

The London School of Economics and Political Science

*All Politics is Local:*

*Sources of variance in the diffusion of venture capital policies*

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## Abstract

The diffusion of the neoliberal Silicon Valley venture capital (“VC”) model seems to be another case of convergence on neoliberal orthodoxy as the spread of Silicon Valley replication ambitions is ubiquitous. But, when looking under the veneer of the Silicon Valley VC policy diffusion trend, I find that VC policy diffusion is not a story of “universal convergence.” Though more than 40 states deployed VC policies in an attempt to create local Silicon Valleys, the policies they implemented took different, and interventionist, forms. This thesis seeks explain why variance, rather than convergence, characterizes the diffusion of this clear, successful model.

Diffusion scholarship has made initial attempts at theorizing why and how diffusion does not lead to complete convergence. This thesis contributes to this growing body of work by conceptualizing and investigating how bounded rationality drives incomplete convergence. To do this, the thesis extends Kurt Weyland’s work on cognitive biases to by testing how five economic management norms shape the Silicon Valley VC policy diffusion: (1) pre-existing norms guiding state intervention, (2) private sector financing norms, (3) preferences for supporting large or small companies, (4) international versus local company support preferences and (5) bank or capital market preferences. The five economic management norms are drawn on to develop East Asian comparative typologies (Nightwatch-man State, Private Sector Promoter, Financier and Director and Command Economy) to test the impact of the norms in specific cases. This thesis also tests state-of-the-art diffusion literature’s hypotheses about the sources of variance in the diffusion process, namely: the impact of multiple diffusion items, diffusion items’ levels of specificity and diffusion mechanisms.

Empirically, this thesis provides a large-N dataset of forty-six countries' VC policies and four East Asian case study analyses (Hong Kong, Taiwan, Singapore and Vietnam). The case studies reveal how, in the face of competitive pressures, three of the five economic management norms propelled policymakers to choose unique policy formula. As a result, this thesis concludes that Tip O’Neill’s presumption that “*all politics is local*” rings true in policy diffusion.

## Selected Abbreviations

A*STAR	Agency for Science, Technology and Research (Singapore)
ARF	Applied Research Fund (Hong Kong)
ASMED	Agency for Small and Medium-sized Enterprise Development (Vietnam)
ASTRI	Applied Science and Technology Research Institute (Hong Kong)
AuM	assets under management
AVCJ	Asian Venture Capital Journal
CEPD	Council for Economic Planning and Development (Taiwan)
CG	Consultative Group
CME	coordinated market economy
CPV	Communist Party of Vietnam
DPP	Democratic Progressive Party (Taiwan)
EC	Economic Committee (Singapore)
EDB	Economic Development Board (Singapore)
ERISA	Employee Retirement Income Security Act (United States)
ESVF	Early-Stage Venture Funding (Singapore)
EVCA	European Venture Capital Association
ExCo	Executive Council (Hong Kong)
FoVCF	fund of venture capital fund
GIO	Government Information Office Executive Yuan, Republic of China
GIP	Global Investor Program (Singapore)
GIS	Government Information Services (Hong Kong)
GP	general partner
GSO	General Statistics Office of Vietnam
HKSTP	Hong Kong Science and Technology Parks Corporation
HKVCA	Hong Kong Private Equity and Venture Capital Association
ICT	information and communications technology
IDB	Industrial Development Bureau (Taiwan)
IFC	International Finance Corporation
III	Institute for Information Industry (Taiwan)
ITC	Innovation and Technology Commission (Hong Kong)
ITF	Innovation and Technology Fund (Hong Kong)
IO	international organization

IPE	international political economy
IPO	initial public offering
ITC	Innovation and Technology Commission (Hong Kong)
ITRI	Industrial Technology Research Institute (Taiwan)
KMT	Kuomintang (Taiwan)
LegCo	Legislative Council (Hong Kong)
LME	liberal market economy
LP	limited partnership
MITI	Ministry of International Trade and Industry (Japan)
MNC	multi-national corporation
MoEA	Ministry of Economic Affairs (Taiwan)
MoF	Ministry of Finance (Hong Kong, Taiwan, Singapore and Vietnam)
MOST	Ministry of Science and Technology (Vietnam)
MPI	Ministry of Planning and Investment (Vietnam)
MTI	Ministry of Trade and Industry Singapore (Singapore)
NDF	National Development Fund (Taiwan)
NRF	National Research Foundation (Singapore)
NSI	national systems of innovation
NSTB	National Science and Technology Board (Singapore)
NVCA	National Venture Capital Association (United States)
PAP	People's Action Party (Singapore)
PE	private equity
PR	permanent residency
R&D	research and development
ROC	Republic of China
SAR	Special Administrative Region
SME	small and medium-sized enterprise
SOE	state-owned enterprise
SVCA	Singapore Private Equity and Venture Capital Association
TIF	Technopreneurship Investment Fund (Singapore)
TVCA	Taiwan Private Equity and Venture Capital Association
VC	venture capital
VoC	Varieties of Capitalism
WB	World Bank

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*To Eze.*



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# 1. Introduction

## 1.1. Introduction

This is a story of policy diffusion<sup>1</sup> in which a clear, successful policy model was transmitted via learning and competition mechanisms. The ending of this diffusion story, according to mainstream diffusion research, should be the spread of policies similar to the source model. Yet, this diffusion story has an unexpected ending as universal convergence has not occurred. Transformation and variance, rather than complete convergence, characterizes the way in which adopting states design local versions of the policy model. The objective of this thesis is to uncover why variety, rather than universal convergence, has resulted from what should be a textbook case of diffusion driving policy convergence.

This puzzling case of diffusion emanates from the Silicon Valley<sup>2</sup> venture capital (“VC”) ecosystem.<sup>3</sup> The Silicon Valley model has attracted international policymakers’ interest in “developing their own venture capital industries” as a means to support local innovation, competitiveness and high-technology entrepreneurial activity since the early 1980s (Gulinello, 2005: 846). Internationally adopted “Silicon” monikers demonstrate the global diffusion of the

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<sup>1</sup> As will be further defined in Chapter 2, diffusion is defined as “as any process in which the prior adoption of a trait or practice alters the probability of adoption for remaining non-adopters” (Strang, 1991: 335).

<sup>2</sup> Silicon Valley is an area south of San Francisco, CA, specifically Santa Clara County, which is centered around Stanford University. The term “silicon” is used to describe the region because of the original density of silicon chip (a personal computer component) manufacturers in the area. Silicon Valley gained in notoriety by the early 1980s given the successful technology firms, start-ups and investors based there.

<sup>3</sup> Though VC investment activity started to take place on both sides of the Atlantic around the time of World War II, it was the VC market centered in the US Silicon Valley that achieved world-renown “exceedingly attractive” returns by the 1970s (Lerner, 2009: 29). The success achieved by VC managers in the US came in tandem with the global high-technology industry’s growth and high-technology companies’ unprecedented initial public offering (“IPO”) valuations.

Silicon Valley model. A few examples include the “Silicon Roundabout” in London, Taiwan’s<sup>4</sup> “Silicon Island,” Australia’s “Silicon Beach,” Israel’s “Silicon Wadi,” Chile’s “Chilecon Valley,” Hong Kong’s “Silicon Harbor” and the “Silicon Alley” in New York City.

More than just a catch phrase, policymakers’ desire to develop their local “Silicon Valley” translated into an estimated USD 3 billion spent annually by Organization for Economic Cooperation and Development (“OECD”) governments by the mid-1990s (OECD, 1997). Singaporean policymakers, for example, recognized “the importance of venture capital financing in the success of countries such as the US,” so the Singaporean government “placed particular emphasis on the development of a venture capital industry in Singapore to boost the development of high technology start-ups and entrepreneurship” (Bruton *et al.*, 2002: 199). Another (perhaps unlikely) adopter is Russia; in 2006 Russian policymakers launched a USD 1 billion fund of VC fund (“FoVCF”) and in 2010 Russian President Dimitry Medvedev launched an initiative to turn Skolkovo, a suburb of Moscow, into the “Russian Silicon Valley” (Basich, 2010: 1).

In Russia, as in elsewhere, building a local VC industry is a central tenant of the Silicon Valley replication efforts. To this end, the Silicon Valley duplication formula has been said to consist of the following:

select a hot industry, build a science park next to a research university, provide subsidies and incentives for chosen industries to locate there, and *create a pool of venture capital* (Wadhwa, 2013; Italics added for emphasis).

This thesis focuses on the international diffusion of policies aimed at the last element in this Silicon Valley formula: policies deployed to create a local VC industry.<sup>5</sup> My thesis research finds that more than 41 countries (out of a 46 country sample) have studied and deployed VC policies, across a

