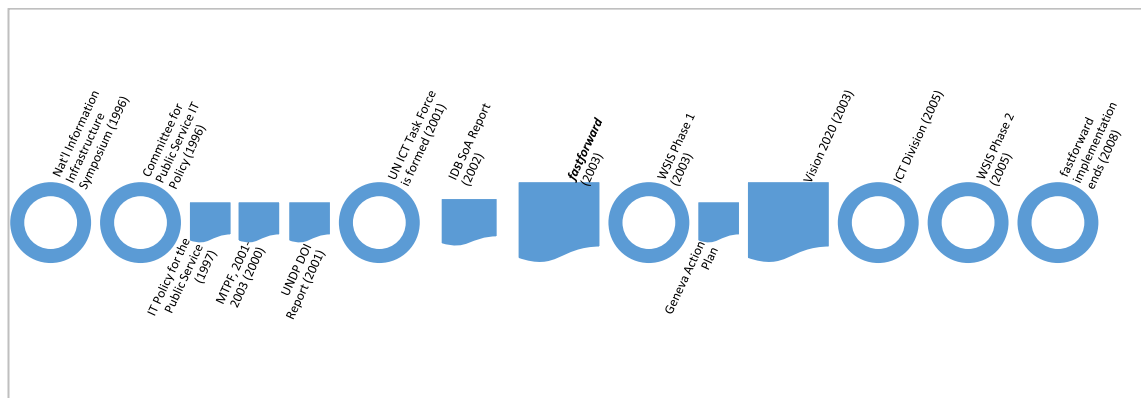
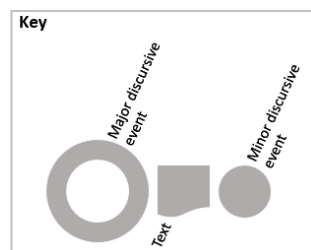


Figure 14 – Timeline of events and texts (*fastforward*)



Colour codes



Although events such as Cabinet meetings, and the Cabinet minutes produced therein, would obviously have played a role in the translation of narratives from other contexts into Trinidad and Tobago, particularly where such translation eventually led to Government-funded action, as suggested in the contextual background chapter there was little *written* evidence of Cabinet meetings being used to debate or refute highly technical issues, nor did I have access to any such meetings for obvious reasons. One would expect that any technical debates, where they did take place, would have occurred at the level of technocrats within ministries or departments, or other organisations, leaving more or less ‘fait accompli’ proposals being brought forward for Cabinet’s attention.

As shown in each timeline, the major discursive events all precipitated the production of important texts (e.g. the ITU Plenipotentiary Conference in 1982 led to the publication of the Maitland Report in 1985; the introduction of GATS in 1999 led to the publication of the WTO Reference Paper on Regulatory Principles; the formation of the National e-Commerce Policy Committee in 1999 generated the first National e-Commerce Policy in 2000; the formation of the UN ICT Task Force in 2001 eventually contributed to the creation of *fastforward* in 2003). In the telecom liberalization case locally produced texts only had significant importance on the policy discourse construction after expertise had been built up in translating and embedding dominant narratives into locally-relevant contextual narratives via the Dookeran Committee. A similar experience occurred with the *fastforward* case. Multiple attempts at framing ICT development as a national priority (e.g. via the IT Policy for the Public Service and the Medium Term Policy Framework of 2001-2003) did not have significant impact on the policy discourse construction until the process of actually putting together the first national ICT4D strategy (the *fastforward* plan itself) had facilitated the development of sufficient expertise. The evidence is not as clear in the Backbone case, however, as there were few traces of externally-derived texts conveying dominant narratives in that case with which to compare the impact of the locally-produced texts.

The production of each text did not have the same impact on social action, however. As introduced in the theoretical framework, there are three categories⁵³ of social action carried out by actors in relation to other actors as a result of their interface with text: intentional, consequential or emergent. In short, these categories represent decreasing levels of intentionality on the part of actors to shape the discourse.

⁵³ Intentional – deliberate attempt to convey narrative through text; Consequential – produced as a by-product of an ongoing discourse and may incorporate other narratives; Emergent – arises from discursive contestation in unpredicted ways and subsequently re-contextualized through new connections being made

How do texts enter policy processes?

The most common perspective arising from the case study is that texts were seldom generated ‘greenfield’ in ICT4D policy processes in Trinidad and Tobago. That is, they did not arise natively out of a public policy concern, or as a result of locally-generated research. Instead, the analysis shows that texts entered the localised policy processes through one of three pathways:

- (1) External events
- (2) Demands arising from international commitments
- (3) Local ‘catch up’ directives aimed at striving for ‘information-based’ modernity

By ‘enter’ here I refer to texts becoming known to key participants in the policy process and used to either guide new activity, or to support or refute ongoing activity.

Table 3 displays the pathway for each of the main documents referenced in the timelines in Figures 12 to 14 and categories the resultant type of social action in each case.

Table 3 – Mechanisms for text entry into localised policy processes

Case	Text	Mechanism	Type of Action associated with production of this text
Telecom Liberalization	Missing Link Report	External event	Emergent
	FCC Benchmark Order	External event	Emergent
	WTO Reference Paper on Regulatory Principles	External event	Intentional
	GATS Protocol 4	External event	Consequential
	Dookeran Report	Local ‘catch up’ directives aimed at striving for ‘information-based’ modernity	Intentional
	Telecommunications Act	Demands arising from international commitment	Consequential
	Various regulations and policies, pursuant to Telecommunications Act (2001) ⁵⁴	Local ‘catch up’ directives aimed at striving for ‘information-based’ modernity	Consequential
Backbone	National e-Commerce Policy	Local ‘catch up’ directives aimed at striving for ‘information-based’ modernity	Intentional
	RFP for Communications Backbone	Local ‘catch up’ directives aimed at striving for ‘information-based’ modernity	Consequential

⁵⁴ Even though this includes several documents, they are counted as a single instance since they are all part of the same programme of work carried out by TATT – filling out the regulatory framework to support liberalization after the main instrument (Telecom Act) came into being

fastforward	IT Policy for the Public Service	Local 'catch up' directives aimed at striving for 'information-based' modernity	Intentional
	Medium Term Policy Framework (2001-2003)	Local 'catch up' directives aimed at striving for 'information-based' modernity	Intentional
	UNDP Digital Opportunity Initiative Report	External event	Emergent
	IDB Summit of the Americas Report	External event	Consequential
	National ICT Strategy, fastforward	Local 'catch up' directives aimed at striving for 'information-based' modernity	Consequential
	WSIS Geneva Declaration & Plan of Action	External event	Emergent
	Vision 2020	Local 'catch up' directives aimed at striving for 'information-based' modernity	Emergent

Table 4 – Frequency of occurrence of text entry mechanism

Type	Count
External events	7
Demands arising from international commitment	1
Local 'catch up' directives aimed at striving for 'information-based' modernity	8

Table 5 – Frequency of occurrence of text entry mechanism, by sub-case

Case	External events	Demands arising from international commitments	Local 'catch up' directives aimed at striving for 'information-based' modernity
Telecom Liberalization	4	1	2
Backbone	0	0	2
fastforward	3	0	4

The results show that most common route for texts to enter the local policy processes was as a result of **directives to 'catch up' in order to strive for 'information-based' modernity**, but this occurred only marginally more frequently than texts entering as a result of **external events**. The telecom liberalization sub-case was the only one in which a commitment arising from an international agreement (GATS) was invoked, which is to be expected since there have been no

global agreements on the topics of e-Government, e-Commerce or national ICT strategies, as there have been for liberalization of telecommunications sectors under the WTO. Even though the Backbone project involved local telecom operator TSTT in a joint alliance with ICT multinational Fujitsu, the interviews and case documents suggest very little interaction, if any, with Fujitsu Global on the part of the e-Government Unit team, ostensibly since the project was considered a fairly standard, relatively low value (in US\$) installation, and as pointed out, it did not involve the use of cutting edge equipment or the development of new equipment.

A more general point about the texts described and analysed in these cases is that there is a significant diversity of texts – in terms of authors/producers, genre (reports, legislative acts, strategies, action plans), time horizons, and functions of the text within the policy process to either introduce or reinforce narratives through discourse. Most texts very clearly performed a discursive reinforcement of international narratives that originated elsewhere. Some attempted to perform a sort of ‘proto-narrative’, that is to say, they attempted to introduce a new or somehow distinct narrative from that which was the dominant institution at the time, but they were unsuccessful in being translated into institutions themselves. Others were internally inconsistent because they were not produced in an appropriate genre, were produced by illegitimate authors, or did not align well to existing, well-accepted institutions.

In the next section we will explore in more detail the nature and interaction of the narratives that were embedded within the main texts in each sub-case.

7.2. Narratives & Institutions

The competition between conflicting, tangential or otherwise related narratives within a given discursive space is an important facet of the discursive policy construction process. Non-specialists seldom grapple with the underlying technical ‘facts’ of an issue. Instead the narratives that they perceive, reproduce and reinforce become the primary currency in a discursive exchange. According to the theoretical framework being applied in this research, the narratives that ‘survive’ the competition are more likely to subsequently become institutions, at which point they play a crucial role in moderating both discursive events (*what can be said or not said; who is allowed to speak or not speak*) and social events (*which proposals get supported; which departments get staff; where projects get funded, etc.*). The analysis that follows, therefore, is intended to address the combined research sub-questions: ***What are the competing narratives***




that interact in the institutional field of ICT4D policy, and how has the competition between narratives produced the institutions that comprise the institutional field of ICT4D policy?

In Tables 6 to 8 below the dominant narrative in the pivotal text in each case is analysed in terms of the factors which are likely to influence the translation of texts into narratives, and subsequently narratives into institutions.

The pivotal texts being examined are:

Case	Text
Telecom liberalization	WTO Reference Paper on Regulatory Principles (1997)
Backbone	National Electronic Commerce Policy (2000)
<i>fastforward</i>	National ICT Strategy document, <i>fastforward</i> (2003)

As a reminder, the factors affecting translation of texts into narratives, and affecting the production of institutions from narratives were introduced separately in the literature review. However, they are reproduced and linked here to show the sequential progression from text to narrative to institution:

Factors affecting translation of texts into narratives		Factors affecting narratives producing institutions
Characteristics of the text producer		The internal structure of the narrative
Genre of text		
Consonance between the narrative and “widespread and deeply held cultural values”		The level of support from other, highly legitimate narratives
Relationship between the narrative and the “national mood”		
Relationship of the text to other texts		The level of competition from other contradictory narratives
Degree of prescription of radical redistribution of power or wealth		

Consistent with the theoretical framework, I take the view that institutions can only be experienced through the actions that they repeatedly enable or constrain. As such the test for institutionalization of the narratives is conducted by examining the type and status of the social actions that succeeded the introduction of the narrative into the institutional field. The framework would suggest that strong institutions would be more successful in supporting (or denying) actions than weak ones.

Table 6 – Analysis of **WTO Reference Paper on Regulatory Principles** as main text that constituted the dominant narrative in support of telecom liberalization

Factors affecting text-to-narrative translation	Effect	Factors affecting narrative-to-institution translation	Effect
Characteristics of text producer	The WTO, as producer of the dominant narrative (<i>economic and social benefits of telecom liberalization</i>), was considered an authoritative and legitimate source of knowledge	Internal structure of the narrative	The dominant narrative about telecom liberalization was considered internally consistent because it was produced by an authoritative and legitimate source, and it was exemplified in a text whose genre was considered a standard and which drew upon the widely accepted institution of “international best practice”. The narrative was therefore widely circulated and referenced.
Genre of text	The genre of the text (Reference Paper) was considered a standard of international best practice, and hence afforded a significant degree of prestige. It therefore enacted ‘ <i>a relevant and recognizable genre which provided other actors with a tool they could use for interpretation, motivating them to use the text and incorporate it into their own actions and texts</i> ’ (Phillips et al., 2004: 643). This in turn facilitated its translation into a supporting text (the Dookeran Report – <i>the first ‘codified’ national telecom policy</i>) in the T&T context, which in turn supported the development of legislation (Telecom Act, 2001)		
Consonance between the narrative and “widespread and deeply held cultural values”	There was a high degree of consonance between part of liberalization narrative and the deeply held values/interests of the private sector - “ <i>telecom liberalization is beneficial because it can offer significant export opportunities and earnings, create new and challenging employment opportunities and diversify the economy”</i>	Level of support from other, highly legitimate narratives	The dominant narrative about telecom liberalization was supported by the private sector because of their self-interested pursuit of new potential earnings, resulting from increased domestic market share, which in turn would have resulted from an increase in the overall market size (number of subscribers), as well as the expected churn of customers away from the incumbent (TSTT).
Relationship between the	Customers were fed up of TSTT’s high prices and low		

narrative and the “national mood”	quality of service, and further, TSTT’s monopoly status was perceived as a major stumbling block to the country’s development		
Relationship of the text to other texts	WTO Reference Paper was interdiscursively linked to, and hence derived legitimacy from the Maitland “Missing Link” Report, which had been produced a decade earlier and was widely accepted within telecom policy circles as a formal report issued by the world governing body for telecommunications	Level of competition from other conflicting narratives	The challenges that were raised in objection to the main narrative came from the governments and telecom operators of developing countries because they foresaw a sharp decline in their incomes from international telecommunications. Those objections were linked to a narrative of using telecoms revenue for national development, however, this narrative was unsuccessful in competing against the WTO’s narrative in favour of liberalization and bringing prices in line with costs, which was further supported by the general neoliberal argument against cross-subsidization.
Degree of prescription of radical redistribution of power or wealth	The WTO Reference Paper did prescribe a change of modus operandi between developed and developing countries which was conflictual (de-legitimation of excessive international settlement payments) and catalysed a shift in power that was considered disadvantageous to developing countries in the short term (as a result of a reduction in revenue), but beneficial to them in the long run.		

Did social action occur?	Yes
If so, what was the evidence of it?	The Working Group on Telecommunications (Dookeran Committee) was formed and produced their instrumental report, which was a precursor to legislative change via the passage and promulgation of the Telecommunications Act of 2001. The implementation of the Act via the creation of the Telecommunications Authority of Trinidad and Tobago, and the subsequent liberalization programme demonstrated that social action occurred arising from this discursive event.
Of what type was it: intentional, consequential, or emergent?	This action was cited by many knowledgeable respondents as being consequential to the publication of the WTO Reference Paper on Regulatory Principles, which intentionally produced to exemplify the objectives of the General Agreement on Trade in Services for the telecommunications sector.

In the telecom liberalization case the Government built regulatory infrastructure, with the expectation that the private sector would be attracted to enter the market and build out the physical infrastructure to facilitate the increase in availability of ICTs. In Table 6 above we can track the path of the WTO's Reference Paper on Regulatory Principles from the General Agreement on Trade in Services, through a local expert committee, becoming codified in an instrumental local telecommunications policy document and subsequently informing the creation of the Telecommunications Act of 2001. Specifically, the narrative was found to be internally consistent and was perceived as authoritative owing to its producer and genre. It built on a previously espoused narrative that had been produced and diffused a decade prior, and hence it gained the support of experts and other elites in the field. The primary opposing narrative came from developing country telcos (TSTT included), however that alternative was not as well supported by additional texts and narratives, and hence the alternative was unsuccessful in disrupting the powerful dominant narrative. Given the significant sustained program of activity that followed the passage of the Telecom Act into law, it can be said that the narrative was institutionalized.

Table 7 – Analysis of **National Electronic Commerce Policy** as main text that constituted the dominant narrative in support of e-Government

Factors affecting text-to-narrative translation	Effect	Factors affecting narrative-to-institution translation	Effect
Characteristics of text producer	The National Electronic Commerce Policy (hereafter referred to simply as “the Policy”) was developed by a committee that comprised local public and private sector representatives, including firms of various sizes, NGOs and other interest groups. Due to its diverse composition and status as a Government-appointed committee, the Committee was considered legitimate	Internal structure of the narrative	The Policy was considered internally consistent because of the status of its producer, and because its genre was considered appropriate to guide activity in the Public Service. It should be noted that the producer did not have any historical legitimacy outside of this particular event, because the Committee was convened solely for this purpose and then disbanded.
Genre of text	As a Government policy document the text would have been considered official, and therefore legitimate to guide the actions of public officers.		

Consonance between the narrative and “widespread and deeply held cultural values”	<p>The primary narrative in the text that related to e-Government referred to a vision for the Public Service in beneficial terms such as <i>“accessible, responsive, interactive, dynamic, committed, open and empowered”</i>. While these terms may have been characteristic of individuals, none of the respondents referred to the Public Service as an organisation in that way. Further, there is no evidence that any accompanying exercises such as meetings, focus groups or surveys were used to communicate or distil the Policy with the public officers themselves, nor with their customers, the general public. As such, there did not appear to be any significant consonance between the narrative and widespread cultural values held by the members of the Public Service</p>	Level of support from other, highly legitimate narratives	The e-Government narrative did not enjoy support from any widely held cultural values at the time, however it did align with the national mood which was supportive of the use of IT to improve the efficiency of delivery of public services.
Relationship between the narrative and the “national mood”	<p>The timing of the publication of the Policy was favourable since it was approaching the new millennium and there was considerable public sentiment in all segments of society in favour of an increased use of ICTs to improve various facets of life, and particularly the Public Service</p>		
Relationship of the text to other texts	The Policy did not directly refer to other texts. In fact, the key terms “e-Commerce” and “e-Government” were relatively new to the stakeholders at the time and had not yet been established discursively.	Level of competition from other conflicting narratives	There was no strong evidence of alternative narratives, conflicting or otherwise, to the e-Government narrative (not considering the null case of inertia, which would be applicable in all change situations

Degree of prescription of radical redistribution of power or wealth	Although some public officers may have been threatened by the main e-Government narrative owing to its implicit call for increased professionalism (and with it, increased risk of punishment in the event of poor performance), there was no explicit prescription of power redistribution, hence there were few grounds for objection on that basis.		anyway). However, the e-Government narrative was not embedded in or linked to other texts that were known and could be referred to.
---	--	--	---

Did social action occur?	Yes
If so, what was the evidence of it?	A vendor was procured to design, build, install and maintain the Communications Backbone project (a.k.a. Government Wide Area Network). After significant delay the project was completed, however, the organizational culture change that it was expected to precipitate did not occur in the expected manner, according to two of the respondents who were directly involved in its implementation, and who were consequently very well familiar with the state of operations in the Public Service before and after the intervention
Of what type was it: intentional, consequential, or emergent?	This action was cited as consequential to the publication of the National Electronic Commerce Policy, and further supported by the establishment of the National ICT Centre into which the e-Government Unit, that was responsible for implementing the project, was subsumed.

In the case of the Backbone project the Government (through a contracted vendor alliance) built physical infrastructure, with the expectation that the public officers would be provided with the tools needed to change their organizational culture into one of a progressive and modern Public Service. In tracing the path of the National Electronic Commerce Policy through Table 7 it appears that although the narrative was put forward in an internally consistent form and did not suffer significant competition from any other conflicting narratives, it was not successful in gaining support from other legitimate narratives, and hence did not fully become an institution.

Table 8 – Analysis of the National ICT Strategy, *fastforward*, as the main text that constituted the narrative of knowledge-based society

Factors affecting text-to-narrative translation	Effect	Factors affecting narrative-to-institution translation	Effect
Characteristics of text producer	The National ICT Steering Committee was comprised of a range of well-respected publicly known individuals from the public, private, and NGO sectors in Trinidad and Tobago. It was chaired by the Minister of Public Administration, who commanded significant respect in the Cabinet. As such, due to its composition and status as a Government-appointed committee it was considered legitimate	Internal structure of the narrative	The <i>fastforward</i> document would have been recognized as an official government policy document, but because its intended reach was national, it is unclear how the text producer would have been perceived at that scale, and hence how the internal structure of the narrative was interpreted by its audience.
Genre of text	The National ICT Strategy document (hereafter referred to as “ <i>fastforward</i> ”) was a Government policy document and therefore was considered official and legitimate to guide the actions of the public sector. Owing to the sometimes-combative relationship between the government and the private sector, however, it is not clear that the document would have been as well received among firms. Except for specific interested individuals, the general public may not have interacted with the actual text, but would instead have paid more attention to its effects.		
Consonance between the narrative and “widespread and deeply held cultural values”	The main narrative embedded in <i>fastforward</i> was framed in very general terms, “ <i>T&T is in a prominent position in the global information society through real and lasting improvement in social, economic and cultural development caused by deployment and usage of ICT</i> ”, with specific applications provided per category of stakeholder. In the absence of survey or other data that was captured to assess the extent of alignment to cultural values, it	Level of support from other, highly legitimate narratives	Evidence from popular news articles at the time suggested that the main narrative would have produced mixed reactions over such a wide audience at the time.

Relationship between the narrative and the “national mood”	<p>is not possible to say how widespread or deeply held they were.</p> <p>The knowledge-based society narrative embedded in <i>fastforward</i> appealed to the techno-centric and technophilic attitudes of many people at the time (in the public, private and non-governmental sectors), however, evidence suggests that these attitudes were not universally held. Given the expanse of the intended reach and the lack of corroborating evidence, it is difficult to say how ‘widespread’ either mood around ICT4D was at the time.</p>		
Relationship of the text to other texts	<i>fastforward</i> was visibly linked to the broader national development strategy, branded Vision 2020. Due to the timing of its publication, it possibly also made connections to texts produced in the lead up to the Geneva Round of WSIS, but this is unclear.	Level of competition from other conflicting narratives	Rather than direct conflict, the main narrative in <i>fastforward</i> appeared to co-opt the various narratives that were embedded in the texts produced by multilateral agencies around that time: UNDP’s focus on “human and societal development” and the role of information in achieving same; IDB’s focus on connectivity and the pursuit of education; and WSIS’s emphasis on creation of the “information society where everyone could create, access, utilize and share information”. As such, multiple narratives were embedded in <i>fastforward</i> , but by way of bricolage rather than through rationalization of the separate narratives into a cogent whole.
Degree of prescription of radical redistribution of power or wealth	<i>fastforward</i> advocated connectivity, higher education, improved public services, an increase in business uptake of ICTs, and an increase in ICT-based businesses. There was no overt prescription to power or wealth redistribution, only to optimization of individual productive capacity.		

Did social action occur?	Yes
If so, what was the evidence of it?	The <i>fastforward</i> policy document was launched, and resources (human and financial) were aggregated, organized and put to use for the implementation of the policy. The evidence suggests that the outcomes as far as creating a knowledge-based society were uneven.
Of what type was it: intentional, consequential, or emergent?	The action was consequential to the publication of the <i>fastforward</i> policy document

In the case of the National ICT Strategy, *fastforward*, the Government was undertaking a much more complex venture than it had done previously since it was attempting to shape the culture of the nation as a whole, with the expectation that the majority of citizens and organisations – private sector, civil society and public sector - would engage in action that was consistent with the Government’s vision of a “knowledge-based society”. Unsurprisingly, the path of the underlying narrative in this case was not as easy to trace, and the evidence put forward in the case study can be interpreted to mean that the path was much more tenuous and less straightforward. The *fastforward*-embedded narrative was seemingly found to be internally consistent and, given its temporal proximity to the national development agenda of the time, **Vision 2020**, it likely would have initially garnered a fair amount of support. The biggest challenge was the perception that the *fastforward* narrative was a bricolage of all the popular ICT-related narratives of the day – it attempted to be all things to all men. The programme of activity and associated public expectations became so unwieldy that the narrative found difficulty in sustaining support, and ultimately the narrative was not institutionalized. This perspective is supported by the views shared by the former National Chief Information Officer who was directly responsible for *fastforward*’s implementation.

7.2.1. Additional contingent factors

Thus far in section 7.2 we have analysed the factors that influenced the text-narrative and narrative-institution transitions on a case-by-case basis, and in so doing we have mapped out the characteristics and dynamics of narrative competition that influenced the institutionalization of narratives through discursive construction. However, there are some additional cross-cutting interpretive themes that bear on these processes which are set out below.

Conflicting temporal scales

By definition, policy is an activity that is heavily influenced by politics. In the case study, the issue of politicians having a '5-year term' mentality was repeatedly mentioned by participants who had been regularly challenged to produce 'visible results quickly' while pursuing their job objectives. This perception was supported by reviewing the annual spectacle that is the National Budget debate in parliament. Such a mentality, however, does not align well with a longer term developmental focus, particularly when engaging with such a complex issue as ICT4D. The complexity of ICT4D is exacerbated by the fact that the societal changes that are sought by ICT4D policies occur on a much more elongated time scale than the technological changes associated with ICT equipment. Just when new initiatives started to gain momentum, before any newly adapted narratives associated with them had an opportunity to be institutionalised, general elections would bring about a change in administration. Even though such changes did not necessarily bring a change in ideology they were accompanied by significant troughs of unproductivity leading into and out of the general election period – into, because ministers would be preoccupied on the campaign trail; out of, because any new incoming minister would make a point of reviewing, relabelling and readjusting the policy mix in a demonstration of his/her dominance. Agenda items that had legal implications (like WTO commitments) were more likely to survive such shifts unaffected.

An overemphasis on equipment as opposed to social change, however, created its own issues because the focus ended up being on rushing through change initiatives rather than taking time to carry out more complex business process re-engineering and culture modification. This was observed in more than one case, but the Backbone case was emblematic of this problem. A project that was intended to result in encouraging public officers to "*show greater dynamism and be more responsive to customer expectations*", among other laudable objectives, ended up being primarily set up as an equipment installation and maintenance project.

Another downside to 'equipment-focused' techno-centric plans described in the case study is that they engendered great anxiety in persons who feared that "*technology was advancing too quickly for our bureaucratic system to keep pace*", with the resulting effect being either chronic incompletion of new initiatives, or aversion to engage with technological issues outright.

Lack of interactional expertise

According to multiple respondents as presented in the case study, the Public Service lacked sufficient human resource capacity to strategise, plan and execute developmental programmes that matched the expectations and pronouncements of the politicians. Where this lack of capacity was appraised critically, support was sought to compensate (e.g. from the IDB via its Telecommunications Modernization Project funding). Where the enthusiasm to deliver outmatched a grounded assessment of capacity, projects (such as the Backbone) became hamstrung by technical or operational problems, such as - incomplete user requirement specification; incorrect assessment of maturity of infrastructure platform, leading to purchase of outdated equipment; and, cost overruns due to both of the above.

A related consideration is the type of leadership required to make complex development projects work. In the fastforward case, the project initially appeared to thrive under the charismatic, transformational leadership of the Permanent Secretary who demonstrated public sector entrepreneurship in her approach to recruiting private sector-trained specialists into the Public Service. For example, bringing the ICT Division into being in an environment where the National Information Systems Centre already existed, and continued to function, generated competition between the two departments that drove each to excel for a time.

What these examples demonstrated was that more often than not, the most valuable capabilities demonstrated by those in leadership positions were less about an ability to manipulate 'bits and bytes' and more about their ability to internalise and translate social and economic objectives into technical language and vice versa, and in so doing, motivate and mobilise a diverse set of persons from different professional backgrounds and with different core interests to execute the same vision. From a discursive standpoint, the concept of "interactional expertise" as proposed by Collins et al. (2007: 660–662) is helpful here. They describe interactional expertise as "the product of a successful linguistic socialization" that is "tacit knowledge-laden and context specific" and that is used to mediate communication and cultural interchange among culturally dissimilar groups. One can say, therefore, that the lack of such interactional expertise was a major factor in the demonstrated inability to sustain ICT4D initiatives.

The negative impact of institutions on vision and establishment of realistic policy objectives

Institutions impose cognitive, regulative and social costs which therefore shape the introduction of new institutions, but which also lead to lack of vision. This was seen in the telecom liberalization case, where long before 1997 several indicators were available to suggest that TSTT's monopoly arrangement was untenable for complementing the information society aspirations the government had already begun advertising. Prior to the introduction of the WTO Reference Paper, however, any narratives about an alternative way to arrange local telecommunications that may have existed would have seemed incredulous and hence, would not have been successful in enrolling support.