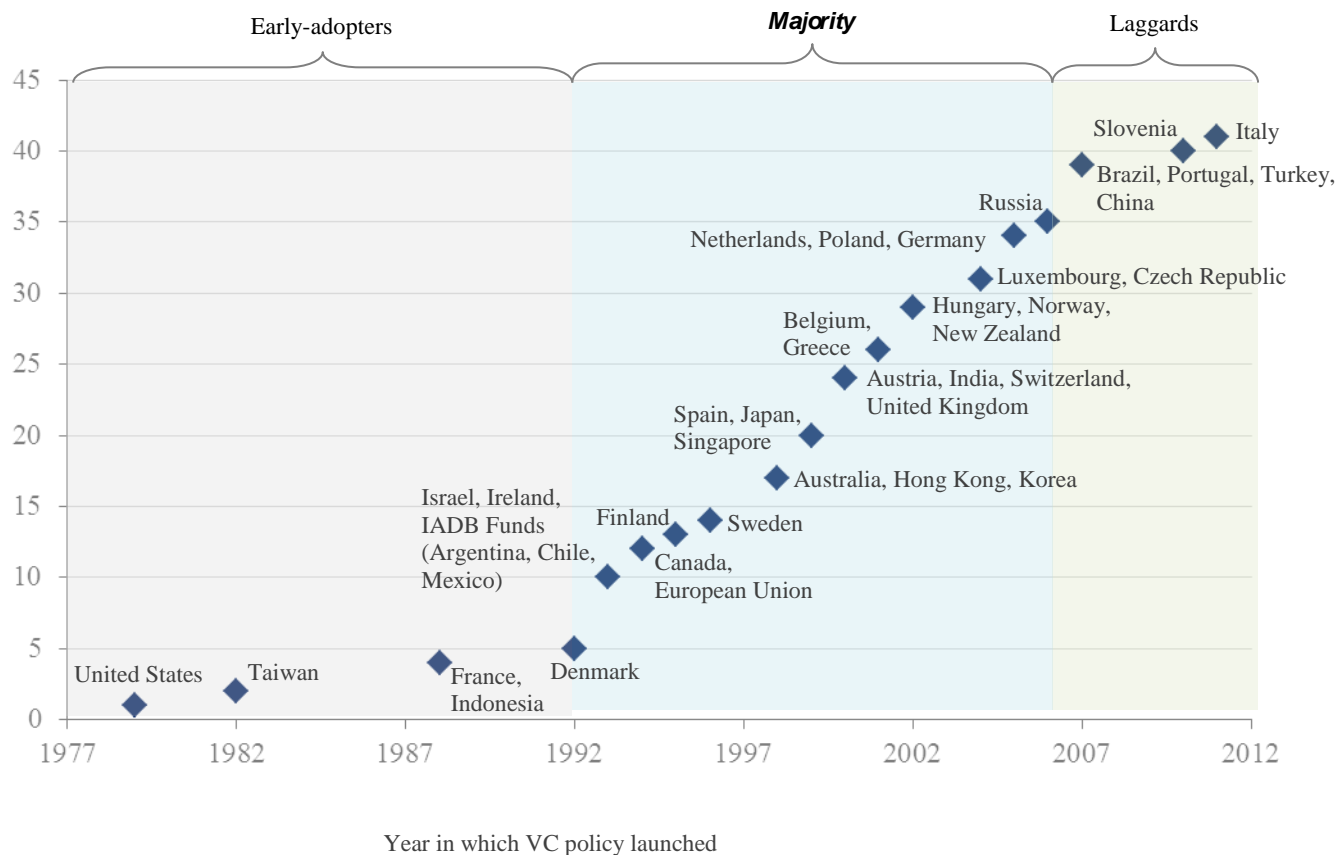
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<sup>4</sup> The Republic of China (“ROC”), also known as Chinese Taipei, is referred to as Taiwan throughout this thesis.

<sup>5</sup> Hereafter, policies aimed at the local VC industry, as detailed in Chapter 2, are referred to as “VC policies.”

range of neoliberal and socialist states across the globe, including Russia and Canada, France and the UK, China, and Chile.<sup>6</sup> Figure 1.1 illustrates the output of my research, which is a trend of 41 states launching VC policies.

**Figure 1.1:** State Launches of VC policy Efforts (Cumulative Number 1979 – 2012)



**Sources:** European Venture Capital Association (“EVCA”), Latin American Venture Capital Association (“LAVCA”), European Union, OECD, World Bank and individual country sources. **Methodology:** Chart indicates initial VC policy launch date and represents the cumulative number of VC policy launches. Sample is all OECD, G-20, BRICs and Asian Tiger countries (46 states<sup>7</sup>). 41 states (nearly 90%) had launched some form of VC policy by 2012.

The pace of VC policy diffusion, as illustrated in Figure 1.1, increased in the 1990s and has been global as VC policies have been adopted by European, Middle Eastern, North and South American

<sup>6</sup> See Section 1.3, Research Methodology, for further explanation of what is included in the large-N dataset.

<sup>7</sup> The 46 states included in the large-N sample are: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Russia, Saudi Arabia, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan (Chinese Taipei), Turkey, United Kingdom, United States and Vietnam.

and Asian states. In recent years, the late developers of the BRICs<sup>8</sup> and Eastern European countries launched VC policies. The VC policy adoption pattern evidenced in Figure 1.1 is expected to result in an S-shaped curve over time as the universe of potential adopters diminishes (Rogers, 1995).

VC policy diffusion may seem to be another story of “universal convergence” (Kuczynski and Williamson, 2003: 325). As illustrated in Figure 1.1, at least 41 states – across geographical, regime type and economic structure divisions – adopted some form of VC policy. But, when I looked beneath the veneer of the general VC policy diffusion trend, I found that VC policy choices have not converged on replicating the neoliberal policy environment that fostered the Silicon Valley VC industry’s growth.<sup>9</sup> Rather, the Silicon Valley-inspired VC policies deployed outside of the US have been markedly more interventionist than Silicon Valley’s hands-off environment. The internationally adopted VC policy choices consist of overt, and differing, means to attract private capital, including VC industry-specific tax credits, regulatory incentives and FoVCFs.

What’s more, even states of similar population and economic sizes, which are geographically proximate and at comparable levels of industrialization, have not made similar VC policy choices. Instead, even amongst proximate cultural and regional peers there have been significant variations in their interventionist VC policy choices. As a testament to the diversity that characterizes this diffusion pattern, in my assessment of the large data set represented in Figure 1.1, no countries were found to have identical VC policy forms. To be sure, although Silicon Valley VC policy diffusion resulted in 41 states deploying VC policies, the adopting states have deployed unique, interventionist tools rather than replicas of Silicon Valley’s neoliberal environment.

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<sup>8</sup> BRICs is the term coined by Goldman Sachs chief economist Jim O’Neill in his 2001 paper entitled “The World Needs Better Economic BRICs” to refer to the high-growth economies of Brazil, Russia, India and China. He argues that these four developing economies will be four of the world’s top economies by 2050.

<sup>9</sup> The Silicon Valley VC policies will be further discussed in Chapter 2. As a brief introduction, the Silicon Valley policy environment for its VC cluster has included American regulations, particularly the limited partnership structure and the 1979 regulatory reinterpretation that allowed pension funds to invest in the asset class. It has not consisted of more region-specific incentives or regulations. See Avnimelech and Teubal (2004) for further discussion of the Silicon Valley VC policy, beyond the discussion in the following section and in Chapter 2.



The cross-national variance in VC policy choices is puzzling because in international political economy (“IPE”) diffusion research, competitive pressures should propel the adoption of similar policies amongst geographic clusters (e.g. Elkins and Simmons, 2005). Scholarship on diffusion’s learning mechanism hypothesizes that if rational policymakers obtain information about a highly successful model from outside their region, they will converge in their beliefs and then “they will make the same policy choices” (Meseguer, 2009: 216). Applying this logic, the diffusion of Silicon Valley policy information should result in policymakers replicating the neoliberal Silicon Valley regulatory environment. Shared competitive pressures and a similar desire to replicate a clear model, together, are expected to lead to convergence on Silicon Valley’s central policy components (ERISA-like regulations and use of the LP structure). But, similar, neoliberal Silicon Valley-like VC policy choices have not occurred across the large-N dataset, or within regions.

**This brings me to this thesis’ central puzzle: why has the diffusion of Silicon Valley VC policy information resulted in varied, and interventionist, VC policy choices rather than convergence on neoliberal regulatory environments?** To answer this question I investigate the sources of transformation and variation in the diffusion of Silicon Valley VC policy information. Using an East Asian cluster of states as a lens to examine the impact of local contexts on diffusion outcomes, I aim to explain why, even though there is a clear model spread primarily via competitive pressures and policy learning, there has not been “universal convergence” on Silicon Valley’s hands-off VC policy environment. In so doing, my thesis contributes to IPE’s understanding of the sources of diversity amidst convergence.

This chapter proceeds by introducing the thesis’ analytical framework, research methodology and case selection. Section 1.2 introduces the thesis’ analytical framework for

investigating the sources of variance in the VC policy diffusion process.<sup>10</sup> It introduces my extension of bounded learning tools to investigate the role of domestic norms in shaping policy diffusion and identifies diffusion scholarship's state-of-the-art tools for examining diversity amongst convergence. Section 1.3 then outlines the research methodology, which is qualitative, including the compilation of the large-N VC policy choice dataset and four case study analyses. Section 1.4 explains the rationale behind the selection of the East Asian cluster, and the specific cases of Hong Kong, Taiwan, Singapore and Vietnam. Finally, Section 1.5 concludes the chapter and outlines the structure of the thesis, including the sequence and aims of the VC policy, literature review, analytical framework, case study, analysis and conclusion chapters.

## 1.2. Analytical Framework

As previously mentioned, diffusion scholarship has focused on how diffusion processes drive broad convergence trends. To this end, diffusion scholars argue that the spatial and temporal clustering of policies, government regime types, etc. shows that there is increasingly less scope for unique policy choices (Simmons *et al*, 2008; Busch and Jörgens, 2005; Holzinger and Knill, 2005). In this way, policy diffusion research contributes to IPE scholarship through its identification of mechanisms behind policy interdependence. However, diffusion scholarship has paid insufficient attention to important components of the diffusion process, particularly domestic contexts (Lenschow, *et al* 2005; Painter and Yeo, 2011: 378). As a result, diffusion frameworks help to explain only a part of an interesting phenomenon: interdependent, but diverse, policy choices.

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<sup>10</sup> Prior to the empirical investigation of VC policy conducted within this thesis, there had not yet been an investigation into the drivers behind the spread of VC policies. Existing academic research on VC policy primarily comes from business schools and IOs, and focuses on describing the laws, tax incentives or outputs of policies in certain regions (see Da Rin, *et al*, 2013 for a recent VC literature review). Harvard Business School professor Josh Lerner is particularly well published on the topic of VC policy. Notably, his analysis of public efforts to drive entrepreneurship, *Boulevard of Broken Dreams* (2009), examines the policy components that have aided and undermined VC market building attempts across a number of countries and American states. Recent studies from public policy and economics departments have applied “institutional frameworks” to explain differences in VC firms’ operations or differences in VC activity levels across countries (see Bruton *et al* 2002; Li and Zahra, 2010). IOs and regional organizations have conducted numerous studies on the role of VC in the economy and have published research on how states can support VC markets (see European Commission, 1995; OECD, 1996; UNCTAD, 1997; OECD, 2003).

Diffusion research's quantitative bias has led to its inability to articulate how the diffusion process leads to limited degrees of convergence (Dobbin *et al*, 2007: 463). Diffusion scholarship has largely focused on explaining broad patterns of convergence (Levi-Faur *et al*, 2011: 1345), rather than employing qualitative case study examinations (Poulsen, 2011). For example, in her research on the diffusion of liberal market reforms, Meseguer (2009: 1) acknowledges that there had been "differences in the timing of reforms, in their speed and intensity, and in their results," but the aim of her study was "not to explain those differences." As a result of diffusion scholars' focus on large-N trends, quantitative studies have not identified specific choices.<sup>11</sup> This has also resulted in diffusion scholarship not delving into the causal chain by which elements of the diffusion process contribute to varying policy choices (Weyland, 2006: 14).