Conversely, narratives that were too far removed from existing realities, and for which there were no clear pathways would similarly not have been supported. A case in point was the episode shared by former PS Wilson in which a Minister imposed unrealistic demands for introduction of a new public service delivery mechanism, without considering the vast difference in contexts between his inspiration and the reality of the T&T public service at the time. Lack of appreciation of the difficult details in doing something new puts implementation in jeopardy, so plans either remain on the drawing board or stall during execution.

Contradictory philosophies or 'deep core' of ideas that underpin causal stories

Another feature of some of the episodes described in the case study related to contradictory narratives being advanced simultaneously by the same person. For example, during Parliamentary debate on the Telecommunications Bill, while discussing the role of the Minister in the operations of the impending Telecommunications Authority, the Minister appeared to be espousing two contradictory viewpoints. On the one hand, as the sponsor of the Bill he was clearly in support of the perspective that *"we want to set up an independent telecom regulator, as prescribed by the WTO and international best practice so as to demonstrate our modernity"*, which is a form of a 'catching up' narrative. Conversely, the government's attempt to institute what some perceived to be Draconian influence on the ability of the Authority to make its own decisions can be interpreted as representing a perspective of *"we want the Minister to maintain control on who gets/doesn't get access to a telecom licence as a show of dominance over the private sector"*, which is a form of 'development reality with postcolonial overtones' narrative.

Lack of contextual adaptation

The overwhelming majority of documents surveyed and people interviewed perceived ICT4D in Trinidad and Tobago as being about the adoption, or slight adaptation, of ICT-based practices and associated equipment that were pioneered in advanced economies. One respondent even remarked that ICT strategies *“had all been done before all over the world, so all T&T had to do was pick one and implement it”*. Such perspectives were representative of what Avgerou (2010) referred to as the “ICT and Development represents socioeconomic improvements through the transfer and diffusion of ICT and required institutions” narrative. The downside of this perspective is that it unproblematically views ICTs as neutral objects, rather than constructions that reflect the contexts in which they were designed. As was demonstrated in the Backbone case with the decision to introduce New Systems Facilitators, complex sociotechnical change of the sort that most ICT4D projects engage with is never achieved without embedded social action.

Section 7.2 has taken a detailed look at the competition among narratives, and the resultant translation of the surviving narratives into institutions. Institutions ultimately moderated both discursive events (what was said or not said; who was allowed to speak or not speak) and social events (which proposals got supported; which departments were staffed, etc.). We will now build on this foundation by developing policy creolization as a specific form of the discursive construction of policy.

7.3. Interpretation and explanation of the three cases of discursive policy construction

In Section 7.1, texts were found to be just as likely to enter policy processes through external events as through local ‘catch up’ directives aimed at striving for ‘information-based’ modernity. Demands due to commitments arising from international agreements were not really a consideration, except in the case of GATS. This is consistent with Trinidad and Tobago’s characteristics of limited public sector technical and managerial capacity – and particularly, low levels of interactional expertise - and a limited range of productive relationships among private, public and academic actors, owing to the country’s industrial and political history. Without these structures or capabilities there is little opportunity to develop future capacity for original policy

relevant research, or to engage in policy entrepreneurship, both of which are strategies that can be beneficial for enriching the policy process (from analysis through to evaluation).

As demonstrated in the analysis in Section 7.2, in practice **the actual discourse (and social action) of development through ICT resulted in uneven development.** This may be the case because in the absence of existing narratives derived from a local context, the prevailing policymaking practice has been the circulation, imitation and adoption of narratives developed elsewhere. This led to chaos in implementation and general disappointment with the “ICT4D policy” project, the likely result of which would be to further delay a more organic approach to ICT4D in the country.

Analysis of the narrative-institution relationships confirmed that **in scenarios where all three of the factors that were expected to influence translation of narratives were present and well established, the process of creating institutions was successful** as evidenced by the sustained programmes of intentional action (or action that occurred as a consequence of some prior intentional action) that succeeded the narrative-to-institution translation. As a reminder, those three factors were: (i) the internal structure of the narratives was consistent; (ii) there was support from other highly legitimate narratives; (iii) there was little to no competition from conflicting narratives. However, given that in developing countries the scenarios in which all three of those supportive factors are present exist as a result of either externally generated stimuli or attempts at catching up to other advanced economies, but seldom in response to intentional action in response to local particularities, by itself this finding concerning **narrative-institution translation** simply means that the asymmetrical power dynamics referred to above will continue to be reinforced over time. This worrisome outcome would likely have a negative effect on the rate and direction of ICT development in the country.

Discourse is not deterministic, however, and it presents opportunities for policy change. Many of the participants of this research who are either policymakers or others with a vested interest in the ICT4D policy environment in Trinidad and Tobago take a view of ICT4D policy as being largely about transfer and diffusion of ICT-based practices pioneered elsewhere (Avgerou, 2010: 9-10). This is complementary to their view of development in general, and ICT-enabled development in particular, as progressive transformation. While this is a pragmatic perspective in a policy environment of limited resources and low capacity for policy innovation, it inadvertently reinforces a power dynamic in which a divide is maintained between digital haves and have-nots, and therefore ultimately undermines the information society aspirations of the policymakers.

As a result, we will now investigate the opportunities for policymakers to alter institutions through the discursive construction of policy narratives and eventual translation into institutions. This will be done through interpretation and comparison of the three sub-cases as different cases of discursive policy construction.

7.3.1. Discursive construction of “liberalizing the telecommunications sector”

This sub-case was mapped onto a twenty-year period from 1985-2005. During the first half of that period, all four of the main texts that influenced the discourse (the Missing Link Report, the FCC Benchmark Order, the WTO Reference Paper on Regulatory Principles and GATS Protocol 4) originated from external events, and, save for the GATS Protocol 4 document, their impacts on the ensuing social action were emergent, relative to the local policy discourse. That is to say, the specific impact those documents had on action in the discursive spaces within Trinidad and Tobago was not intended by their authors or main proponents, and in fact, the narratives conveyed by those documents had to be translated and adapted into contextually appropriate narratives by the members of the Ministerial Committee on Telecommunications. In other words, the paradigm shift precipitated by the Missing Link Report, and carried through to the GATS Protocol 4, was a representation of a discursive struggle that did not originate in Trinidad and Tobago and in which local actors were not the primary discussants. The discourse was instead translated and embedded into the local discursive space through the Dookeran Report. From the GATS Protocol 4 document onward to the publication of various telecommunications regulations, the resulting social action was consequential – drawing on broader narratives concerning economic development and social progress as the discourse progressed, but not initiating any new independent ideas about the rationale for, or impacts of telecommunications liberalization.

Even though the dominant narrative concerning the importance of telecommunications sector liberalization for economic development was introduced into the local policy landscape via the Dookeran Report, there was a delay in its implementation. This delay occurred due to the shifting of Cabinet responsibility for telecommunications (and later, ICT) among multiple different ministries and departments. As discussed in the case study these shifts were attributed to three factors: evolving attitudes among senior politicians towards ICT4D policy; discontinuities in the approach to policy implementation precipitated by multiple general elections in quick succession between 2000 and 2002; and, competency gaps among Public Service technocrats in a post-liberalization world.

Notably, there was no evidence of any real contestation of the objective of the dominant narrative, but only of its proposed mechanism of implementation – specifically, the issue of the ICT Minister’s power to usurp the authority of the so-called independent regulator. To put it another way, even though the entire history of telecommunications in the country to that point had been characterised by a monopoly service provider, there was no debate about the merits of introducing competition because the expected benefits of the change far outweighed the costs – high cost of international calls, low quality of service, lack of value added services – precisely as the citizens’ aspirations towards modernity and desires for integration into the global community were ascending. Nonetheless, this first set of contestation was resolved via debate in the Parliament, an important discursive space for policy.

The second major source of contestation was also related to the implementation approach rather than the intent of the narrative. Specifically, non-adherents to the dominant narrative took issue with the new regulator being operationalized without the full slate of supporting legislation being in place to facilitate the regulator’s proper functioning. Again, no dissent was expressed concerning the regulator’s objective, but rather the complaint was that effecting the desired liberalized telecommunications sector without Parliamentary approval of all its operational legislation (which was not possible at the time of the debate in 2001) would simply result in a chaotic market that could not be regulated. Eventually, however, those obstacles were overcome when Parliament returned to its regular operations in 2003.

The removal of this blockage, combined with the jolt provided by the impending deadline of the WTO-mandated reforms, provided the platform for a series of actions: from obtaining technical assistance from the IDB to build the technical and managerial capacity of regulatory staff, through to the issuance of operating licences to new service providers. This series of actions gave effect to the liberalization thrust because they coincided with, became embedded within, and were magnified by, a larger national discourse about “becoming a developed nation by the year 2020” which surfaced in 2003. The so-called ‘Vision 2020’ drive towards development provided its own set of narratives that were complementary to the “telecommunications for modernity” narrative, which allowed the latter to become cemented in the national consciousness, not as a technical or political issue as it had been advanced during the discursive struggle, but instead, framed squarely in economic and social terms. Ultimately telecommunications liberalization began to be taken for granted as an essential aspect of contemporary life. In so doing, the narrative of telecommunications liberalization matured into a vehicle for the power struggles about identity and destiny in which the citizenry was engaged. What was initially perceived as an imposition by advanced countries on the development

trajectories of others that were less advanced, came to be adopted in Trinidad and Tobago into the aspirational language associated with the Vision 2020 developmental programme that was carded to transform the country in ways far beyond what had been achieved since gaining Independence in 1962.

Turning our attention specifically to the role of the key texts in the policy creolization process, we see that texts produced by external events outnumbered and outweighed (in terms of importance attributed to them by respondents) those produced by local catch up directives. Those externally-generated texts embodied the dominant narrative and thereby provided a strong normative force for conforming to the tenets of that narrative. In addition, the international commitment precipitated by signing onto GATS Protocol 4 required the new Telecom Act to usher in sector liberalization. This provided impetus for the new narrative to stimulate social action that produced lasting effects on the policy discourse and the institutional fields that were still felt at the end of the twenty-year period, and were even felt at the time of data collection in 2011. All the social action associated with the production of these texts was either emergent or consequential. This signifies that the translation into the local policy discourse occurred as a result of a non-trivial amount of debate and discursive struggle.

7.3.2. Discursive construction of “building an e-government wide area network”

The sub-case chronicling the establishment of the Government’s wide area network was mapped onto an eleven-year period from 2000 to 2011. The network was expected to underpin Trinidad and Tobago’s public service reform process through the unification of ministries and agencies into an electronic “one stop shop”. The process of building the network was construed as a technical, operational activity rather than being research or debate driven. As such only one text was acknowledged as playing a major discursive role in the sub-case – the National E-Commerce Policy – and its production was the result of a locally-originated development directive to catch up to more advanced countries. The National E-Commerce Policy precipitated intentional action as there was a deliberate attempt to foster electronic commerce in the country, via the facilitation of electronic government or “e-government” services. The narrative of *“e-government can do for the public service what e-commerce is doing for the private sector”* helped legitimise the policy among government policymakers because they saw e-government as a catalyst for development. Underlying this narrative was a heavy emphasis on physical infrastructure, which therefore allowed ICT infrastructure vendors to have significant influence on the implementation choices.

The Backbone project was actively contested during its lifetime. Contestation was centred on disagreements over how to approach implementation, rather than on discursive struggle among the dominant narrative and any of its alternatives. There was no open debate about whether the Public Service should be “operating in an accessible, responsive and interactive environment” that was “more responsive to customer expectations”. Instead disagreements arose concerning the significant technological challenges faced in developing and integrating the network solution, as well as resistance from persons that did not buy into the initiative. These challenges were in turn caused by a combination of factors, including the lack of a high-level champion for the initiative, interpersonal conflict among the Backbone team, technical capabilities of the vendors that were inadequate to match the demands of the project, ‘turf wars’ between Public Service IT departments and the e-Government Unit, and poor change management.

From 2003 onwards, the Backbone project was incorporated under the umbrella of the national ICT development strategy. This helped give the project broader discursive legitimacy and the support of a powerful policymaker in the form of the Minister of Public Administration and Information, who had been given responsibility for ICTs. At the same time, dedicated change management professionals were brought in to help end users assimilate the proposed changes by emphasising the value those changes added to their work flows. By then, however, it was a case of too little too late as the extensive conflicts surrounding the project and its significantly delayed implementation had actually worked to subdue interest in the project among many of its intended beneficiaries.

No external events or international commitments were present to stimulate social action that could later institutionalise the new narratives into behaviour that disrupted the status quo of non-consumption. Some action occurred (specialist unit convened; equipment purchased and installed; basic IT services provided to ministries and departments), however the longer term transformative effect of achieving “*greater dynamism...more responsive[ness] to customer expectations*” in the Public Service was not achieved. The timing of the National E-Commerce Policy’s publication, and the later publication of the National ICT Strategy, fastforward, meant that the E-Commerce Policy was discursively linked to the broader technological upheavals of the time. However, the delayed implementation did not facilitate the narratives surrounding “e-Commerce” and “e-Government” to be established discursively in the institutional field.

7.3.3. Discursive construction of “writing a national ICT4D strategy”

This sub-case was mapped onto a six-year period from 2002 to 2008. Even though the discourse started as a result of intentional action (in the form of the publication of the IT Policy for the Public Service as well as the Medium Term Policy Framework for 2001-2003), subsequent action was all emergent or consequential as none of the subsequent narratives were consistent with each other.

The timing of the publication of the Public Service’s IT Policy, just after the turn of the 21st century and the frenzy surrounding Y2K, meant that it coincided with a number of other discursive events concerning development agencies that introduced a range of other narratives about ICT4D into the policy discursive spaces. These included the publication of the UNDP’s Digital Opportunity Initiative Report and the IDB’s 2002 Summit of the Americas Report, the formation of the UN ICT Task Force and the start of the WSIS process. As was detailed in Section 6.3, each of these discursive events advanced a different perspective on the role of ICT in development.

Discursive conflict was therefore inevitable since there was limited technical or leadership capacity among the Government technocrats who had responsibility for developing the national ICT strategy to resolve those disparate perspectives. Specifically, ICTs were put forward as talismans that could simultaneously and rapidly resolve systemic problems in, among other areas, education, public administration and doing business. Previous attempts to advance these issues through a public service reform initiative dating back to the mid-1980s that had been led by a PNM Cabinet minister, Gordon Draper, had been inconclusive. Consequently, the fact that no connection was made between the ICT4D thrust and broader public missions around any of these issues meant that the ICT narrative was did not benefit from interdiscursivity and was perceived as nothing more than the latest fad concocted by the Ministry of Public Administration. Ultimately, *fastforward* was less than successful in achieving its deliverables, owing to the chronic inability of the Public Service to implement large-scale projects. This, combined with the lack of historical and deep social engagement with topical development issues referenced above resulted in fading interest in ICT4D.

When we look at this turn of events through the lens of the text-narrative-institution relationships we see that texts produced by external events were outnumbered by, and considered by policy actors to be less relevant to local circumstances, than those originating from local catch up directives. Although the *fastforward* document integrated and translated global narratives into the local policy discursive spaces, it did so by combining a range of

different narratives that represented conflicting perspectives, and were therefore internally inconsistent. This ultimately weakened the document's authority. With the exception of the two texts identified near the start of this case's period (IT Policy for the Public Service and the MTPF 2001-2003), all the social action associated with the core texts was emergent or consequential. Once again this signifies that the translation into the local policy discourse occurred as a result of a non-trivial amount of debate and discursive struggle. Some action occurred (a specialist unit was convened to implement the policy and a programme of activity was partially executed), however the longer term transformative effect of placing T&T in "*a prominent position in the global information society through real and lasting improvement in social, economic and cultural development caused by deployment and usage of ICT*") did not occur.

7.4. Towards a Model of Policy Creolization as discursive construction of policy creoles and policy pidgins

I propose here that it is useful to think about the discursive construction of ICT4D policy as **policy creolization**, viewed as the recombination and hybridization of existing narratives and externally derived narratives. Policy creolization is an extension of the discursive model of policy-as-discourse construction introduced in Chapter 3. Specifically, there are two main factors that influence the emergence of policy pidgins and, eventually, policy creoles (both viewed as particular forms of institutions) in a setting of discursive construction. These are:

- The length of the temporal window over which policy actors have an opportunity to develop **interactional expertise** to transfer, imitate and assemble narratives (resulting in the emergence of **policy pidgins** - semi-specific yet incomplete proto-languages that mediate discursive transfer), and eventually to translate, edit and embed those narratives into social actions (resulting in the emergence of **policy creoles** - full-fledged languages that facilitate not only discursive transfer, but social action).
- The degree of intentionality of the discursive action, and subsequently the social action, that policy actors engage in. As presented in Chapter 3, there are three categories of social action:
 - **Intentional** action – which deliberately conveys particular ideas through texts.
 - **Consequential** action – which is generated as a by-product of ongoing dialogue among actors during which they may draw on broader narratives.
 - **Emergent** action – which arises through discursive contestation and struggle in ways that were not necessarily intended or predicted.

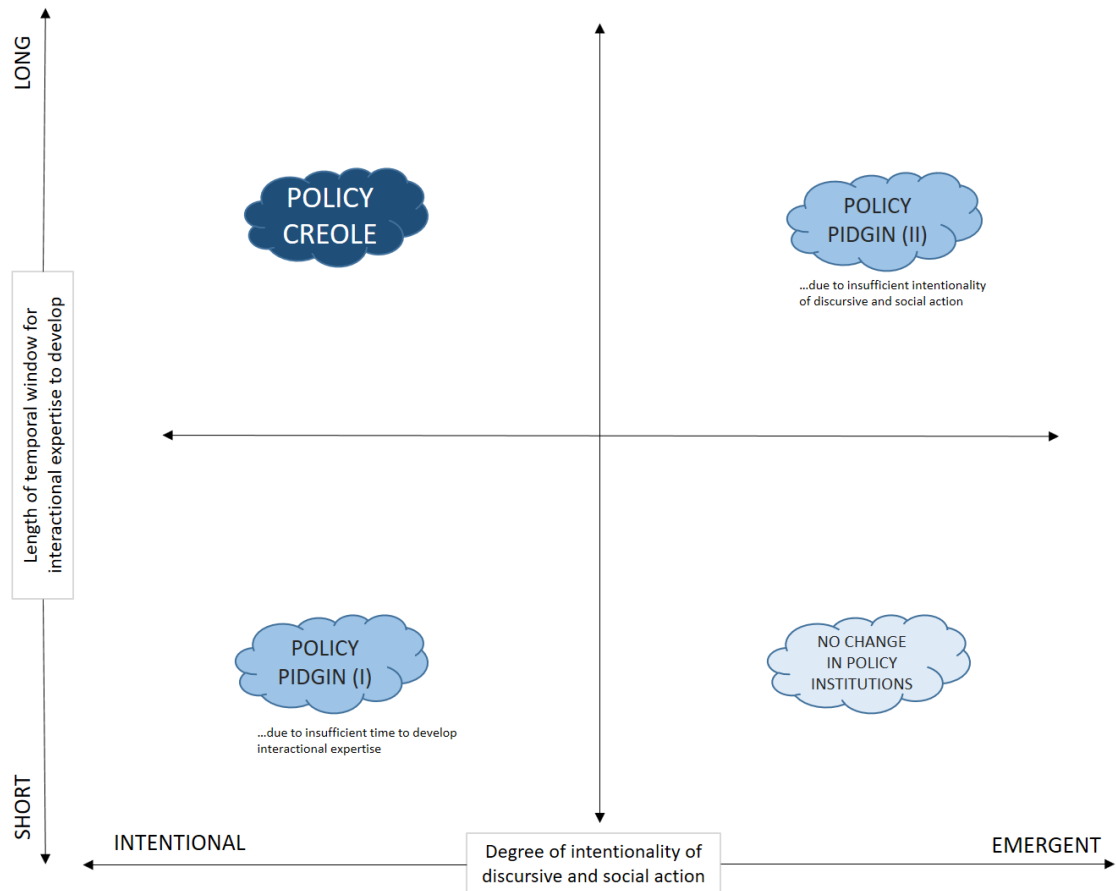


Figure 15 – A model of policy creolization

If we assume that the degree of intentionality of social action occurs on a continuum, then the ideal types are intentional on one end and emergent on the other. Therefore, displaying the two characteristics, degree of intentionality and length of temporal window to develop interactional expertise, on a two-by-two matrix results in a schema of four possible combinations, as shown in Figure 15. Going clockwise from bottom right we have:

- Short temporal window for interactional expertise development **and** emergent social action, for which **no change in policy institutions will occur** (neither as creoles, pidgins nor any other form)
- Short temporal window for interactional expertise development **and** intentional social action, for which the first type of **policy pidgin (type I) emerges** - an incomplete institution due to insufficient time
- Long temporal window for interactional expertise development **and** intentional social action, for which a **policy creole emerges**

- Long temporal window for interactional expertise development **and** emergent social action, for which the second type of **policy pidgin (type II) emerges** – an incomplete institution due to lack of intentionality

With this schema, we can see that the features which distinguished the telecom liberalization sub-case from the other two as potentially fertile ground for the emergence of a policy creole are: 1) the longer temporal window afforded to the events described in this case than to those in the others; and 2) the purposive attempts at improving the interactional expertise (couched in terms of technical and managerial capacity of regulatory and policy personnel) through the training programmes facilitated by the IDB Modernization of Telecommunication loan. Let us now revisit all three sub-cases and test the application of the schema.

The analysis showed that in the telecom liberalization case the Government built regulatory infrastructure, with the expectation that the private sector would be attracted to enter the market and build out the physical infrastructure to facilitate the increase in availability of ICTs. This initial part of the process occurred over the better part of a decade. The narrative of “telecom liberalization as beneficial for socioeconomic improvement” was shown to be internally consistent because it presented a coherent view of the new prospective reality. It gained support from a previously existing, well-supported narrative in the form of the Maitland Report’s “telecom as a missing link for economic development” narrative, and it overcame competition from the narrative of maintaining the status quo of using much-higher-than-cost international settlement rates to fund development. The dominant narrative presented in the Maitland Report benefited from approximately ten years between the Report’s publication and the GATS coming into effect, thereby allowing the narrative to mature and become embedded in global telecom regulatory action. Further, there is evidence that training courses were established at various sites in Canada, the US and the UK, where Caribbean telecom regulators and policymakers routinely went to be brought up to speed on the “contemporary best practice” as regards telecommunications development. The persons so trained were the primary champions for conveying the new way of approaching telecommunications regulation and liberalization, and undoubtedly had to develop a significant amount of interactional expertise to do so (by training colleagues, drafting policy documents and regulations, and so on). As a result, the narrative was institutionalized as the Telecommunications Act of 2001 was passed, and succeeded by the establishment of the independent regulator, the Telecommunications Authority, as well as a significant programme of activity to operationalize the liberalization of

the sector since 2004 – activity which persists to the current time. In sum, **intentional action combined with adequate time to develop interactional expertise resulted in a policy creole.**

As an example of the construction of a policy pidgin, we will examine the third sub-case. Here the analysis showed that with the *fastforward* national ICT strategy, the Government attempted to change social culture, with the expectation that all private and organizational actors would engage in action that was consistent with the Government's vision of a "knowledge-based society". As in the other two cases, the *fastforward* text would have been considered internally consistent, even though it combined multiple narratives, because of the prestige afforded to the National ICT Steering Committee that authored it, as well as the genre and structure of the text itself. Owing to the heterogeneity of the intended audience it is difficult to ascertain the narrative's alignment with the national mood, however it did draw on another highly legitimate narrative in the form of the 'developed country' perspective advanced by the Vision 2020 national development strategy which was published around the same time. *fastforward* did not appear to be negatively impacted by competition from contradictory narratives, partly because it drew upon most of the alternative (though not necessarily conflicting) narratives that had been advanced by the international development agencies and funding organisations. The initiative was negatively impacted, however, by incomplete implementation and non-delivery of some of its main deliverables. The result was that while *fastforward* enjoyed support initially, that support waned over time since the programme of activity did not produce the desired societal impact and the associated public expectations could not be sustained. The initial strength of the *fastforward* narrative in 2003, linked as it was to the strong, aspirational narrative of the Vision 2020 national development strategy, initially pointed to the potential for *fastforward* to have a degree of intentionality that would contribute to successful institutionalization. **This interdiscursive strength, however, was hindered by the loss in legitimacy brought on by failed project implementation.** After a change in minister in 2007 and subsequent shift of attention away from the programme, **momentum slowed and only a policy pidgin (type I) was constructed.**

For a final example of the construction of a policy pidgin we can examine the case of the Communication Backbone project. In this example the Government (by way of a contractor alliance) built physical infrastructure, with the expectation that the public officers (employees of the Public Service) would change their organizational culture upon being provided with the tools required to function as a modern, progressive Public Service. The narrative of "e-Government as beneficial for improving public sector efficiency and providing more accountable

and transparent service to citizens” was shown to be internally consistent, however it did not align well with the prevailing ‘widely held beliefs’ and so it did not achieve support from other, highly legitimate narratives. Finally, although the narrative was not faced with competition from conflicting narratives, it also did not reference any previously existing texts, so it exhibited little interdiscursivity. Consequently, the narrative was not fully translated into an institution, as evidenced by the fact that although the project was completed and all the ministries connected, those key informants who worked closely with the project reflected that the objective of having a “one stop shop” for online access to government services was not achieved and ministries continued to operate in a competitive, siloed manner. In other words, **the lack of interaction with other established narratives** as embodied in texts (i.e. lack of interdiscursivity) **meant that the policy actors did not develop the interactional expertise required to create a policy creole, and only a policy pidgin (type II) resulted instead.**

7.5. Generalizing the Policy Creolization Model

Do these interpretations have validity outside of the instant case? The extent of generalizability of the model of policy creolization depends on the similarity of mix of particularities in the target setting with those in the case study developed here in Chapter 6. As demonstrated in Chapter 5, Trinidad and Tobago is a Commonwealth Small Island Developing State with an industrialized resource-dependent economy and Westminster-style parliamentary democracy. Taking these characteristics in groups, one can identify that there are a number of comparator countries⁵⁵, both elsewhere in the Caribbean region and the rest of the developing world, for which similar histories and development trajectories make policy creolization an attractive framework for first critically analysing, and subsequently, constructing policy.

As in many of its comparators, in Trinidad and Tobago there is an aversion to "*creole*"^{56,57,58} especially when used in particular settings. That aversion has been attributed to a number of narratives: "*1) our negative history as slave and indentured acquirers of English; 2) a traditional attitude that the Creole we created - from the contact of (initially) English and African and (subsequently) Indic languages - is not a genuine language for audibly being a 'corruption' of*

⁵⁵ As regards ICT policy, some of these have typically been: Jamaica, Malta, Mauritius, Costa Rica and Singapore

⁵⁶ "Trinidad and Tobago Standard English?" - <http://www.triniview.com/winford/tntenglish.htm>

⁵⁷ "A Different, not an Incorrect, Way of Speaking, Pt 1" - <http://www.trinicenter.com/winford/2002/Feb/>

⁵⁸ "In Defence of Creole: Loving our Dialect" - <http://www.outlish.com/in-defence-of-creole-loving-our-dialect/>

English vocabulary and grammar; 3) the use of English for 'high' social functions but the use of Creole for 'low' social functions; 4) the international prestige of American and British English versus the international lack thereof of Creole English; and 5) codification (in grammars, dictionaries, style/usage manual, etc.) of English, but not of Creole". These narratives have become institutionalized in Trinbagonian culture over time, and their effect extends beyond the boundaries of interpersonal communication and integrates into all aspects of social interaction. The analysis suggests that these embedded institutions have hampered the ICT4D policy construction process because of two phenomena that were explored in the case study:

- Alternative narratives such as *"ICT does not necessarily result in development for all; it is subject to the power dynamics of IT innovation action"* **do not recruit support** from the dominant, highly legitimate narrative *"ICT and Development represents socioeconomic improvements through the transfer and diffusion of ICT and required institutions"*
- There is a **high level of competition between contradictory narratives** at the "program" level of generality (Schmidt, 2008), who defines programs as: (1) the issues to be characterised as problems (as opposed to those which are framed as 'accidental' elements of the environment, and hence are not amenable to human intervention; (2) the range of possible solutions that will be considered (and thus, excludes those options that are not given consideration); (3) the goals of the action to be undertaken; and, (4) the criteria for determining success.