On the other hand, comparative capitalist<sup>12</sup> frameworks, such as Varieties of Capitalism ("VoC") (Hall and Soskice, 2001), identify how different institutional complementarities propel the persistence of various forms of capitalist systems despite global competitive pressures. In this way, VoC scholars argue that global economic forces are "crucially intermediated by social and political institutions and by policy discourses" (Walter and Zhang, 2012: 60). However, while institutional research programs explore the role of domestic institutions and path dependency (Skocpol and Weir, 1985), these models fail to account for the role of international factors in policy choices and changes (Knill, 2005).<sup>13</sup> Comparative capitalism frameworks therefore struggle to explain the

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<sup>11</sup> With that said, there are a number of important diffusion research projects that have either pursued relatively small-N investigations (e.g. Weyland, 2006) or have paired large-N examinations with case study research (e.g. Meseguer, 2009's use of Costa Rica as an illustrative case study).

<sup>12</sup> The term "Comparative Capitalism" includes the VoC, comparative institutional, NSI and comparative business systems research programs (this umbrella term includes the works of Whitley, 1992; Walter and Zhang, 2012; Witt and Redding, 2013 and others). These comparative programs together offer hypotheses as to the roles of institutional settings as drivers of market structures and performance. Comparative capitalism tools are typically deployed to explain tripartite institutional complementarities' impact on market activity and performance, not policymakers' policy choices (Crouch, 2009; Walter and Zhang, 2012).

occurrence of interdependent policy change that diffusion scholarship accounts for.

In light of the complementary strengths and weaknesses of the diffusion and comparative capitalism programs, this thesis fuses comparative capitalist tools into a diffusion framework. In doing so, this thesis' framework identifies and differentiates the impact of local contexts on the diffusion process. As employed here, comparative capitalism tools offer typologies that guide an investigation of how, even in the face of external pressures and exposure to the same policy models, policymakers adapt policy items to fit their local context. In this way, my domestic norm-focused diffusion framework pays "attention to diffusion itself" (Solingen, 2012: 631).

My analytical framework's central hypothesis is that bounded learning drives adaptation in line with policymakers' economic management norms. In doing so, my framework builds upon the work of Kurt Weyland (2006) regarding the way cognitive biases explain why and how different policy choices result from diffusion processes. Cognitive heuristics (anchoring, availability and representativeness) help "account for the spread of similarity and diversity," which Weyland posits to be a "defining characteristic of policy diffusion" (Weyland, 2006: 8).<sup>14</sup> In a critique of bounded learning, Meseguer supports my use of Weyland's framework to explain variety. She argues that although the bounded learning framework:

has been used to explain policy convergence, what one would actually expect is the opposite – that is, *policymakers arriving at very different conclusions about the consequences of policies, and hence choosing divergent policies* (Meseguer, 2009: 19; Italics added for emphasis).

Following from this logic, bounded rationality is employed here to explain the occurrence of

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<sup>13</sup> Crouch (2009: 85) discusses the debate about whether VoC has, and can, account for economic policy choices. He, importantly, notes that Iverson and Soskice (2006) did respond to this critique that VoC does not sufficiently account for policy choices by exploring how economic arrangements affect policy choices.

<sup>14</sup> Please see Chapter 3 for the full discussion of the three cognitive heuristics.

different policy choices resulting from the diffusion process. My thesis' framework extends the bounded learning theory by investigating how policymakers' policy area-specific economic management norms drive each state to pursue unique policies, leading to limited, rather than full, convergence across adopters. The five economic management norms delineated and investigated in this thesis are: (1) pre-existing interventionist orientation, (2) private sector financing norms, (3) international or local firm preferences, (4) large or small firm preferences and (5) bank or capital market preferences. In developing these context specific norms, my thesis employs Weyland's cognitive biases in a more domestically-rooted direction.

To endow greater analytical power on the five economic management norms, I employ them to formulate comparative typologies for East Asia. I delineate my own typologies because comparative capitalism literature does not sufficiently delineate national institutional arrangements within East Asia (Storz and Schafer, 2011). Much of existing comparative capitalism's coverage of East Asia has thus far focused on a singular type, based upon analyses of Japan, Korea or China (see Amable, 2003; Aoki, Jackson and Miyajima, 2007; Levechevalier, 2011, Storz and Schafer, 2011).<sup>15</sup> As evidence of comparative capitalism's myopia, Amable (2003) developed the comparative capitalism's singular "Asian model," that effectively only describes the Korean and Japanese models and Soskice only offered a similar "group-coordinated East Asian economies" type (Crouch, 2009: 85).

In this way, the comparative capitalisms literature assumes that strongly interventionist Asian states promote national champions (keiretsu or chaebols). Therefore, they overlook the diversity of systems and focus on state relations with large firms rather than state relations with SMEs. These oversights impair the comparative capitalism theory's ability to guide investigations in East Asia for two reasons. First, East Asian policymakers' norms have not all been MNC or

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<sup>15</sup> Recently there have been attempts to rectify this deficiency. For example, Witt and Redding (2013) provides an account of numerous different types of business systems, using the VoC lens, across Asia.

national champion focused. There are East Asian systems centered on start-ups (e.g. Taiwan<sup>16</sup>) as well as states that prefer neoliberal approaches (e.g. Hong Kong). Second, and importantly to the VC policy area, these existing typologies do not delineate policymaker preferences for small or large firms. Since VC policy is closely related to local SME support, existing comparative capitalism typologies do not account for policymakers' SME-focused norms.

At the other extreme, some comparative capitalisms research delineating differences in East Asian systems are criticized for being too specific.<sup>17</sup> These carefully delineated, and perhaps overly descriptive, types come from the East Asian business systems and national innovation systems ("NIS") research (Whitley, 1999, 1992; Johnson, 1982; Witt and Redding, 2013) as well as East Asia-specific, and nuanced, VoC efforts (Walter and Zhang, 2012). Such accounts describe individual states; Whitley (1992), for example, develops characteristics of the business systems in Japan, South Korea, Taiwan and Hong Kong. Other typologies articulate institutional subsets (business systems, financial architectures, and labor market regimes) for several East Asian settings (such as Co-governed, State-led, Networked and Personalized) (Walter and Zhang, 2012: 8-17).

To remedy these deficiencies, my East Asian typologies more fully acknowledge and differentiate the SME-financing relevant economic management norms in East Asia. In this way, the typologies are derived from differences in informal institutions (economic management norms). Together, the typologies cover the neoliberal to statist range of economic management norms (related to small firms and capital market support) across the non-Japan, China or Korea states in East Asia. The East Asian typologies developed here include the Nightwatch-man state, the Private Sector Promoter, the Financier and Director, and the Command Economy.

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<sup>16</sup> Given the focus of the Taiwanese institutional context on SME production, Taiwan has been labelled "SME-Oriented Capitalism" in academic research (Chapter 12 in Witt and Redding, 2013).

<sup>17</sup> In addition to this critique, these more descriptive typologies also do not address SMEs or the four East Asian states investigated in this research project.

Though the role of economic management norms in the diffusion process is my focus, this thesis also tests hypotheses from recent diffusion scholarship that identify sources of variance in the diffusion process (see Klingler-Vidra and Schleifer, 2014 for review of this state-of-the-art literature). To this end, Chapter 3 unpacks diffusion literature’s hypotheses for policymakers’ adaptations of policy items as a result of multiple policy items (see Falkner and Gupta, 2009) and varying levels of specificity (see Weyland, 2006; Lenshow *et al*, 2005). Briefly, the diffusion scholarship’s hypotheses presented in Chapter 3 are that the existence of multiple policy items, and less specific policy items, are likely to drive diverse outcomes. In contrast, single models that are highly specific blueprints are expected to lead to more convergence.

To draw this section to a close, I summarize the three primary hypotheses that my thesis tests:

- 1) **Policymakers’ economic management norms are the central force shaping states’ unique bounded learning processes** – beginning with agenda setting, to research, evaluation and policy design – to ultimately make policy items “fit” local environments.
- 2) Multiple diffusion items, and less specific diffusion items, contribute to variance.
- 3) Economic structures in this empirical area (SME activity levels and the bank vs. capital market character of financial sector) determine the timing of VC policy diffusion.

In advancing these hypotheses, I aim to challenge the globalization thesis. The globalization literature argues that there will be convergence on neoliberal policies as a result of states’ competitive pressures to attract and retain capital (see Garrett, 1998; Strange, 1996; Mosley, 2000; Goodman and Pauly, 1993; Haggard and Maxfield, 1996; Keohane and Milner, 1996).<sup>18</sup> Given the diversity of policies in this empirical area – particularly amongst regional clusters – the

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<sup>18</sup> Scholars on the other side of the states versus markets debate have found that the state may still have “room to move” (Mosley, 2000) or is not experiencing a positive or negative change in its power. Instead, they have argued that states are experiencing a transformation into an economic actor expected to deploy some level of industrial policy (Cerny, 2005; Rodrik, 2004; Spencer and Brander, 2001).

globalization hypothesis does not explain my diversity amidst convergence large-N VC policy outcome. The patchwork shape of VC policy choices – in which neoliberal states have adopted direct funding tools while developmental states have resisted government funding, and in which regional clusters have myriad of funding, tax and regulatory strategies – the competition mechanism has not had a uniform impact. The competition mechanism’s inability to explain the shape of the VC policy diffusion trend led me to formulate an alternative hypothesis: that each state’s learning process, guided by local policymakers’ economic management norms, propels the adoption of VC policies with the same objective (to create a local version of the Silicon Valley VC cluster) but with different specifications in line with each local normative context.

### **1.3. Research Methodology**

Consistent with the objective outlined by King, Keohane and Verba (1994: 7), my research “seeks to make descriptive and causal inferences about the world.” In this vein, my thesis brings qualitative arguments and description to an under-researched issue: the diffusion of information on the Silicon Valley policy environment. To investigate this phenomenon, I pursue two stages of research. The first stage is a large-N canvassing of international VC policy choices and the second stage consists of a small-N dive into four case studies.

The first component of my research is the compilation of a large-N dataset of the VC policies deployed in 46 ICT market competing countries (OECD members, G-20 states, the Asian Tigers<sup>19</sup> and Vietnam). The dataset of national VC policies includes specific details on the funding, taxation and regulatory components of each of the (41) states that deployed VC policies. The dataset is contained in an Excel spreadsheet, organized by region (The Americas, Europe, Middle East and Africa, and Asia Pacific). Within each regional tab, there are country-specific columns that

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<sup>19</sup> Asian Tigers are Hong Kong, Taiwan, Singapore and Korea (World Bank, 1994).



detail the following information for each country: the date that each VC policy element was deployed and the precise specifications across the tax, regulatory and funding VC policy elements (see Annex I for a sample of the dataset's contents). To compile this broad, detailed dataset I consulted a number of sources, including VC industry associations, such as the EVCA, the NVCA, and the LAVCA, international organizations (the OECD, Asia Pacific Economic Cooperation "APEC," and the Inter-American Development Bank "IADB"), the European Investment Fund, government agencies and academic literature.

Within the large-N dataset, the following details are specified. For the funding category, each column specifies the FoVCFs' launch dates, names, AuM, repayment terms, other terms and international versus domestic VC manager requirements. In addition, the dataset indicates whether each country has directly managed VC funds, rather than a FoVCF. For the VC tax policy details, the dataset specifies the tax rate that VC managers are subject to, as well as any tax credits for VC managers or investors. The regulatory section details the structures available (LP structure or paper company, for example) as well as any variations on these structures from the Anglo-American LP model. The regulatory rows also identify restrictions on the ability of investors to access the VC asset class to determine whether an ERISA-like regulatory change has been made. Finally, the regulatory section identifies if and when a national VC industry association was formed and the details of any second tier, or technology SME-focused, stock exchanges.

The large-N data is not analyzed quantitatively; instead, the large-N dataset frames this research project. The large-N dataset reveals the global VC policy diffusion pattern as diversity amongst convergence, since 41 of the 46 states were found to have deployed varied VC policies. As mentioned in the earlier discussion of Figure 1.1, the VC policies identified in the large-N data collection vary in numerous ways – within regions, culturally similar states, and amongst states of similar regime type. They vary in terms of the FoVCF terms, by giving different amounts of money

to the initiative, by requiring different repayment terms, and by requiring local or international partners. Furthermore, numerous states were found to have not deployed any FoVCF, and instead either managed VC funds directly, or chose not to manage any VC-related funds at all.

On the tax front, the large-N dataset found a potpourri of states offering tax credits – either for investments made, or losses suffered – and different tax rates for VC profits. The regulatory front has seen large degrees of variation, as the LP structure has not been universally adopted, and even when adopted, there has been adaptation towards a local form. ERISA-like regulations that allow institutional investors to invest in the VC asset class, which were credited with much of Silicon Valley’s success, were only employed in a handful of cases. More commonly, restrictions have persisted for local investment managers, particularly related to their ability to obtain funding from, or sell their portfolio companies to, international investors.

In light of the large range of adaptations found in the large-N dataset, and the finding that no two states have deployed the same combination of VC policies, the large-N research was essential to establishing the thesis’ narrative: numerous policymakers have deployed VC policies in an effort to build their own Silicon Valley-like VC cluster, but they have all done so differently. The large-N dataset compilation also helped me to develop categories that encompass the range of VC policy instruments that have been deployed by 41 states. By tracking what has been deployed across the globe, I am able to (1) ensure that this thesis presents the full range of VC policy choices made and (2) categorize this complete range of VC policy elements.

To properly investigate the precise drivers of the diversity amidst convergence trend, the lion’s share of my research focused on small N, in-depth, qualitative case studies. I investigated the impact of the diffusion process on VC policy choices in four case studies within a regional cluster: Hong Kong, Taiwan, Singapore, and Vietnam (case selection rationale is discussed in Section 1.4).

In line with the central hypothesis of my research project, my case study research primarily focuses on examining the role of five economic management norms in shaping VC policymaking, beginning with their impact on agenda setting through to policy evaluation, design and implementation. To test the existing diffusion literature's theories, I also examined the role of the diffusion mechanisms (competition, coercion, learning and emulation), as well as the existence of multiple diffusion items and diffusion items of varying levels of specificity. My small-N research of these factors began with a review of primary government communiqués and reports as well as academic and IO literature.

Then, given that my research primarily focuses on policymakers' economic management norms, I conducted 46 semi-structured interviews with policymakers, VC managers, VC industry association leaders, IOs, academics, angel investors, and high-tech entrepreneurs. My sample of interviewees was determined through a two-step process. First, I identified the senior policymakers responsible for VC policymaking in each case study. For example, in Singapore I identified the policymaker in the 1990s committee that launched the funding component of the government's *Technopreneurship-21* initiative, and then went on to manage the government FoVCF. In three out of four states,<sup>20</sup> I interviewed these senior VC policymakers to ascertain which VC policy models they studied, how they acquired their information and then how and why they pursued their specific VC policy choice. The goal of these few, but high-profile, interviews was to understand the VC policy diffusion process from inception to outcome, so it was of primary importance that I speak with the key individuals, rather than many policymakers each offering glimpses into the process.

I then employed a snowballing technique to identify additional interview subjects in each case (see Clark, 2006: 419 for a discussion of snowballing methodology). At the end of each interview, I asked my interviewee which two or three other policymakers or industry participants

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<sup>20</sup> In Taiwan, the senior VC policymaker was K.T. Li who is deceased. In this case I sought out policymakers who were close contemporaries of K.T. Li who were able to share insights into the influences and processes surrounding K.T. Li's VC policymaking in the early 1980s. For more recent Taiwanese VC policymaking, however, I was able to speak directly with the individuals responsible.

that they felt were critical to the VC policymaking process, or had interesting insights into the agenda-setting, evaluation, and design segments of the VC policymaking process. I then followed up on these referrals to conduct the next round of interviews in each case, and repeated the same procedure of asking for another few referrals from these contacts. When I felt that I had reached the point of saturation, I stopped conducting interviews.

#### 1.4. Case Selection

As mentioned in the previous sections, diffusion research often examines how policies diffuse to and within geographically or culturally proximate clusters (see Simmons and Elkins, 2004; Meseguer, 2008; Weyland, 2006). Spatially-organized diffusion analyses contend that policies diffuse in a certain manner because of their co-location. Given that my research project aims to extend diffusion theory, I chose my case studies in a similar manner to the majority of diffusion studies: as a geographic cluster. In so doing, my research project investigates VC policy diffusion from Silicon Valley to one specific cluster, rather than to some other cross-section of states.<sup>21</sup> By exploring the sources of varied policy choices within one cluster I believe my research best contributes to policy diffusion literature.

In order to choose which region to investigate, I turned to my large-N dataset to identify a geographic cluster that adopted varying VC policies, including at least one state that has not (yet) adopted a VC policy. Then, since my primary hypothesis is that different economic management norms are essential to diffusion, I sought a cluster of states that consisted of notably different economic management norms. The idea being that the clearly different economic management norms would not just lead to variance across the cluster of states, but that *each state's* policymakers

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<sup>21</sup> An alternative case selection would not hold geographic or cultural proximity as the defining characteristic, and would instead choose comparative states according to size (e.g. Katzenstein, 1985) or economic competitiveness (e.g. Breznitz, 2007).

economic management norms would propel their VC policy choices to fit *their local* environment.

These criteria led to the selection of a regional cluster whose policymakers' possess different economic management norms as well as states that adopted VC policies at different stages: the East Asian states of Taiwan (early), Hong Kong (mid), Singapore (mid) and Vietnam (late / non-adopter).<sup>22</sup> As previously mentioned, though IPE literature often groups the East Asian states together as interventionist states that "govern the market" (Wade, 1990), the region offers economic management norm variety; after all, it includes the "most free economy in the world!"<sup>23</sup> The four East Asian case studies range from the "most free economy" of Hong Kong, to Taiwan's focus on tax supports for local SMEs, to Singapore's financing to attract international firms to the Vietnamese state's historic public command of production.<sup>24</sup> While no real world cases are ever perfectly comparable, through this selection process I found sufficient similarities as well as analytically important differences in the East Asian cluster.

The East Asian VC policies implemented as a result of policymakers' studies are markedly different from one another. Hong Kong's VC policy efforts include the offering of the LP structure and deploying a USD 100 million FoVCF that paid a management fee to established VC managers in 1998. Taiwan, in contrast, launched a 20% tax credit for VC investors in 1983, used a paper company structure and extended its first official FoVCF as a bilateral initiative of USD 160 million with New Zealand in 2012. Singapore deployed a tax credit only for start-up investment losses and adopted the LP structure in 2002. Singaporean policymakers also deployed an internationally-

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<sup>22</sup> Latin America was the other final cluster choice, but since the IADB had launched a FoVCF for several states (Argentina, Mexico and Chile) in the region, the VC policy choices of each individual state would have been muddled.

<sup>23</sup> The Heritage Economic Freedom Index has ranked Hong Kong the most free economy in the world for more than 15 years.

<sup>24</sup> The fourth Asian Tiger (Korea) was not selected in light of its economic management norm similarities with Singapore in terms of its large firm preferences and private sector financing as well as its similar timing of VC policy adoption. In addition, the existing comparative typologies for Asia have already depicted the Korean policymaking context, so my bringing the "Asian" typology focused on national champions would not have added to the further understanding of SME and capital market policymaking context in East Asia. Instead, I chose to investigate VC policy's initial diffusion into Vietnam, as it offered a more unique normative environment and only initial VC policy diffusion.

focused USD 1 billion FoVCF in 1999, a domestically-inclined FoVCF in 2008 and offered permanent residency for Singaporean VC fund investors. The Socialist Republic of Vietnam, yet again different to the other East Asian states, recently began leveraging donor funding to deploy preferential loans (not equity investments or FoVCFs) directly to its start-ups.

The East Asian case studies were also chosen because empirical exploration of these cases is lacking. Kenney *et al* (2002) and Dietrich (2003) provided accounts of the national VC policies deployed across Asia Pacific countries. However, their findings are no longer comprehensive as they were conducted at least a decade ago. Furthermore, their studies detail the policy differences but do not explore the origins of East Asian VC policy choices. The four East Asian states and their ICT industrial policy choices have been examined by numerous scholars, including Alice Amsden's (2001) 'rise of the rest' and Douglas Fuller's (2010) exploration of Hong Kong's laissez-faire limits. IPE research such as Dan Breznitz's 2007 book on *Innovation and the State* and economic history books such as J. Megan Greene (2009) looked at VC policy as one product of the *Origins of the Developmental State in Taiwan*. Yet, these closest accounts do not investigate the origins of East Asian VC policies.