In two of the three sub-cases sufficient time wasn't built in to the transformation projects explored in this thesis to allow for deep recombination and hybridisation of foreign policy narratives and locally-derived policy narratives. Policy actors simply did not develop the interactional expertise needed to make it happen. This type of institutionalization is arguably a generational process, in the sense that it takes a long time to occur, and it requires the development of adequate discursive spaces, or from the perspective of policy creolization, trading zones. Building new policy creoles is also more challenging, and takes more and different resources than building regulative and physical infrastructures (as demonstrated in the cases of telecom liberalization and the Backbone project).

Moreover, ICT4D policy is complementary to other policies that shape other developmental institutions such as education, healthcare, or employment. In short, it is an enabler to development in other aspects of life. Since the connections between ICT4D policy and other strong institutions – either industrial (the country's oil and gas-dependent economy) or social (the rich creative industries, such as Carnival, for which the country is famous) – were not well

established, the ICT4D policy could not become well embedded into operational routines, and hence, was ineffective. The complexity of the subject (ICT4D) and the means of instituting it (discourse) means that a significant temporal dimension is required to construct a policy creole that is appropriate, that is to say, simultaneously visionary and contextual for Trinidad and Tobago.

The presence of cross-cutting interlinkages between ICT4D and other development policy domains implies that there is scope for applying the policy creolization model to other policy domains to examine their institutional dynamics, and to identify possible areas in which policy creoles may be developed so as to make the policymaking process more efficacious.

7.6. Chapter Summary

To recap, in this chapter we conducted an interpretive analysis of the three embedded sub-cases within the overall case study presented in Chapter 6.

Construction of ICT4D policy in the context of a developing country is a discursive process that involved translation and adaptation of narratives that could trigger new institutions or disrupt existing ones. This process could involve new narratives or existing narratives that were part of international discourses and were imported and recombined to create local narratives in an ICT4D discourse. The analysis suggests that the ICT4D policy discourse that has been constructed in Trinidad and Tobago is unstable and emergent because the narratives embedded within it are contradictory, and hence intrinsically and persistently in competition. That persistent competition meant that the translation and adaptation that was necessary for new narratives and institutions to be established as part of the ICT4D discourse, for nascent institutions to be reinforced, or for old institutions to be disrupted, did not take place on a consistent basis.

We examined the possibilities for policymakers to disrupt well-established policy institutions by replacing them with alternatives that facilitate coordination and interaction between the internationally generated narratives and local narratives. An example where this process started to emerge in the present study was the telecom liberalization case. I have referred to such an approach as “**policy creolization**” and its resulting outputs as either “**policy creoles**” or “**policy pidgins**”, depending on the maturity and stability of resultant institutions. Establishing the examples of construction of policy creoles and pidgins in the form of a model suggested that policy creolization requires both interactional expertise (deep contextual knowledge of the landscape into which a narrative is being embedded as well as the source of the external

narrative) and a high degree of intentionality of social action. The analysis has therefore offered an argument for the appropriateness of the metaphor of the “policy creolization” model to explain the efforts of Trinidad and Tobago to become an information or knowledge-based society. Because ICT is an enabler to so many other issues of concern in development policy, such as health, education, economic development, and so on, there is scope for application of policy creolization to policy analysis and policymaking in those issues as well.

In the concluding chapter we summarise the contributions of this research to policy knowledge, implications for policy practice, highlight the limitations of the approach and point to opportunities for further research.

8. Conclusion

This chapter will highlight and reflect on the key contributions of this research, by linking the findings, theoretical framework, policy implications and prospective directions for future research.

8.1. Contribution to Policy Research Knowledge

There are three original contributions to knowledge made in this thesis. Firstly, I have proposed an analytical framework that integrates three separate bodies of literature. The discursive model of institutionalization of Phillips, Lawrence and Hardy (2004) and the 'policy as discourse' approach of Shaw & Greenhalgh (2008) and Shaw (2010) are integrated by way of a bridge, the 'trading zones' concept of Galison (1997) as extended by Collins, Evans, & Gorman (2007). Thereby, I developed a series of analytical constructs that can be used for contextual policy research, especially in developing countries where dominant policy narratives constrain and moderate discursive exchange when those policy narratives - which were originally articulated in advanced economies - are subsequently transferred into developing countries.

Secondly, I have empirically applied the framework to the study of ICT4D policy construction in Trinidad and Tobago, generating new insights in the process. In so doing I critically examined the process of constructing policy as discourse with the aim of identifying ways in which policy could be done differently. The analysis suggests that the process of discursively transferring previously existing policy narratives into new contexts can result in one of three outcomes: **no change** - if the introduction of policy narratives had no impact whatsoever on institutions (either by creating new ones, or disrupting existing ones); the construction of **policy pidgins** (semi-specific yet incomplete proto-languages that mediate discursive transfer) when discursive transfer, imitation and assemblage of narratives partially occurs; or the construction of **policy creoles** (full-fledged languages that facilitate not only discursive transfer, but social action) if the discursive transfer is complemented by translation, editing and social embedding.

Thirdly, in the model of policy creolization developed in Chapter 7 I identified two main factors that influenced the emergence of policy pidgins and, eventually, policy creoles (both viewed as particular forms of institutions) in a setting of discursive construction, namely:

- The length of the temporal window over which policy actors have an opportunity to develop *interactional expertise* to transfer, imitate and assemble narratives, and eventually to translate, edit and embed those narratives into social actions;

- The degree of intentionality of the discursive action, and subsequently the social action, that policy actors engage in, noting that there are three categories of social action:
 - ***Intentional*** action – which deliberately conveys particular ideas through texts.
 - ***Consequential*** action – which is generated as a by-product of ongoing dialogue among actors during which they may draw on broader narratives.
 - ***Emergent*** action – which arises through discursive contestation and struggle in ways that were not necessarily intended or predicted.

This highlights that both intentionality and time are required to bridge the knowledge gaps present between the different contexts, and even so, that the policy construction process in the new context requires practitioners to develop non-trivial levels of interactional expertise.

8.2. Implications for Policy Practice

Most policy or political analyses of T&T focus on the country's industrial policy, and specifically its energy industries, in respect of its polarising effect on social relations and other economic activity. I propose that analyses of policy in another sphere, ICT4D, provides a similarly useful opportunity for such reflection, for the reasons expressed above.

The question that needs to be asked of ICT4D policy makers and policy analysts is "What does an information based economy and information society mean for the citizens of Trinidad and Tobago?" Arriving at the answer is not simply a matter of translation of the 'international best practice' discourse (whether Western or Northern led) into our context, but must entail active seeking to create a policy creole through facilitating coordination and interaction between external mainstream narratives with alternative narratives, including ones that are locally derived. As a first step, I suggest that the methodology developed and demonstrated in this thesis is useful for policy analysts to unpack the conceptual constructions of their domain to assess the latent power dynamics that may be unwittingly reinforced by lack of critical analysis.

Another implication for policy practice is that this method offers practitioners a means of assessing both "failed" and "successful" policy interventions with a view to understanding the institutional dynamics in each case. This is important, as we have shown, because institutions exercise powerful normative, cognitive and regulative functions on the development of new institutions, and ultimately on social action. As a result, a lot is at stake for policy makers to get a deeper understanding of the institutional fields, or discursive spaces, in which they operate.

8.3. Limitations and Opportunities for Further Research

The process of using a discursive method to study policy-as-discourse has opened my eyes to the potential of this method for not only “*reaching the parts that other theories and methods can’t reach*” but as suggested above, it has illuminated a new prospective pathway to be explored for generating new insight into policy making in developing countries through policy creolization.

As indicated in Chapter 4 the principal limitations of the methodology adopted for this research are linked to three factors: the limits of my reflexivity as a new researcher who previously worked as a public sector technocrat; the limits of my capability to access research participants that could potentially offer a disconfirming view (in this case, the private sector) so as to improve triangulation; and the limits of snowballing as a technique to identify and access the all the social networks of persons and organizations that are relevant to this topic.

These shortcomings diminish the explanatory power of the framework, because it is difficult to model accurately complex interactions among a plethora of actors in a multilevel discursive space over an extended period of time. It is possible that certain aspects may not have been fully captured, since it was not always possible to corroborate some. This being the case, I am confident, however, that due to the in-depth qualitative research conducted, and the innate strengths of contextualism as a methodological concept that these shortcomings do not limit the claims I have made.

Another potential limitation of this research is the small number of cases examined. As pointed out by (Langley, 1999), employing a narrative strategy for organizing processual data as I have done here reveals theory that is “high on accuracy, lower on simplicity and generality”. This shortcoming is counterbalanced by the fact that I have been able to compare mechanisms across three embedded sub-cases, and thus, the generality of the findings can only be improved by further research.

Further research is required to adequately conceptualize policy creolization as a potential mechanism for the conduct of contextually appropriate policy research. Such research should also seek to define an appropriate methodology for operationalizing the concept so that can be tested empirically. Some expected outcomes of this type of research would be firstly shoring up the validity of the concept, and secondly, design of an agenda for policy change that can be employed in creating policy-as-creole.

References

- Allison GT (1969) Conceptual Models and the Cuban Missile Crisis. *The American Political Science Review*, American Political Science Association 63(3): 689–718.
- Alvesson M and Kärreman D (2000) Taking the Linguistic Turn in Organizational Research: Challenges, Responses, Consequences. *The Journal of Applied Behavioral Science* 36(2): 136–158.
- Artana D, Auguste S, Moya R, et al. (2007) Trinidad and Tobago: Economic Growth in a Dual Economy. Available from: <http://www.iadb.org/res/publications/pubfiles/pubCSI-116.pdf> (accessed 3 June 2015).
- Austin K (2005) *Development, Implementation, and Maintenance of a Communications Backbone for the Public Service - Report submitted as part of deliverables of e-Government Consultancy, 01 Sep 2005-30 Nov 2005*. Port of Spain, Trinidad.
- Austin K (2008) *Final Consultancy Report - contracted services for the Communications Backbone Implementation Project Phase II and Related Activities*. Port of Spain, Trinidad.
- Avgerou C (1998) How can IT enable economic growth in developing countries? *Information Technology for Development*, Routledge 8(1): 15–28.
- Avgerou C (2008) Information systems in developing countries: a critical research review. 17 June 20. *Journal of Information Technology* 23: 133–146.
- Avgerou C (2010) Discourses on ICT and Development. *Information Technologies & International Development* 6(3): 1–18.
- Bacchi C (2000) Policy as Discourse: What does it mean? Where does it get us? *Discourse: Studies in the Cultural Politics of Education* 21(1): 45–57.
- Barber BR (2004) *Strong Democracy: Participatory Politics for a New Age*. London: University of California Press.
- Barley SR and Tolbert PS (1997) Institutionalization and Structuration: Studying the Links Between Action and Institution. *Organization Studies (Walter de Gruyter GmbH & Co. KG.)*, De Gruyter 18(1): 93.
- Bell D (1976) *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. Basic Books.
- Berger P and Luckmann T (1966) *The social construction of knowledge: A treatise in the sociology of knowledge*. NY: Doubleday.
- Best L (1968) Outlines of a Model of Pure Plantation Economy. *Social and Economic Studies* 17(3).
- Best L and Levitt K (1968) *Externally propelled industrialization and growth in the Caribbean*. Montreal, Canada: McGill Centre for Developing Area Studies.
- Blyth M (2002) *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century*. New York: Cambridge University Press.
- Boje D (2001) *Narrative Methods for Organizational & Communication Research*. London: SAGE Publications Ltd.
- Bosso CJ (1994) The contextual bases of problem definition. In: Rochefort DA and Cobb RW (eds),

- The Politics of Problem Definition: shaping the policy agenda*, Lawrence, KS: University Press of Kansas.
- Braga CAP, Forestier E and Stern PA (1999) *Developing countries and Accounting Rates Reform - A Technological and Regulatory El Niño?* Public Policy for the Private Sector.
- Brewster H (2008) The Anti-Development Dimension of the European Community's Economic Partnership Agreement for the Caribbean. Cape Town, SA.
- Brewster H, Girvan N and Lewis V (2008) Renegotiate the Cariforum EPA. *Trade Negotiation Insight* 7(3): 8–10.
- Bronner SE (2004) *Reclaiming the Enlightenment: toward a politics of radical engagement*. New York: Columbia University Press.
- Brotherton M (1964) *Masers and Lasers; How They Work, What They Do*. New York: McGraw-Hill.
- Campbell JL (2004) *Institutional change and globalization*. Princeton, NJ: Princeton University Press.
- CARICOM Secretariat (2005) *CARICOM's Trade a Quick Reference to Some Summary Data 1996 - 2001*. Georgetown, Guyana.
- Carter N (2007) *The politics of the environment: ideas, activism, policy*. Cambridge: Cambridge University Press.
- Castells M (1996) *Rise of The Network Society (Information Age, Vol 1)*. Wiley.
- Chambers R (1983) *Rural Development: Putting the Last First*. London: Longman Scientific & Technical.
- Chigona W and Mooketsi B (2011) In the Eyes of the Media: Discourse of an ICT4D Project in a Developing Country. *The Electronic Journal of Information Systems in Developing Countries* 46(6): 1–16.
- CIVIC (2003) Towards a Vision of a Caribbean Information Society - A Contribution to the WSIS from the Caribbean ICT Stakeholders Virtual Society. Available from: <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan013271.pdf>.
- Clarke CG (1976) Insularity and Identity in the Caribbean. *Geography*, Geographical Association 61(1): 8–16.
- Clemens MA, Kenny CJ and Moss TJ (2007) The Trouble with the MDGs: Confronting Expectations of Aid and Development Success. *World Development* 35(5): 735–751.
- Cohen MD, March JG and Olsen JP (1972) A Garbage Can Model of Organizational Choice. *Administrative Science Quarterly*, Johnson Graduate School of Management, Cornell University 17(1): 1–25.
- Collins H, Evans R and Gorman M (2007) Trading zones and interactional expertise. *Studies in History and Philosophy of Science Part A* 38(4): 657–666.
- Cowhey P (1998) FCC benchmarks and the reform of the international telecommunications market. *Telecommunications Policy* 22(11): 899–911.
- DeLeon P (1998) Models of Policy Discourse: insights versus Prediction. *Policy Studies Journal*, Blackwell Publishing Ltd 26(1): 147–161.

- Demas WG (1965) *The Economics of Development in Small Countries with Special Reference to the Caribbean*. Montreal: McGill-Queen's University Press.
- dos Santos T (1970) The structure of dependence. *American Economic Review, Papers & Proceedings*: 231–236.
- Douglas M (1986) *How Institutions Think*. Syracuse, NY: Syracuse University Press.
- Drezner DW (2001) Globalization and Policy Convergence. *International Studies Review* 3(1): 53–78.
- Dunleavy P, Margetts H, Bastow S, et al. (2006) New Public Management Is Dead—Long Live Digital-Era Governance. *Journal of Public Administration Research and Theory* 16(3): 467–494.
- Dunn HS (1991) Telecommunications and underdevelopment : a policy analysis of the historical role of Cable and Wireless in the Caribbean. City University of London.
- Dunn HS (1995) Caribbean telecommunications policy: fashioned by debt, dependency and underdevelopment. *Media, Culture & Society* 17(2): 201–222.
- Dye TR (2008) *Understanding Public Policy*. 12th ed. Upper Saddle River, NJ: Pearson/Prentice Hall.
- Dye TR and Zeigler LH (2003) *The irony of democracy: an uncommon introduction to American politics*. Belmont, CA.: Wadsworth/Thomson Learning.
- Easton D (1965) *A Systems Analysis of Political Life*. New York: John Wiley.
- Edelman MJ (1988) *Constructing the political spectacle*. Chicago: University of Chicago Press.
- Emerson RM, Fretz RI and Shaw LL (2001) Participant Observation and Fieldnotes. In: Atkinson P (ed.), *Handbook of Ethnography*, London: SAGE Publications.
- Escobar A (1995) *Encountering development : the making and unmaking of the Third World*. Princeton, NJ: Princeton University Press.
- Evans PB (1995) *Embedded autonomy: states and industrial transformation*. Princeton, NJ: Princeton University Press.
- Fairclough N (1989) *Language and Power*. London: Longman.
- Fairclough N (1992) *Discourse and Social Change*. Cambridge: Polity Press.
- Fairclough N (1995) *Critical Discourse Analysis: The Critical Study of Language*. Harlow: Pearson Education Ltd.
- Fairclough N (2003) *Analysing Discourse: Textual analysis for social research*. Abingdon: Routledge.
- Fairclough N (2009) A Dialectical-Relational Approach to Critical Discourse Analysis in Social Research. In: Wodak R and Meyer M (eds), *Methods of Critical Discourse Analysis*, Thousand Oaks, CA: SAGE Publications, pp. 162–186.
- Farrell TW (2012) *The Underachieving Society: Development Strategy and Policy in Trinidad and Tobago, 1958-2008*. Kingston, Jamaica: University of the West Indies Press.
- Finance M of (2001) *Medium Term Policy Framework (2002-2004)*. Port of Spain, Trinidad.
- Finance M of (2002) *Social and Economic Policy Framework (2003-2005)*. Port of Spain, Trinidad.

- Finger JM and Nogues JJ (2002) The Unbalanced Uruguay Round Outcome: The New Areas in Future WTO Negotiations. *The World Economy* 25(3): 321–340.
- Finger JM and Schuler P (1999) *Implementation of Uruguay Round Commitments: The Development Challenge*.
- Fischer F (2003) *Reframing Public Policy: Discursive Politics and Deliberative Practices*. Oxford: Oxford University Press.
- Fontana A and Frey JH (2005) The Interview: From Neutral Stance to Political Involvement. 3rd ed. In: Denzin NK and Lincoln YS (eds), *The SAGE Handbook of Qualitative Research*, Thousand Oaks, CA.: SAGE Publications.
- Frank AG (1967) *Capitalism and Underdevelopment in Latin America*. New York: Monthly Review Press.
- Frank AG (1969) *Latin America: Underdevelopment or Revolution*. New York: Monthly Review Press.
- Friedman TL (2006) *The world is flat : the globalized world in the twenty-first century - University of Sussex*. London: Penguin Books.
- Galison P (1997) *Image and logic: A material culture of microphysics*. Chicago: University of Chicago Press.
- Garfinkel H (1967) *Studies in Ethnomethodology*. Englewood Cliffs, N.J.: Prentice Hall.
- Girvan N (1970) Multinational Corporations and Dependent Underdevelopment In Mineral-Export Economies. *Social and Economic Studies* 19(4).
- Girvan N (2001) Reinterpreting the Caribbean. *New Caribbean Thought*, pp. Jamaica: University of the West Indies Press: 3–23.
- Girvan N and Girvan C (1973) The Development of Dependency Economics in the Caribbean and Latin America: Review and Comparison. *Social and Economic Studies*, Sir Arthur Lewis Institute of Social and Economic Studies, University of the West Indies 22(1): 1–33.
- Goldstein J and Keohane RO (1993) *Ideas and Foreign Policy: Beliefs, Institutions, and Political Change*. Ithaca, NY: Cornell University Press.
- Grant D, Keenoy T and Osrick C (1998) Organizational discourse: Of diversity, dichotomy and multi-disciplinarity. *Discourse and organization*, London: Sage Publications 1: 13.
- Hajer M (1995) *The politics of environmental discourse: ecological modernization and the policy process*. Oxford: Oxford University Press.
- Hajer M (2003) Policy without polity? Policy analysis and the institutional void. *Policy Sciences*, Springer Netherlands 36(2): 175–195.
- Hardy C and Maguire S (2010) Discourse, Field-Configuring Events, and Change in Organizations and Institutional Fields: Narratives of DDT and the Stockholm Convention. *Academy of Management Journal*, Academy of Management 53(6): 1365–1392.
- Hardy C and Phillips N (1999) No joking matter: Discursive struggle in the Canadian refugee system. *Organization Studies*, Sage Publications 20(1): 1–24.
- Heclo H (1978) Issue Networks and the Executive Establishment. In: King A (ed.), *The Political System*, Washington, DC: The American Enterprise Institute for Public Policy Research.

- Heeks R (2010) Do information and communication technologies (ICTs) contribute to development? *Journal of International Development*, John Wiley & Sons, Ltd. 22(5): 625–640.
- Hill MJ (1997) *The policy process: a reader*. 2nd ed. Hill MJ (ed.), Prentice Hall / Harvester Wheatsheaf.
- Hirschman AO (1958) *The Strategy of Economic Development*. New Haven, CT: Yale University Press.
- Holzinger K and Knill C (2005) Causes and conditions of cross-national policy convergence. *Journal of European Public Policy* 12(5): 775–796.
- Hood C (1991) A Public Management for All Seasons. *Public Administration* 69(Spring): 3–19.
- Hood C (1995) The 'new public management' in the 1980s: Variations on a theme. *Accounting, Organizations and Society* 20(2–3): 93–109.
- IDB (2002) *Summit of the Americas: The Agenda of the IDB – Activities and Strategic Programs One Year After Quebec*. Washington, DC.
- Jabko N (2006) *Playing the Market: A Political Strategy for Uniting Europe, 1985–2005*. Ithaca, NY: Cornell University Press.
- Jaworski A and Coupland N (2006) *The Discourse Reader*. London: Routledge.
- Jenkins-Smith H and Sabatier P (1993) The Study of Public Policy Processes. In: Sabatier P and Jenkins-Smith H (eds), *Policy Change and Learning: An Advocacy Coalition Approach*, Boulder, CO: Westview.
- Jepperson R (1991) Institutions, institutional effects, and institutionalism. *The new institutionalism in organizational analysis* 6: 143–163.
- Jobert B (1989) The Normative Frameworks of Public Policy. *Political Studies*, Blackwell Publishing Ltd 37(3): 376–386.
- John G (1991) *A political history of Trinidad and Tobago: 50 Years of the Ballot*. Port of Spain, Trinidad: Trinidad Express Newspapers Ltd.
- John P (1998) *Analysing public policy*. London: Pinter.
- John P (2003) Is There Life After Policy Streams, Advocacy Coalitions, and Punctuations: Using Evolutionary Theory to Explain Policy Change? *Policy Studies Journal* 31(4): 481–498.
- Jones CO (1977) *An Introduction to the Study of Public Policy*. The Duxbury Press series on public policy, North Scituate, Mass.: Duxbury.
- Katzenstein PJ (1996) *The culture of national security: Norms and identity in world politics*. New York: Columbia University Press.
- Keeley J and Scoones I (1999) Understanding Environmental Policy Processes: A Review. *IDS Working Paper 89*, Brighton: Institute of Development Studies.
- Kimberly JR (1976) Issues in the Design of Longitudinal Organizational Research. *Sociological Methods & Research* 4(3): 321–348.
- Kingdon JW (1984) *Agendas, alternatives, and public policies*. Boston: Little, Brown.
- Kingdon JW (1995) *Agendas, alternatives, and public policies*. 2nd ed. Harlow: Longman.

- Kleine D and Unwin T (2009) Technological Revolution, Evolution and New Dependencies: what's new about ict4d? *Third World Quarterly*, Routledge 30(5): 1045–1067.
- Kress G (1995) The social production of language: History and structures of domination. In: Fries P and Gregory M (eds), *Discourse in Society: Systemic functional perspectives*, Norwood, NJ: Ablex, pp. 169–191.
- Kvale S (1996) *Interviews: an introduction to qualitative research interviewing*. London: Sage Publications.
- La Guerre J (1999) *Politics, Society and Culture in the Commonwealth Caribbean*. St. Augustine, Trinidad: School of Continuing Studies, the University of the West Indies.
- Langley A (1999) Strategies for theorizing from process data. *Academy of Management review*, Academy of Management 24(4): 691–710.
- Lasswell H, Lerner D and Fisher H (1951) *The policy sciences: Recent developments in scope and method*. Stanford: Stanford University Press.
- Lea DAM and Chaudhuri DP (1983) Rural Development and the State: contradictions and dilemmas in developing countries. London: Methuen.
- Lewis WA (1954) Economic Development with Unlimited Supplies of Labour. *The Manchester School* 22(2): 139–191.
- Lindblom CE (1959) The science of muddling through. *Public Administration Review* 19: 79–88.
- Longmore R, Jaupart P and Cazorla M (2014) *Toward economic diversification in Trinidad and Tobago. World Bank Policy Research Working Paper, No. 6840*, Washington, DC.
- Maier CS (1975) *Recasting Bourgeois Europe*. Princeton, NJ: Princeton University Press.
- Majone G (1989) *Evidence, argument, & persuasion in the policy process*. New Haven, CT: Yale University Press.
- Mann CL (2003) Information Technologies and International Development: Conceptual Clarity in the Search for Commonality and Diversity. *Journal of Information Technologies & International Development* 1(2): 67–79.
- Mansell R and Wehn U (1998) *Knowledge Societies: Information Technology for Sustainable Development*. New York: Oxford University Press.
- Marcelle GM (2003) Integrating ICTs in Caribbean Development: Regional Initiatives & Strategies. In: Presentation at 'Diplomacy and Cyberspace' Seminar organised by UNDESA and UNITAR, October 20-24, 2003.
- Marcelle GM (2004) Closing the Digital Divide in the Caribbean: A Leadership Challenge. In: The Association of Caribbean University, Research and Institutional Libraries (ACURIL) XXXIV Annual Conference, May 23-29, 2004.
- Marsh D and Rhodes RAW (1992) Policy communities and issue networks: Beyond typology. In: Marsh D and Rhodes RAW (eds), *Policy Networks in British Government*, Oxford: Oxford University Press.
- Mehmet O (1999) *Westernizing the Third World: The Eurocentricity of Economy Development Theories*. London: Routledge.
- Merriam SB (1988) *Case study research in education: A qualitative approach*. Jossey-Bass.

- Miles MB and Huberman AM (1994) *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks, CA.: SAGE Publications.
- Mitchell PE (2007) Multilateral Organisations and Information and Communications Technology (ICT) Sector Planning in Caribbean Economies: Example of Trinidad and Tobago. *8th Annual Conference - Crisis, Chaos and Change: Caribbean Development Challenges in the 21st Century*, Sir Arthur Lewis Institute of Social & Economic Research. University of the West Indies.
- Momsen JH and Townsend JG (1987) *Geography of Gender in the Third World*. Albany, NY: State University of New York Press.
- Morgan G and Sturdy AJ (2000) Beyond organisational change-discourse, structure and power in UK financial services. Basingstoke: Macmillan.
- Morgenthau H, Thompson K and Clinton D (2005) *Politics Among Nations: The Struggle for Power and Peace*. 7th ed. New York: McGraw-Hill Education.
- Morlacchi P and Nelson RR (2011) How medical practice evolves: Learning to treat failing hearts with an implantable device. *Research Policy* 40(4): 511–525.
- Mottley W (2008) *Trinidad and Tobago Industrial Policy 1959-2008*. Kingston, Jamaica: Ian Randle Publishers.
- Mumby DK and Clair RP (1997) Organizational discourse. *Discourse as social interaction*, Sage London 2: 181–205.
- Myrdal G (1957) *Economic Theory and Under-Developed Regions*. London: Duckworth.
- Nair KGK and Prasad PN (2002) Development through Information Technology in Developing Countries: Experiences from an Indian State. *The Electronic Journal of Information Systems in Developing Countries* 8(2): 1–13.
- Noguera FM (1998) The Caribbean. In: Noam EM (ed.), *Telecommunications in Latin America*, New York, NY: Oxford University Press.
- Palmer DA, Jennings PD and Zhou X (1993) Late adoption of the multidivisional form by large US corporations: Institutional, political, and economic accounts. *Administrative science quarterly*, JSTOR: 100–131.
- Pantin DA (1991) Political crisis in Trinidad and Tobago: cause or coincidence? *Caribbean Quarterly*, University of the West Indies and Caribbean Quarterly 37(2–3): 63–83.
- Parker I (1992) *Discourse dynamics: Critical analysis for social and individual psychology*. London: Routledge.
- Pentland BT (1999) Building Process Theory with Narrative: From Description to Explanation. *The Academy of Management Review*, Academy of Management 24(4): 711–724.
- Pettigrew AM (1990) Longitudinal Field Research on Change: Theory and Practice. *ORGANIZATION SCIENCE* 1(3): 267–292.
- Phillips N and Hardy C (1997) Managing multiple identities: Discourse, legitimacy and resources in the UK refugee system. *Organization*, Sage Publications 4(2): 159–185.
- Phillips N, Lawrence TB and Hardy C (2000) Inter-organizational Collaboration and the Dynamics of Institutional Fields. *Journal of Management Studies*, Blackwell Publishers Ltd. 37(1): no-no.