## **1.5. Conclusion**

This thesis investigates the puzzle of why diffusion drove varied, interventionist VC policy choices, rather than convergence on a Silicon Valley-like VC policy environment. What's more, it examines why variety occurred despite policymakers' learning efforts in response to similar competitive pressures and shared desires to replicate Silicon Valley. In order to explain the occurrence of this puzzling diffusion outcome, the thesis proceeds as follows. Chapter 2 introduces the VC policy area including the VC asset class, VC policies, VC policy diffusion items and VC policy diffusion intermediaries. Chapter 3 develops existing diffusion scholarship's

conceptualization about sources of diversity in the diffusion process, including the impact of multiple policy items and their varying levels of specificity. I also further delineate the hypothesized impact that the four policy diffusion mechanisms are expected to have on policy choices. Then Chapter 4 develops hypotheses for the domestic sources of policy variance in East Asia. The analytical framework developed in Chapter 4 focuses on the Weyland-inspired use of economic management norms in shaping bounded learning processes, and also delineates the formal institutions and economic structures of each state.

Chapters 5, 6, 7, and 8 examine the sources of VC policy choices in Hong Kong, Taiwan, Singapore and Vietnam. The case study chapters are analytically guided accounts of how specific elements of the policy diffusion process impact each state's unique VC policy choice. Though the same factors are examined in each case study, the relative weight of discussion for the factors varies according to the role that the factors play in each case. As an example, if the coercion mechanism was not found to be at work in a case, I do not deliberate over why it was not present. Instead, the case study chapters present the factors that matter most in each case. Chapter 9 examines the case study findings by comparing results and identifying themes across the empirical investigations. Chapter 10 concludes the thesis by applying the findings to larger IPE debates and outlining areas for further bounded rationality theory development and empirical research.

## 2. VC Policy

### 2.1 Venture Capital: History and Macroeconomic Importance

The working definition of VC in this thesis is “financial capital provided to start-up companies (“start-ups”) with high growth potential in exchange for equity (e.g. preferred stock) or equity-related stakes.” Within the capital markets sector, VC is a subset of the alternative investment class of “private equity,” which refers to investments in companies that are not publicly traded (e.g. not listed on a stock exchange). VC constitutes a specific form of private equity, as it only includes investments in start-ups that often have small revenues and even negative profitability. In this way, VC managers are incentivized to invest in high-risk start-ups because of the potential for exponential returns as the start-up grows. Though VC investments have the potential for producing outstanding returns, VC is a risk-laden asset class given the lack of collateral,<sup>25</sup> the illiquid nature of the investments<sup>26</sup> and start-ups’ high failure rates. The early investment stages that VC managers participate in range from the Series A Round (which is effectively the investment stage after friends and family and angel investments) through to later stages of growth capital (which constitutes more mature companies seeking funding to expand their product line, geographic reach, etc.). Below, Table 2.1 outlines the various stages of start-up funding and how VC investments fit into the spectrum:

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<sup>25</sup> What makes start-up equity-based investments even more risky is that there is little or no collateral provided by the start-up to their investors should they fail. In contrast, when banks make asset-based loans, such as mortgages, they are able to take ownership of the house (the asset) and sell it to help recoup their losses. In VC investments there is no such collateral available to VC managers so they are therefore more susceptible to total losses.

<sup>26</sup> VC investments are illiquid, and therefore patient forms of investment, as they typically take at least five (maybe ten) years to mature so investors do not have public ways to liquidate (sell or cash out) of their investments over this time period (they could try to sell their stake to another private investor or back to the company management). Because of the long holding period, VC has ‘patient capital’ characteristics even though VC is focused on high-risk innovation that is more associated with impatient capital (e.g. stock market centric systems) (see Cumming, 2010: 306 for further discussion of the patient capital nature of VC investments).



**Table 2.1: Early-Stage Funding**

Financing Stage	Period (years)	Risk level	Activity to be financed	Typical Investor
Initial financing / Seed	7-10	Extreme	For supporting an idea or R&D for product development	Friends, family, government grants and business angels
Start up (Seed Round)	5-9	Very high	Initializing operations or developing prototypes	Angel, government grants, seed funds
First stage (A Round)	3-7	High	Start commercial production and marketing	VC Managers
Second stage (B Round)	3-5	Medium to High	Expand market & growing working capital need	VC Managers
Later stage (Growth Capital)	1-3	Medium	Market expansion, acquisition & product development	Private Equity (or follow on rounds from VC Managers)
Buy out-in / Mezzanine / IPO	1-3	Low to Medium	Acquisition financing	Multi-national companies, private equity, and IPOs

*Source: MBA Knowledge Base*

In terms of the sectors in which VC managers invest, VC funds typically invest in technology, healthcare and biomedical start-ups. As an illustration, as of May 2012, the top sectors in terms of VC deals were as follows: internet 27%, healthcare 18%, software and related 14%, clean technology 9%, other information technology 7%, and telecoms and media 7% (Kenyon, 2012: 6). As this shows, VC managers primarily invest in technology-related, early-stage start-ups.

Facebook provides an illustrative example of both the high risks that VC managers take when investing in high technology start-ups, and the huge returns they can earn when their investment is successful. Shortly after Mark Zuckerberg came up with the idea of an online yearbook at Harvard, his newly formed company, Facebook, needed capital to hire staff, buy

servers, and further develop the technology. As a result, the Facebook team sought early-stage funding. In 2004 they received investment from angel investor Peter Thiel (a PayPal co-founder) of USD 500k. Then a year later (in 2005) Accel Partners (a Silicon Valley-based VC manager) invested USD 12.7 million based on a USD 100 million valuation for the high-growth social network start-up (VentureBeat, 2012). The year that Accel invested was not a profitable one for Facebook. In fact, the company took a USD 3.6 million loss in 2005.

Accel's investment in a company making a loss exemplifies the early-stage, high-risk nature of VC managers' investments in start-ups: VC funds provide significant sums of capital in exchange for equity, even when the company is not profitable, in the hopes that it will see exponential growth. Said another way, Accel's investment of USD 12.7 million in Facebook bought them less than a 15% ownership stake in a company operating at a loss. Obviously this investment represents a large amount of money given to a start-up company that may have failed, which could have resulted in Accel's USD 12.7 million investment in Facebook vanishing into zero. But, in this case, within five years of their investment, Accel Partners sold an estimated one fifth of their Facebook equity at a USD 35 billion valuation – earning Accel a 350 times return given that their 2005 investment had been based upon a USD 100 million valuation (Arrington, 2010).

Of course, not all the start-ups that VC managers invest in achieve outstanding returns on par with Accel's investment in Facebook. Instead, VC managers diversify their portfolios of companies,<sup>27</sup> expecting approximately 10% of the start-ups they invest in to outperform.<sup>28</sup> To help increase their odds of success, VC managers reduce the information asymmetry inherent in private company investment by conducting extensive research on any company in which they would invest.

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<sup>27</sup> The start-ups that VC firms are invested in are called “portfolio companies.” The singular of the term is used to refer to a specific company (portfolio company) and the terms “portfolio” or “portfolio of companies” are used to refer to the set of companies in which a VC manager is invested in.

<sup>28</sup> The performance expectation in the VC industry is that one in ten investments produce very high returns, four out of ten produce moderate returns, and others produce negative returns or collapse completely. Outperformance in VC terms is typically thought of a five times return on investment.

Before they invest, VC managers conduct due diligence on many start-ups. In fact, VC managers on average invest in only 1% of all the start-ups they have received business plans from (Fenn, Liang, and Prowse, 1995). Then, after investing, VC managers closely monitor, provide expertise and make introductions for their portfolio companies. Though VC managers are highly selective and provide operational support to the start-ups they invest in, there is no guarantee that even 10% of their portfolio companies will outperform. Given the risky nature of VC investing, VC managers take significant equity stakes in the start-ups they invest in, averaging 30% ownership stakes and often requiring seats on the start-ups' board of directors (Gompers and Lerner, 1999). In summary, VC investments are high-risk as VC managers make long-term, illiquid investments in start-ups that may fail, but in exchange VC funds take significant equity ownership stakes in promising, early-stage start-ups that may produce exceptional returns.

The formation of the first professional VC management firms first took place in the US and the UK around the time of WWII. The two entities most often cited as the first VC managers were in the United States: the American Research and Development Corporation (“ARD”) and J.H. Whitney and Company (Lerner, 2009: 9-12). On the other side of the Atlantic Ocean, in 1945, a VC investment firm called 3i was formed by the British government with GBP 15 million in capital. These American and British pioneer VC entities represent the first time that the financial support of start-ups shifted out of the hands of high-net worth individuals (what we would today call “business angels”<sup>29</sup>) and into organized investment management businesses. Following in the footsteps of those early VC management firms, in 1958, Draper, Gaither, and Anderson launched the first fund that was LP structured (Gompers & Lerner, 1999: 7). The LP structure then quickly became the Anglo-American standard regulatory structure for VC funds. By the 1980s the VC industry had grown as it had performed remarkably well in the United States. Despite 3i's success, the UK VC

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<sup>29</sup> Business angels are private, individual investors who invest in start-up companies. The amount of money that angels provide to start-ups is typically less than VC managers, and typically at an earlier stage of investment, as illustrated in Table 2.1.

market did not grow at the extraordinary rate as the American VC industry based in Silicon Valley.

Since then, the VC market has grown from a cottage industry of a few hundred million to an industry with AuM of USD 100 billion across more than 500 funds by 2000 (Lerner, 2002). Despite the VC industry's growth, its AuM is still relatively small in terms of global asset classes. For comparisons sake, at the end of 2012 the global hedge fund industry had nearly USD 2 trillion AuM (BarclayHedge, 2012) and sovereign wealth funds managed more than USD 5 trillion (SWF Institute, 2012). Despite its small stature, the VC industry is said to have a large, positive impact on economic activity (OECD, 1997). This sentiment is supported by the disproportionately large impact of VC investment on the American economy. More specifically, US-based VC AuM, which only accounts for 0.2% of US GDP, is said to have financed 21% of American GDP (NVCA, 2011).