- Phillips N, Lawrence TB and Hardy C (2004) Discourse and Institutions. *Academy of Management Review*, Academy of Management 29(4): 635–652.
- Pieterse JN (2010) *Development Theory: Deconstructions/Reconstructions*. 2nd ed. London: SAGE.
- Powell M (2006) Which knowledge? Whose reality? An overview of knowledge used in the development sector. *Development in Practice* 16(6): 518–532.
- Putnam LL and Fairhurst GT (2001) Discourse analysis in organizations. *The new handbook of organizational communication: Advances in theory, research and methods*: 78–136.
- Pyati A (2005) WSIS: Whose vision of an information society? *First Monday* 10(5).
- Rahnema M and Bawtree V (1997) *The Post-Development Reader*. London: Zed Books.
- Rhodes RAW (1997) From institutions to dogma: tradition, eclecticism and ideology in the study of British Public Administration. In: *Understanding Governance. Policy Networks, Governance, Reflexivity and Accountability*, Buckingham, Philadelphia: Open University Press, pp. 165–179.
- Richardson J (2000) Government, Interest Groups and Policy Change. *Political Studies*, Blackwell Publishers Ltd 48(5): 1006–1025.
- Roberts NC and King PJ (1989) The Process of Public Policy Innovation. In: Van de Ven AH, Angle HL, and Poole MS (eds), *Research on the Management of Innovation: The Minnesota Studies*, New York: Ballinger/Harper & Row, pp. 303–336.
- Roe E (1994) *Narrative Policy Analysis: Theory and Practice*. Durham, N.C.: Duke University Press.
- Rostow WW (1960) *The Stages of Economic Growth: A Non-Communist Manifesto*. London: Cambridge University Press.
- Rostow WW (1971) *Politics and the stages of growth*. Cambridge: Cambridge University Press.
- Rothstein B (2005) *Social traps and the problem of trust*. Cambridge, UK: Cambridge University Press.
- Sabatier PA (1988) An advocacy coalition framework of policy change and the role of policy-oriented learning therein. *Policy Sciences*, Kluwer Academic Publishers 21(2–3): 129–168.
- Sabatier PA (1991) Toward better theories of the policy process. *PS: Political Science & Politics* 24(2): 147–156.
- Sabatier PA and Jenkins-Smith HC (1993) Policy change and learning: an advocacy coalition approach. *Theoretical lenses on public policy*, Boulder, CO.: Westview.
- Schiffrin D, Tannen D and Hamilton HE (2003) *The handbook of discourse analysis*. Oxford: Blackwell Publishers.
- Schmidt VA (2008) Discursive Institutionalism: The Explanatory Power of Ideas and Discourse. *Annual Review of Political Science* 11(1): 303–326.
- Sen A (1970) *Collective Choice and Social Welfare*. San Francisco, Calif.: Holden-Day.
- Sen A (1980) Equality of what? (lecture delivered at Stanford University, 22 May 1979). In: Ashby E and McMurrin S (eds), *The Tanner lectures on human values*, Salt Lake City, Utah: University of Utah Press.
- Sen A (1999) *Development as freedom*. New York: Anchor.

- Shaw SE (2010) Reaching the parts that other theories and methods can't reach: How and why a policy-as-discourse approach can inform health-related policy. *Health*: 14(2): 196–212.
- Sherman Heyl B (2001) Ethnographic Interviewing. In: Atkinson P (ed.), *Handbook of Ethnography*, London: SAGE Publications.
- Skelcher C, Mathur N and Smith M (2005) The Public Governance of Collaborative Spaces: Discourse, Design and Democracy. *Public Administration*, Wiley-Blackwell 83(3): 573–596.
- Stewart F (1978) *Technology and Underdevelopment*. London: Macmillan Press.
- Stillman RJ (2005) *Public Administration: Concepts and Cases*. Houghton Mifflin.
- Stöhr WB and Taylor DRF (1981) *Development from above or below?: The dialectics of regional planning in developing countries*. Chichester: Wiley.
- Stone DA (1989) Causal Stories and the Formation of Policy Agendas. *Political Science Quarterly*, The Academy of Political Science 104(2): 281–300.
- Surel Y (2000) The role of cognitive and normative frames in policy-making. *Journal of European Public Policy*, Routledge 7(4): 495–512.
- Sutherland E (2009) Telecommunications in Small Island Developing States. *SSRN Electronic Journal*.
- Sutherland E (2010) Telecommunications in the Small Island States and Territories of the Caribbean. *SSRN Electronic Journal*.
- Taylor C (2002) Modern Social Imaginaries. *Public Culture* 14(1): 91–124.
- Taylor JR and Van Every EJ (1993) *The vulnerable fortress: Bureaucratic organization and management in the information age*. Toronto: University of Toronto Press.
- Tedlock B (2005) The Observation of Participation and the Emergence of Public Ethnography. 3rd ed. In: Denzin NK and Lincoln YS (eds), *The SAGE Handbook of Qualitative Research*, Thousand Oaks, CA.: SAGE Publications.
- Thakur D (2009) ICTs and Community Participation: An Indicative Framework. *The Journal of Community Informatics* 5(1).
- Thakur D (2012) Leveraging Information and Communication Technologies for Development (ICTD) in the Caribbean. *Geography Compass*, Blackwell Publishing Ltd 6(1): 1–18.
- Thompson MPA (2004a) Discourse, 'Development' & the 'Digital Divide': ICT & the World Bank. *Review of African Political Economy*, Taylor & Francis, Ltd. 31(99): 103–123.
- Thompson MPA (2004b) ICT, Power and Developmental Discourse: A Critical Analysis. *The Electronic Journal of Information Systems in Developing Countries* 20(4): 1–26.
- Titscher S, Meyer M, Wodak R, et al. (2000) *Methods of Text and Discourse Analysis*. London: SAGE Publications.
- UNCTAD (2009) *Information Economy Report 2009: Trends and Outlook in Turbulent Times*. Geneva: United Nations Conference on Trade and Development.
- Unwin T (2007) No end to poverty. *Journal of Development Studies*, Routledge 43(5): 929–953.
- Unwin T (2009) *ICT4D: information and communication technology for development*. Cambridge University Press.

- Van De Ven AH and Poole MS (1995) Explaining development and change in organizations. *Academy of Management Review*, Academy of Management 20(3): 510–540.
- van Dijk J and Hacker K (2003) The Digital Divide as a Complex and Dynamic Phenomenon. *The Information Society*, Routledge 19(4): 315–326.
- van Dijk TA (1985) Discourse Analysis in Society. *Handbook of Discourse Analysis*, London: Academic Press.
- van Dijk TA (1993) Principles of Critical Discourse Analysis. *Discourse & Society* 4(2): 249–283.
- Van Dijk TA (2001) Principles of Critical Discourse Analysis. In: Wetherell M, Taylor S, and Yates SJ (eds), *Discourse Theory and Practice*, London: The Open University Press.
- van Leeuwen T (1993) Genre and Field in Critical Discourse Analysis: A Synopsis. *Discourse & Society* 4(2): 193–223.
- Wallerstein I (2000) Globalization or the Age of Transition? *International Sociology* 15(2): 249–265.
- Wallsten S (1999) *Telecom Traffic and Investment in Developing Countries: The Effects of International Settlement Rate Reductions*. World Bank Policy Research Working Paper No. 2401.
- Weber M, Runciman WG and Matthews E (1978) *Max Weber: Selections in Translation*. Cambridge: Cambridge University Press.
- Webster F (2002) *Theories of the Information Society*. 2nd ed. London: Routledge.
- Wetherell M (2001) Themes in Discourse Research: The Case of Diana. In: Wetherell M, Taylor S, and Yates SJ (eds), *Discourse Theory and Practice*, London: The Open University Press.
- Wodak R (2001) What CDA is about - a summary of its history, important concepts and its development. In: Wodak R and Meyer M (eds), *Methods of Critical Discourse Analysis*, London: SAGE Publications.
- Wolcott HF (1994) *Transforming Qualitative Data: Description, Analysis and Interpretation*. Thousand Oaks, CA: SAGE Publications.
- Yates DJ, Gulati GJ and Tawileh A (2010) Explaining the Global Digital Divide: The Impact of Public Policy Initiatives on Digital Opportunity and ICT Development. *2010 43rd Hawaii International Conference on System Sciences*, Hawaii.
- Yin RK (1981) The Case Study Crisis: Some Answers. *Administrative Science Quarterly* 26(1): 58–65.

Appendix I – Interview Details

Fieldwork Schedule: July to December 2011

Table 9 – Fieldwork schedule

Period	Activity
July – August	.Document collection and initial analysis .Identification of framing themes to guide in-depth interviews
September – November	.Conducting interviews .Writing field notes and collecting additional documents referenced in interviews .Developing initial narratives
December	.Getting initial feedback from informants

Table 10 – Interview particulars

Interviewee	Affiliation	Sector	Interview Date (dd/mm/yyyy)	Length of Interview (hh:mm)
Dr. Kim Mallalieu	University of The West Indies	Academia	23/09/2011	01:25
Prof. St. Clair King	University of The West Indies	Academia	12/10/2011	01:13
Cintra Sooknanan	Trinidad and Tobago Computer Society	Civil Society	29/09/2011	01:12
David Little	PSTG Consulting Caribbean Ltd.	Consultant	27/10.2011	00:36
Devindra Ramnarine	PSTG Consulting Caribbean Ltd.	Consultant	04/10/2011	01:19
Vashtie Dookiesingh	Inter-American Development Bank	Multilateral Funding Agency	29/11/2011	01:11
Adam Montserin	National ICT Centre	Government	26/11/2011	00:37
Arlene McComie	Ministry of Public Administration	Government	09/11/2011	00:46

Atiba Phillips	National ICT Centre / National ICT Company	Government	14/09/2011	01:11
Cleveland Thomas	National ICT Centre / National ICT Company	Government	16/09/2011	00:49
Denyse White	National ICT Centre / National ICT Company	Government	04/10/2011; 07/10/2011	01:01; 00:39
Gerard James	National ICT Centre / National ICT Company	Government	29/08/2011; 03/11/2011	01:12; 00:12
Gillian Macintyre	Ministry of Public Administration	Government	12/10/2011	00:59
Jacqueline Wilson	Ministry of Public Administration and Information	Government	01/11/2011	01:44
John Mollenthiel	National ICT Centre / National ICT Company	Government	29/09/2011	02:09
Joy Lange-Syriac	National ICT Centre	Government	10/12/2011	01:25
Kenwyn Austin	National ICT Centre	Government	05/01/2012	02:15
Kwesi Prescod	National ICT Centre	Government	29/08/2011; 05/09/2011	01:21; 02:30
Dr. Lenny Saith	Ministry of Public Administration	Government	07/12/2011	01:07
Peter Mitchell	National ICT Centre	Government	03/08/2011; 29/08/2011	02:05; 01:11
Bernadette Lewis	Caribbean Telecommunications Union	Inter- governmental agency	15/08/2011	01:15
Edo Stork	United Nations Development Programme	Inter- governmental agency	18/11/2011	01:17
Nigel Cassimire	Caribbean Telecommunications Union	Inter- governmental agency	16/08/2011	02:05
Mark Lyndersay	Lyndersay Digital / Trinidad Guardian Newspapers	Journalist	17/11/2011	01:04
Bernard Mitchell	Evolving TecKnologies and Enterprise	Parastatal	25/08/2011	00:50

	Development Company Ltd			
Cris Seecheran	Telecommunications Authority of Trinidad and Tobago	Regulatory Agency	11/10/2011	00:31
Annie Baldeo	Telecommunications Authority of Trinidad and Tobago	Regulatory Agency	11/10/2011	00:30
Total: 27 participants, 37 hours, 41 minutes of audio recordings				

Appendix II – Document Details

Table 11 – Documents used for the analysis

Document	Description
The Missing Link Report (1984)	This Report was published by the Independent Commission for World Wide Telecommunications Development, a commission that had been convened in 1982 by ITU's. This report, which has since been cited by practitioners and academics as a landmark document in the field, zeroed in on telecommunications development, and particularly the improvement of telecommunications infrastructure as a critical precondition for socioeconomic development.
The Text of the General Agreement on Tariffs and Trade (GATT) (1986)	The GATT was the global multilateral trade negotiating mechanism that preceded the WTO. This document was the cumulative output of amendments since the document first came into force in 1948.
Trinidad Guardian newspaper articles from 1993 to 1999 and 2001-2003 (173 articles in total)	The Trinidad Guardian is one of three daily newspapers published in Trinidad and Tobago, and it has wide circulation ⁵⁹
The Text of the General Agreement on Trade in Services (GATS) (1994)	The GATS was a landmark document because it introduced services to the coverage of the global multilateral trade negotiations landscape. For the purpose of this thesis, the relevant service under consideration was basic telecommunications
Fourth Protocol of the GATS (1996)	This attachment to the main GATS text set out requirements for each member state to submit a Schedule of Specific Commitments and a List of Exemptions from Article II concerning basic telecommunications annexed to the Protocol
Cabinet Minute 1737 of 19 July 1997	Confirmed the acceptance of an IT Policy for the Public Service as a basis for specific directives to guide the use of IT in the Public Service
Cabinet Minute 1931 of 31 July 1997	Confirmed the establishment of the "Year 2000 Compliance Committee" within the National Information Systems Centre (NISC) to lead the work of bringing all computer systems in ministries and agencies into year 2000 compliance , along with the adoption of the ISO 9000 Standard Date Format (YYYYMMDD)
Schedule of Commitments under the Fourth Protocol of GATS – Trinidad and Tobago (1997)	This document set out Trinidad and Tobago's GATS commitments as they related to trade in basic telecommunications

⁵⁹ While I initially also acquired old articles published during the period 1995 to 2010 in the Trinidad Express, the other major daily newspaper published in Trinidad and Tobago, the format in which the articles were generated by the Express' archival software meant that most of the articles were lumped together long streams of text, and many omitted publication dates. As such, none of these could be reliably used.