Spectacular returns earned in cases like Accel's investment in Facebook, or Kleiner Perkins Caufield & Byers' investment in Google and one of ARD's investments that turned USD 50,000 into USD 350 million, have brought significant attention to the VC asset class. In addition, some of today's most ubiquitous global companies received VC support while still in the start-up stage. These include Facebook, Google and Genentech, which were all aided by VC financing, network introductions and operational expertise (Lerner, 2009: 28). As mentioned on page 14, as predecessors of these success stories achieved unprecedented IPO valuations, the VC market's profile has grown as a result of these highly successful "exits."<sup>30</sup> Despite these successes, the VC industry's preeminent think tank, the Kauffman Foundation, published a 2012 report demonstrating that for the last twenty years the average VC fund has failed to even return investors' money after fees are accounted for (Malcahy, *et al*, 2012: 3-4). In this way, the great interest in the VC asset class has been a function of the perceived value that investors and policymakers have given to initial success and headline returns (like Accel's return on their Facebook investment) rather than

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<sup>30</sup> An "exit" is the way in which the VC investor gets out of an investment. Exits often come via IPOs or strategic acquisitions, where the VC funds' ownership is bought by another investor.

rational analyses of the overall performance of the asset class.

VC remained a predominantly American industry through the 1990s (Doidge, *et al*, 2011), but VC investments and high-technology firms' IPO activity levels have become increasingly international (Aylward, 1998). The reduction in the American dominance of the VC industry has come as international VC markets have been growing at an average annual growth rate of 5% (Ha, 2009). As a result, through 2008, 70% of the VC industry's funding activity had taken place in North America, but by 2012 that percentage dropped to 61% (Kenyon, 2012: 11). As further evidence of the internationalization of the VC industry, the largest VC market per capita has been Israel (Senor and Singer, 2009) and key VC hubs now include China and India (Kenyon, 2012). Speaking to the scale of these key VC hubs outside the US, China-based VC managers raised USD 5.4 billion in AuM in 2010 alone (BusinessWire, 2011). The growth of VC markets around the globe has been the result of a rise in cross-border investments as Western investors seek investment opportunities in high-growth markets, but also the product of the deployment of VC policies across a number of states.

The VC policies that have helped facilitate the internationalization of the VC industry have been motivated by policymakers' beliefs about the VC industry's macroeconomic importance. More specifically, the VC industry has been purported to drive innovation, employment and economic growth through the financing and operational expertise that VC managers' invest in start-ups (NVCA, 2011; Lerner, 2009). The macroeconomic importance of VC industries can be broken down into three categories. The first is policymakers' desire to fill the "equity gap" that early-stage high-technology start-ups face. The term "equity gap" (or funding gap) refers to the (perceived) inability of early-stage start-ups to find funding, which results in an insufficient amount of risk

capital available for entrepreneurs (OECD, 1997).<sup>31</sup> The second category includes the positive externalities of VC investments on innovation, private sector research and development (“R&D”) expenditure, job creation, etc. (OECD, 1996). VC has been linked with innovation and economic growth given its investment in SMEs in the technology sector (Kortum and Lerner, 2000; European Commission, 1995). The third macroeconomic contribution of VC is the non-financial benefit that VC investment activity brings, such as industry-specific operational expertise and professional networks with companies and investors abroad. Rather than a bank simply giving the start-up money, VC managers are believed to be “smart money” because of their technology savvy, product development expertise and rolodex of potential customers and acquirers.

## 2.2 VC Policy Elements<sup>32</sup>

Silicon Valley’s VC industry growth came from a generally enabling, rather than VC-market-specific, regulatory environment. However, as Silicon Valley VC policies have diffused there have been new policy elements introduced by adopters: funding and taxation.<sup>33</sup> These instruments each offer several opportunities for variance (OECD, 1997: 20). Figure 2.1 provides an illustration of the three VC policy elements, then the ways in which VC policy instruments vary are discussed in the following paragraphs that address each VC policy element in turn:

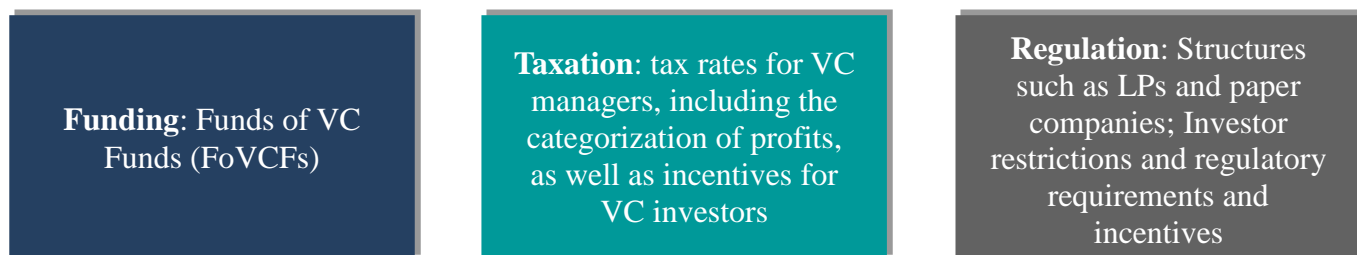
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<sup>31</sup> The shortage of VC funds, and therefore the existence of an equity gap, is debated. Several studies give evidence to the contrary, such as the European Central Bank’s January 2005 working paper (#430).

<sup>32</sup> As discussed by Avnimelech and Teubal (2008), I acknowledge that VC policy elements do not operate in a vacuum. Instead, they are part of a three-phase innovation and technology policy life cycle in which business sector R&D and innovation support is a necessary prior to VC policy. Avnimelech and Teubal (2008) argue that business sector support is Phase 1 and VC policy is Phase 3.

<sup>33</sup> The OECD (1997: 4) outlined their categories for VC policy: direct supply of capital to firms, financial incentives to VC funds or firms and regulations. The delineation of VC policy elements here builds on these existing categories, just adding the taxation component.

*Figure 2.1: Three VC Policy Elements*



The VC policy environment in Silicon Valley consisted of a favorable regulatory framework for VC managers to operate in. The legal structure employed by Silicon Valley VC managers is the LP structure. The LP structure reduces the potential liability of the VC funds' managers and investors by ensuring that their personal assets are not liable should the fund management company (and its portfolio companies) encounter financial difficulty. In addition, LP structures correspond to capital gains tax treatment in many jurisdictions, which means that VC funds' profits<sup>34</sup> are subject to a lower tax rate than the (typically) higher corporate tax rate. Finally, LP structures also allow for the distribution of equity in underlying investments across the VC fund management team and its employees.

While the LP structure has been employed in Silicon Valley and numerous international jurisdictions, other legal structures, such as company structures, have been deployed instead of the LP structure in states such as Japan<sup>35</sup> and Taiwan. Company structures, in contrast to the LP structure, do not shield the personal assets of investors or managers, do not correspond to a capital gains tax rate and do not endow employees of VC management firms with equity in the underlying investments. However, only differentiating between these two different types of structures (the LP and the paper company) does not capture all the types of regulatory structures that have been

<sup>34</sup> The VC industry refers to "profits" as "carry" so in this thesis, the terms carry and profits will be used interchangeably to describe the returns that VC funds make.

<sup>35</sup> Japanese regulation did not follow the LP structure until 1998 (via the Limited Partnership Act for Venture Investment in 1998) (Walter and Zhang, 2012: 144). Prior to the LP structure being available, Japanese investors in VC potentially risked their personal assets given the lack of a limited liability structure (Liang and Peng, 2010).

utilized by VC managers as modified LP structures have been deployed across numerous states. For example, in 2002 Australia deployed an adaptation of the LP structure. In an effort to limit the potential for foreign firms to exploit the LP structure's favorable tax treatment, Australian policymakers adjusted the LP structure to require that "each company backed by a venture partnership have at least half its assets in Australia" (Lerner, 2009: 158).

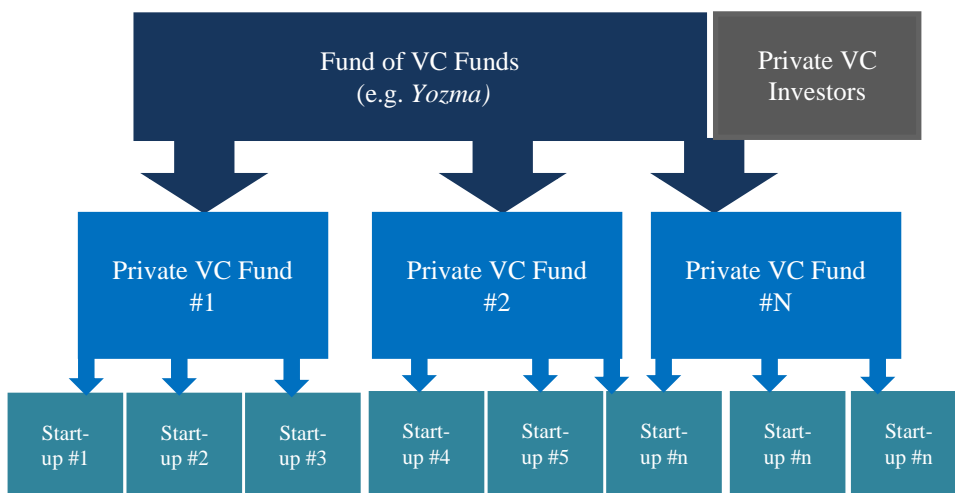
In addition to the legal structure, there are other restrictions and incentives that constitute the regulatory element of VC policies. Direct restrictions on VC investment activity relate to the types of investors (e.g. pension funds) who are able to invest in VC funds given the high risk nature of the asset class (OECD, 1997). The first pro-VC market regulation in this regard was the US' reinterpretation of its Employment Retirement Income Security Act ("ERISA") in 1979 that allowed pension funds to invest in VC funds and helped catapult Silicon Valley VC investment activity. In contrast, in some states, ERISA-like regulations have not been enacted and so restrictions on the types of VC investors remain. There have also been regulatory tools used to incentivize VC market activity. These regulatory tools include Singapore's offering of residency in exchange for foreigners' investment in domestic VC funds. Finally, indirect restrictions on VC activity include caps on foreign ownership of domestic firms, rules on when companies are eligible to list on a public exchange (e.g. five years of continuous profitability or a minimum market capitalization), and the white space in which private companies can operate.