Cabinet Minute 3416 of 30 December 1998	Cabinet noted that a Consultancy Report produced by the Commonwealth Secretariat to finalize an IT strategy to transform the Public Service had proposed a Roles and Responsibilities Matrix to delineate the intertwining functions of the various IT stakeholders across government and external service providers. They then went on to approve 3 projects proposed in the Report: the Government Wide Area Network ; an Information Systems Strategic Plan for the government; and “fast track” deliverables for two unnamed government business areas.
Cabinet Minute 1389 of 2 June 1999	Recounted that Cabinet noted a status update from the Year 2000 Compliance Committee
Cabinet Minute 1626 of 1 July 1999	Confirmed the establishment of the National Electronic Commerce Policy Committee under the Ministry of Trade and Industry and Consumer Affairs, and indicated that T&T had been selected to participate in a World Bank study on e-commerce in the Western Hemisphere with the aim of addressing issues such as payments, security systems, and risk management – an area of work that was considered a “very critical area since a robust and reliable electronic financial infrastructure is essential for the growth of confidence in, and hence the further development of, e-commerce.”
Cabinet Minute 2089 of 8 September 1999	Confirmed the government’s agreement to a Microsoft Enterprise Select Agreement for the use of Microsoft Office software throughout the Public Service
Cabinet Minute 1548 of 16 August 2000	Confirmed the decision to procure and implement and Automated Human Resource Information System for the Public Service
Electronic Transfer of Funds Crime Act, 2000	This was an important piece of legislation for establishing the requisite organisational structures and giving effect to provisions outlined in its associated Policy document
Computer Misuse Act, 2000	This was an important piece of legislation for establishing the requisite organisational structures and giving effect to provisions outlined in its associated Policy document
Donor’s Memo for the IDB “Modernization of Telecommunications” project (TC-99-11-04-6) (2001)	Used to identify the objectives of the loan programme , as well as to get insight on the IDB’s perspective on telecommunications & ICT development
Cabinet Minute 1600 of 7 November 2001	Confirmed the role of the E-Commerce Secretariat as a facilitator to “focus on policy issues that would provide the environment for participation by the private sector in e-commerce” and to “review the National E-Commerce Action Plan to determine the relevant policy issues to be addressed”
Telecommunications Act, 2001	This was an important piece of legislation for establishing the requisite organisational structures and giving effect to provisions outlined in its associated Policy document
Medium Term Policy Framework 2002-2004 (2001)	This was a national planning framework that was published by the Ministry of Planning. The document heralded the development of a National Information and Communication Technology Strategy and the continued execution of the National e-Commerce Action Plan by the

	National Electronic Commerce Secretariat that had been established in 2000
National Budget Statements from 2001-2011	These were considered annual guides to the government's operations that signalled the expected public expenditure for a given year. They were used for data triangulation.
Cabinet Minute 1974 of 31 July 2003	Recorded Cabinet's denial of UWI's request to support its bid to establish a Country Gateway - an interactive portal to provide information on development and poverty reduction, on the grounds that such a portal was a function for a central government agency only.
Cabinet Minute 414 of 20 February 2003	Recorded the government's decision to allow the IDB to award a contract to a firm called Consulting and Audit Canada for consultancy services to assist GoRTT in preparing a National ICT Plan .
<i>fastforward</i> – The National ICT Strategy of Trinidad and Tobago (2003)	Trinidad and Tobago's first national ICT policy document. The document envisioned T&T in " <i>a prominent position in the global information society through real and lasting improvements in social, economic and cultural development caused by deployment and usage of information and communication technology</i> "
Cabinet Minute 144 of 15 January 2004	Confirmed the agreement to hire additional technical staff to support the e-Government Unit's Government Network Management Centres
Cabinet Minute 1646 of 17 June 2004	Confirmed the decision to hire New Systems Facilitators in the Ministry of Public Administration and Information for assignment to Ministries and Departments to facilitate the integration of new systems and work procedures (such as those facilitated by the Backbone) to transform the Public Service
Cabinet Minute 2098 of 22 July 2004	Established a Memorandum of Understanding between GoRTT and the Government of Canada , to secure the Canadian government's assistance for the implementation of the <i>fastforward</i> Governance project, and the e-Government Portal project . The document also rescinded a previous decision that had been recorded in Minute 433 of 12 February 2004 to enter a contract with the Government of Canada to hire Consultancy and Audit Canada to undertake consultancies for three <i>fastforward</i> Pathfinder projects
Cabinet Minute 2142 of 29 July 2004	Recorded the agreement to extend the employment contracts of technical staff within the e-Government Unit for 6 months, on the same terms as their previously approved contracts from 2001
Cabinet Minute 2466 of 2 September 2004	Confirmed the established of the ICT Division in MPAl

Cabinet Minute 2698 of 23 September 2004	<p>Recounted the salient elements of a report on the 5th Caribbean Ministerial Consultation on Regional Cooperation for e-Government Capacity Building that had been held on 17-18 June 2004. Minister of Public Administration and Information Dr. Lenny Saith as the Chairman of a working session on <i>Building upon the Caribbean e-Government Strategy</i> had led a proposal to achieve a series of objectives, including:</p> <ul style="list-style-type: none"> * Endorsing the action-oriented e-government strategy for the Caribbean region as a framework within which the government of the region could develop their own national strategies and national e-government programmes * Advocating for well-informed commitment of political leadership and genuine participation of the people in determining e-government objectives, as critical factors for successful e-government development * Recommending that the regional e-government strategy endorsed at the Consultation be used to complement the CARICOM ICT Connectivity Agenda that was due to be endorsed by an upcoming meeting of CARICOM ICT ministers that was due to be held on 12-15 October 2014 * Requesting the CARICOM Secretariat and the UN Department of Economic and Social Affairs (UNDESA) to provide resources and support for a regional information sharing and coordination facility that was due to be established
Cabinet Minute 2967 of 21 October 2004	Recorded the agreement to send staff of the e-Government Unit and the National ICT Secretariat to visit Puerto Rico to review their government's e-Government Portal Project
Cabinet Minute 3352 of 2 December 2004	<p>Recounted the salient elements of the 3rd Meeting of Caribbean ICT Ministers held on 15 October 2004, which included a decision to endorse a proposal from the Caribbean Broadcasting Union to establish a Regional Programme Development Fund to develop: local/regional programme content; programming platforms for radio and TV to showcase the content; training facilities to develop the requisite skills to produce quality radio and TV programmes. Notably, the Minute did NOT reference the Regional e-Government Strategy that had been endorsed at the regional meeting 6 months prior, nor the CARICOM ICT Connectivity Agenda that it was meant to complement.</p>
Cabinet Minute 357 of 5 February 2004	Recorded the agreement to implement Phase I of an Electronic Document Management System to divisions of the Office of the Prime Minister
Cabinet Minute 433 of 12 February 2004	Recorded the agreement to implement 3 projects under the National ICT Plan (namely: <i>fastforward Governance</i> ; <i>National Broadband Strategy and Implementation</i> ; <i>e-Government Portal</i>) through a contractual arrangement with the Government of Canada to hire a firm Consulting and Audit Canada .
Telecommunications (Amendment) Act, 2004	This was an important piece of legislation for establishing the requisite organisational structures and giving effect to provisions outlined in its associated Policy document

Summit of the Americas: The IDB Agenda to Support the Mandates of the Summits of Quebec and Nuevo León (2005)	Framework document that sets out the IDB agenda for supporting the development of member countries in the wake of the 2001 and 2004 Summits of the Americas
Cabinet Minute 122 of 13 January 2005	Confirmed the decision to extend the employment of staff in the e-Government Unit, e-Commerce Secretariat and National ICT Secretariat , as an interim measure in preparation for the creation of the ICT Division of the MPPI
Cabinet Minute 1298 of 19 May 2005	Confirmed the organisational structure of the newly created ICT Division
Cabinet Minute 3146 of 8 December 2005	Recorded the agreement to enter a contract with a state-owned Special Purpose Company – eTeCK – for the implementation of Phase II of the Backbone project
ICT Policy Formulation and eStrategy Development – A Comprehensive Guidebook (2005)	A publication of the UNDP-Asia Pacific Development Information Programme. The document's author, Mr. Richard Labelle, was sub-contracted by a firm (Goulet Telecom) that was hired to conduct ICT governance and management capacity building workshops for the National ICT Centre and the rest of the Public Service in 2007
Final Report on "The Development, Implementation and Maintenance of a Communications Backbone for the Public Service" (2005)	This report was produced by Mr. Kenwyn Austin, upon completion of Phase I of the Backbone project. At the time of writing, Mr. Austin had just completed a stint as e-Government Consultant, and the report's objective was to highlight key elements of the implementation, lessons learnt, recommendations and next steps.
<i>BitDepth</i> newspaper articles from May 2005 to June 2011 (24 articles in total)	These covered a range of topics ranging from emerging choices in the local broadband Internet access market, to coverage of the ICT Symposium put on by the Government in 2008. Most articles attempted to take a critical stance on the issues being highlighted
Cabinet Minute 1318 of 1 June 2006	Noted that Cabinet reviewed a proposal for IT Policies and Guidelines for the continued support of the Communications Backbone and referred it to the Finance and General Purposes Committee for consideration
Cabinet Minute 1797 of 20 July 2006	Confirmed the decision to carry out a series of enhancement works to the Government Wide Area Network (Backbone) in light of a litany of technical issues faced during implementation (saturation of internet connectivity bandwidth, challenges with operational applications, LAN interconnectivity, and lack of site readiness for interconnection). Of note, in this document Cabinet agreed that the Special Purpose Company to be selected for the job might consider selective tendering of an appropriate sub-contractor " <i>so as to take advantage of the accumulated project knowledge and experience, as well as cost savings inherent in such an approach</i> " thereby opening the way for the re-selection of the firms who had possibly contributed to the technical challenges in the first place.

Cabinet Minute 38 of 5 January 2006	Recorded the agreement to accept the National Data Protection Policy , and instructed the Attorney General to make amendments to the Freedom of Information Act (1999) to ensure conformity with the principles articulated in the Policy, and to prepare the necessary legislation to enforce the provisions outlined in the Policy document. The document outlined that the Policy's purpose was to "deal with the protection of the right to privacy for citizens of Trinidad and Tobago, while ensuring that the regulations which mandate certain actions on the part of the private sector are not unrealistic and burdensome." The document also outlined that the Policy sought to give effect to a number of general principles of Protection of Personal Privacy, including: accountability, consent, limiting collection, limiting use, and openness.
Cabinet Minute 39 of 5 January 2006	Recorded the agreement to accept the National Policy on Electronic Transactions , and instructed the Attorney General to prepare the necessary legislation to enable to enforce the provisions outlined in the Policy document. In the document e-commerce is identified as "an important strategic driver for economic growth" and the Policy document was intended to create "a clear and predictable legal environment that can be trusted by citizens, institutions and businesses". There was also an appeal to international best practice: "common approaches have been taken by governments worldwide and are built on the principles of media neutrality, functional equivalence and technological neutrality". In recognition of the expected reticence in the mainstream to accept electronic transactions, the Policy highlighted that its provisions were "mostly enabling which allow for a particular legal effect, but [did] not impose regulatory requirements, so that people will continue to have a choice as to whether they use electronic transactions or continue with a paper-based environment". In so doing, the Policy's provisions sought to ensure that "electronic communications have the same protection in court as paper documents." The Minute went on to recount the specific issues that the Policy attempted to pronounce on so as to facilitate the adoption of electronic transactions.
Annual Telecommunications and Broadcasting Sector Market Reports from 2006 to 2010	These were produced annually by TATT to chronicle the state of the telecommunications and broadcast sectors since the commencement of the liberalization process
Final Report of Contracted Services for the Communications Backbone Project Implementation Phase II and Related Activities (2008)	This report was produced by Mr. Kenwyn Austin, upon completion of Phase II of the Backbone project. Once again, Mr. Austin had been retained on a short term consultancy to oversee the implementation of the project, and once again his report outlined a number of issues and recommendations.

CARICOM Draft Regional Digital Development Strategy (RDDS) 2010-2014	This document was a product of the CARICOM Secretariat and was produced with funding from the European Union . It invoked the WSIS and the Regional Plan of Action, eLAC2007, and was framed as the strategy required to give effect to those action plans. The document was intended to be the Caribbean Region's ICT Strategy for Development, serving to <i>"build the sustainable knowledge society in the shortest possible time."</i>
A Broadband Network in Support of Economic and Social Development (2011)	Concept note produced by Prof. St Clair King that sets out his thesis in support of the government building a nationwide broadband network in Trinidad and Tobago
The Information and Computer Technologies (2011)	Concept note produced by Prof. St Clair King to define a way forward for ICT as part of a foresighting exercise undertaken by the government
Data Protection Act, 2011	This was an important piece of legislation for establishing the requisite organisational structures and giving effect to provisions outlined in its associated Policy document
Electronic Transactions Act, 2011	This was an important piece of legislation for establishing the requisite organisational structures and giving effect to provisions outlined in its associated Policy document
Sustainable Development of the ICT Sector (2011)	This was a PowerPoint presentation produced by Mr. Bernard Mitchell of eTeCK that sought to present a snapshot of the country's development progress, while clarify a role for eTeCK in future developments. The highlight of eTeCK's contribution to that point was the Tamana InTech Park which was under construction at the time, and was intended to serve as a specialised technology park with advanced broadband network infrastructure.
Constitution of the IT Professional Society of Trinidad and Tobago (Draft) (2013)	Used to identify this civil society organisation's objectives, and give insight into their perspective on the role of IT in Trinidad and Tobago
Transcript of interview with the Administrator of the Trinidad and Tobago Network Information Centre (TTNIC) conducted by the Trinidad and Tobago Computer Society (n.d.)	Used as a substitute for directly interviewing the TTNIC Administrator myself to identify his perspective on the role of ICT , and the Internet in particular, in Trinidad and Tobago, as well as the role of the government in supporting ICT.