The VC policy funding element includes various versions of the FoVCFs structure. FoVCFs allocate investment capital to VC managers, the rationale being that there is a private market failure, because private investors (e.g. pension funds, insurance companies, and high net worth individuals) are not allocating sufficient amounts. FoVCFs can invest in VC funds alone, or as is most often done, alongside private investors. In the case when FoVCFs invest alongside private investors, the government requires that a certain amount of funding to come from private investors before the



government money is available to the VC manager (as in Figure 2.2 below). By requiring private sector investment, the FoVCFs incentivize VC managers to raise capital from private investors instead of relying on government FoVCF money. This design aims to decrease future dependence on state funding by ensuring that the VC managers are competitive enough to raise funding from private investors. Figure 2.2 illustrates how the public FoVCF structure works:

**Figure 2.2: FoVCF Structure**



Public FoVCFs have varied in four main ways in their deployments thus far. They have differed according to their repayment terms, duration, international involvement and AuM sizes. First, FoVCFs vary according to their repayment terms. FoVCFs have given their VC managers the option to buy out their government investors at a nominal interest rate (e.g. 5%) or as a share of the investment return (e.g. equal to the FoVCFs’ equity stake). Second, FoVCFs have varied in their duration. In this way, FoVCFs have been deployed with set end dates (such as the five years given to Israel’s Yozma Fund) and have also been structured as “evergreen funds” that do not close (such as Finland’s FoF Growth structure that reinvests exit proceeds for future investments).<sup>36</sup> Depending upon their duration, FoVCFs have been said to be a one-time jumpstart or an ongoing aid to the VC industry. Third, FoVCFs have varied in terms of their involvement of international investors. To

<sup>36</sup> For a discussion of the implications of the evergreen fund structure on the FoVCF’s incentives and performance, see Lerner (2009: 116-117).

this end, some FoVCFs have required matching funding from international investors or have given FoVCF money to international VC managers, while others are wholly focused on domestic investors and VC managers. Last but not least, FoVCFs have differed in size. The AuM of FoVCFs has ranged from less than USD 100 AuM up to the USD 1 billion FoVCFs in Russia and Singapore.

Taxation is the third and last VC policy element. Tax policy includes the ways in which VC profits are categorized for tax purposes – either as capital gains, income, corporate, or tax exempt. The VC manager tax treatment is the tax rate applied to VC funds' carry.<sup>37</sup> VC tax rates can range from zero (tax exempt), to capital gains (typically around 15%-20%), to corporate or income tax rates (that can be more than 40%). In addition to tax rates on VC funds' profits, tax policy has also included tax incentives that target VC managers' operational revenue derived from management fees. Said another way, incentives have reduced operating revenue income, not just revenues from investment activity.

Tax policies have also taken the form of credits given to VC fund investors. In this way, governments have incentivized investment in the VC asset class through tax credits, such as the UK's Enterprise Investment Scheme tax credit that has been given for start-up investments (see HMRC, 2013). The tax credit given to investors in the VC asset class has been intended to encourage private VC investment by lowering the overall risk taken on by investors by limiting their downside. An illustrative example is the Taiwanese VC tax policy, where 20% of the amount invested in Taiwanese was given as a tax rebate for individuals (from 1982) and corporations (from 1991), so investors would only potentially lose 80 cents on the dollar they invested (Kenney, *et al*, 2002). Tax credits have also been offered as compensation for investors losses in start-up investments. This form of tax credit was offered in Singapore as a way for the government to help mitigate private investors' losses in start-ups.

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<sup>37</sup> "Carry" is the VC industry term for profits made on exits from investments.

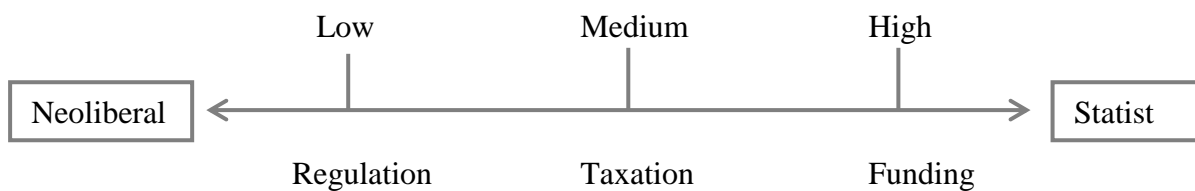
To aid the comparability of the VC policy elements, the three elements of the VC policy area are conceptualized to correspond to different levels of state intervention: regulation (low), taxation (medium) and funding (high). Of the three components, the lowest level of state intervention is regulation. The “low” categorization of regulatory policies is due to this industrial policy instrument being most closely aligned with the state as a provider of rules that enable markets to operate. Said another way, VC market regulations engender (or undermine) private sector activity by providing an institutional framework that enables (or constrains) the constitution of a market. In this way, in the regulatory area, states are not endowing the VC industry with financial resources or otherwise directing investment activity.

The tax instrument is categorized as mid interventionist because this tool encourages VC market activity either by offering low tax rates specifically to VC managers or by extending tax credits for private investment into the VC asset class. Whereas regulation only provided the legal infrastructure, tax incentives are categorized as the medium level of intervention as they explicitly encourage and reward VC investment activity. Taxation does not constitute the state giving financial resources directly to specific VC managers; tax rates and tax credits consist of the state indirectly conceding financial revenue (tax revenue) to encourage VC investment and fundraising activity. As a result, taxation steers market activity towards this specific sector whereas market regulations simply provide a platform on which firms can operate.

The FoVCF policy instrument constitutes the top end of the interventionist spectrum as the state is giving money directly to specific VC managers. In doing so, government VC funding is categorized as a “high” interventionist approach as the state directly allocates capital to specific firms and therefore risks crowding out private sector investment. In this way, FoVCFs grant policymakers the power and budget to pick winners, rather than just fostering an enabling

environment in which the private sector decides where to allocate capital. It is important to note that although the state does pick specific VC managers to invest in, FoVCF investment in several VC managers is choosing the seemingly most capable firms in an attempt to support the sector, not to build national champion VC management firms. Public FoVCFs are highly interventionist, but not state-promoted national champions nor state-owned enterprises, which would be an even higher form of market intervention. In sum, the three VC policy elements represent the following positions on a spectrum of government intervention:

**Figure 2.3:** *VC Policy Elements on a Neoliberal to Statist Continuum*



Regulation is the low category in Figure 2.3 as the legal and regulatory environment broadly enables or constrains private sector activity. Taxation is categorized as more interventionist, and therefore at the medium position, as tax treatment and credits promotes or discourages industry-specific forms of private investment. Funding, particularly FoVCFs, is placed at the high end of the spectrum as this policy instrument consists of the State allocating to specific VC managers.

### 2.3 VC Policy Diffusion Items

The original VC policy model is the policy context responsible for helping to aid Silicon Valley’s success.<sup>38</sup> As mentioned earlier in this chapter, the Silicon Valley VC market is said to be

<sup>38</sup> The source model is intentionally referred to as Silicon Valley, and not the American model. This is because there were different approaches to supporting the VC markets across American states, so a singular American model did not exist. In addition, empirical work revealed that policymakers and members of the epistemic community in this policy area have specifically referred to the US Silicon Valley, and not the entire US system.

the product of neoliberal, pro-market regulations and the confluence of a number of factors.<sup>39</sup>

Rather than a specific set of policies, observers have pointed to the confluence of a number of factors; American research and development spending, the presence of top universities, the co-location of large technology firms and start-ups, a positive regulatory environment, and access to exits via stock market IPOs (Avnimelech and Teubal, 2004). In this way, though Silicon Valley has been a highly successful technology start-up ecosystem that others want to replicate, its success has not been synonymous with specific VC policies.

To this end, the Silicon Valley model has not consisted of a FoVCF, tax breaks or other specific VC industry policy tools. The American government has directed money to its regional VC markets via many American cities and states launching their own VC funds (see Lerner, 2009: 138-142 for examples). However, these FoVCFs have not targeted Silicon Valley. The funding program that tangentially aided the success of the Silicon Valley VC market has been the US Small Business Administration's 1958 Small Business Investment Company program that gave funding and incentives to SMEs. Thus, though direct (state-level FoVCFs) and indirect funding (i.e. the SBIC program) have been deployed by the US government to support SMEs, the Silicon Valley VC market has not been the target, or product, of specific government funding or tax breaks.

Instead, regulations such as the LP structure and the 1979 relaxing of the national ERISA Prudent Man rule have contributed to the growth of the American VC market. But, again, these regulations were not focused on the Silicon Valley region specifically (Avnimelech and Teubal, 2004). Further, they have not alone been identified as the precise policy tools that drove Silicon Valley's VC industry success. With that said, the US Department of Labor's 1979 national ERISA

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<sup>39</sup> Some researchers have pointed out the interventionist government role in Silicon Valley, particularly the Department of Defense contracts, the launch of the Small Business Investment Company program, etc. In this way, Lerner (2009: 41) laments that "Silicon Valley was far from a creation of unfettered capitalism" as during World War II public subsidies helped "catalyze its growth and shaped its critical features." With this said, the intervention that Lerner and other scholars point to, were government military contracts and national programs to boost entrepreneurship; the efforts were not specifically focused on building Silicon Valley as a hub of entrepreneurial and VC activities.

rule reinterpretation, in particular, sparked private investment in VC as it allowed American pension funds, university endowments and foundations to invest in high risk asset classes including VC (Lerner, 2009: 39; Gompers and Lerner, 1999). The LP structure, from a legal perspective, has meant that VC investors are only liable for their share of the investment in the VC fund, not for any further damages or losses resulting from the portfolio company operations. Another major benefit of the LP structure is from a tax perspective, as the carried interest (“carry” or the profit earned) of the VC fund is transparent, or passed through to its investors, instead of being ‘double taxed’ on the management company level. As a result, returns on a VC investment in the US are taxed as capital gains (15 to 20%), instead of the higher income tax rate of 30 to 45%.

In light of the non-specific nature of the Silicon Valley VC policy environment, Silicon Valley has been an idea that other states want to replicate, but has not served as a specific VC policy blueprint to follow. To be sure, Silicon Valley, which so many states have strived to replicate, achieved its success due to a broadly enabling environment. There was no US government funding for the Silicon Valley VC market, and the ERISA reinterpretation, capital gains taxation rates and LP structure were generic, non-VC specific American measures. The Silicon Valley VC cluster has not prospered due to government policy targeting the VC market in northern California’s Silicon Valley. As a result, the Silicon Valley diffusion item’s level of specificity is low. The vague nature of the Silicon Valley policy environment has meant that there has been plenty of room for interpretation on which elements of its context drove its success.

Unlike the broadly enabling policies associated with Silicon Valley, subsequent VC adopter states have deployed policies that specifically seek to build a local VC market. The two VC policy innovations cited as models for East Asian policymakers interviewed for this thesis were: Taiwan’s 20% tax incentive in 1983 and Israel’s 1993 Yozma (*Hebrew*: initiative) FoVCF. Over time, these more specific policy items have been diffused as blueprints for how countries can create local

versions of Silicon Valley. In doing so, they have expanded the menu of policy diffusion items available to VC policy adopters.

The first state outside the US to create a VC policy innovation, Taiwan, launched a tax credit in 1983 as the Ministry of Finance issued the Regulations for the Administration of Venture Capital Enterprises. As will be more fully explored in Chapter 5, Taiwan's Minister without Portfolio, K.T. Li, and the then current Minister of Finance, implemented the tax credit shortly after learning about VC while on a study trip to the US and Japan. More specifically, the Taiwanese policymakers chose to deploy a 20% tax deduction to first-time investors in VC, as long as they maintained their high-tech VC investment for a minimum of two years (TVCA, 2011). In addition, tax exemptions were also offered for earnings from VC investments that were reinvested (Koh & Wong, 2005: 26). Taiwanese policymakers were innovators in their use of tax credits to spark VC market activity as such efforts were not part of the source Silicon Valley policy environment. The Taiwanese VC tax innovation has diffused as awareness of the tax incentive's role in the creation of Asia's most active VC market, centered in Taipei and Hsinchu Science Park, has spread.

The second VC policy innovation that has become a VC policy diffusion item is Israel's FoVCF.<sup>40</sup> Given their success, Israel has been named as a policy model for a number of VC policy adopters. In June 1992, Israel's Office of Chief Scientist created the Yozma Venture Capital Ltd. (which launched in 1993) with USD 100 million AuM (Lerner, 2009: 155-156). Yozma was led by Yigal Erlich, then Israel's Chief Scientist, to build an international and private investor-linked VC market. Over the next five years, Yozma invested via ten drop-down funds and also made direct investments in start-up companies. The Yozma fund required that the local Israeli VC managers had foreign partners (i.e. Walden, an American PE firm and Kyocera in Japan) before they were eligible

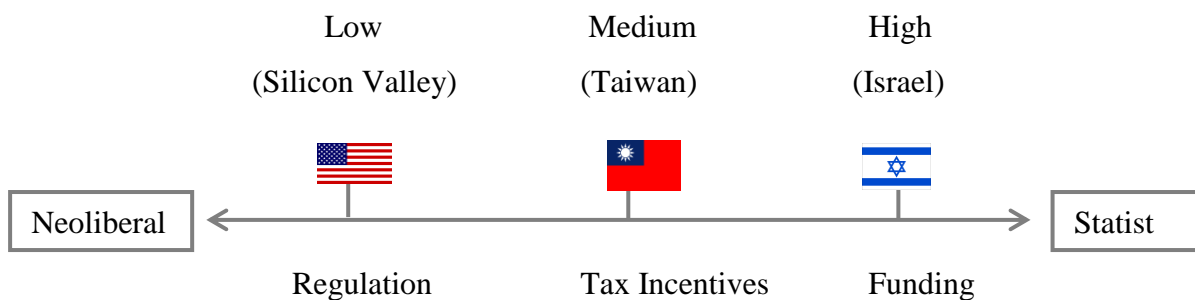
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<sup>40</sup> Here, it should first be said that although the FoVCF structure had been deployed before Israel's Yozma, its previous attempts had not been nearly as effective in sparking local VC industry activity. Thus, though the FoVCF was not a new instrument, Israel has been perceived as an innovator due to their successful design and implementation of the FoVCF. See Rogers, 1995 for a discussion of why this perception of novelty, rather than necessarily pure policy innovation, is what matters.

to receive the money in an effort to “bring foreign venture capitalists’ investment expertise and network of contacts to Israel” (Lerner, 2009: 156). The Yozma Fund was privatized in 1998<sup>41</sup> and Yozma offered its private investors to buy out the Yozma investment at cost plus a nominal interest rate and a 5-7% share in the future profits of portfolio company exits (Mathonet and Meyer, 2007: 268; Lerner, 2009: 156; (Avnimelach and Teubal, 2004). Following the Yozma Fund’s kick start, the Israeli VC market became the second biggest VC market in the world on an absolute basis and the world’s largest on a per capita basis (Baygan, 2003).

In sum, Silicon Valley has served as the source VC policy environment and Taiwan and Israel innovated new VC specific policy tools in their attempt to create their local Silicon Valley-like VC cluster. Other states have gleaned information on all three VC policy items in efforts to create local Silicon Valleys. Together Silicon Valley’s regulatory policy environment, Taiwan’s taxation and Israel’s funding policy items fit on this neoliberal to statist continuum as low, medium and high, respectively.

**Figure 2.4:** VC Policy Items on a Neoliberal to Statist Continuum



As depicted in Figure 2.4, the Silicon Valley VC policy environment fits on this continuum as the Low indicator (see American flag above). The later, more interventionist policy innovations, the

<sup>41</sup> The Yozma Fund was unique in that it was designed to be discontinued within five years, so as not to become an subsidy to the VC market. As detailed as ways that FoVCFs can vary, some states’ FoVCFs, such as Finland’s FoF Growth, have annual budgets for investment and also reinvest all exit proceeds. In doing so, these evergreen funds continue to support the VC industry rather than provide a jump start at inception.



Taiwanese tax credit and the Israeli FoVCF, involve the state conceding revenue or allocating funding to the VC market, respectively. Thus, these policy items are placed increasingly towards the statist end of the spectrum. Together, the possible VC policy choices range from being centered on regulation as the Silicon Valley model did, to ratcheting up the statist nature of involvement by offering tax incentives (Medium) or FoVCFs (High).

## 2.4. VC Policy Diffusion Intermediaries

Now I briefly turn to identifying the international actors (referred to here as “intermediaries”<sup>42</sup>) that disseminate VC policy diffusion. This is done in the same way that policy diffusion – especially policy transfer – scholars have mapped out “who is involved in policy transfer” (see Dolowitz and Marsh, 2000: 9). In Dolowitz and Marsh (2000:10) terminology, the actors involved in diffusion include: elected officials, political parties, civil servants, pressure groups, policy entrepreneurs and experts, transnational corporations, think tanks, supra-national governmental and nongovernmental institutions and consultants. In the same vein, here the actors involved in the VC policy arena primarily include the IOs, source items’ policymakers, VC industry associations, VC managers and high-technology industry participants. Given the East Asia focus of this research project, the impact of personal networks (*guanxi* - Chinese for “networks”) is specifically examined. Here, *guanxi* refers to the personal networks within states, as well as across, typically with members of the VC, or ICT, sector.

These intermediaries propel diffusion from the points of origin to the points of adoption. In this way, they may impact how policy information is framed, the level of detail that the receiving states have access to, etc. For example, Israeli policymakers, including the former Chief Scientist who

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<sup>42</sup> Intermediaries are also called “social agents” (Solingen, 2012), “policy entrepreneurs” (Dolowitz and Marsh, 2000) and “carriers” (Scott, 2003).

designed and managed the Yozma FoVCF, have directly shared policy information and consulted to several states. In fact, information on the Yozma model was transferred so directly that the founder of Yozma, serving as a consultant, sat with New Zealand policymakers to create the New Zealand Venture Investment Fund and even choose the FoVCF's manager (Author Interview, Tel Aviv, 6 October 2013). In so doing, intermediaries such as Yigal Ehrlich have shaped the (positive) perception of policy items by sharing data on the policy item's precise structure and performance. Also, they have directly advised other policymakers on how the policy item should be implemented in their local context. To be sure, the intermediaries need identifying in each case as they have shaped the level of detail and perception of VC policy choices at points of adoption.

IOs diffuse VC policy information via their funding, forums and policy advice (see Holzinger *et al.*, 2008; Sharman, 2011). The IOs that have been involved in VC policy diffusion are the World Bank ("WB"), the WB Group's private sector-focused entities: the International Finance Corporation ("IFC") and InfoDev, the OECD, the International Monetary Fund ("IMF"), the United Nations ("UN"), the Asian Development Bank ("ADB"), APEC and the IADB. These IOs' policy papers, financing and consulting have spread VC policy information across borders. More specifically, the World Bank, the OECD and the IMF began lamenting the benefits of government support of VC markets in the 1990s (see, for example, the OECD 1996 report on 'Venture Capital and Innovation' as well as the 1997 UNCTAD paper on 'The Experiences of Country Funds and Venture Capital Funds in Developing Countries').<sup>43</sup> Some IOs have even gone further than giving advice on VC policies. To this end, in 1994 the IADB launched a regional FoVCF to build up VC markets across Latin America (in Argentina, Chile and Mexico, in particular) and the European Union has managed the European Investment Fund. In total, IOs have been intermediaries in VC policy diffusion as they have distributed policy information and they have even funded FoVCFs

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<sup>43</sup> IO rhetoric around VC's impact on innovation, entrepreneurship and economic growth followed the late 1980s shift of the World Bank towards promoting private sector development. Prior to that time, private sector funding was not given for fear of competing with or crowding with existing activity (Kogut and Macpherson, 2008).

(going beyond just being an intermediary).

High-technology industry participants, consultants, VC investors and academics constituted epistemic communities (and *guanxi*) that diffused VC policy information across localities. The VC policy-specific epistemic community (see Haas, 1992) has consisted of consulting firms, VC industry associations, academics, investors, entrepreneurs and high-technology sector executives who share knowledge of VC policy best practices and pitfalls. Members of this epistemic community have presented their VC policy evidence and suggestions to policymakers in numerous states. However, it is important to remember that the epistemic community's influence, in VC policy and other issue areas, is "dependent on local political conditions" (Kogut and Macpherson, 2008: 107). More specifically, the receptiveness of policymakers to the involvement of private sector actors in the policymaking process is expected to empower or undermine the power of *guanxi*. Here, we assume that more neoliberal states (the Nightwatch-man State and the Private Sector Promoter) are more inclined to leverage *guanxi* for VC policy information than the more state-led types (the Financier and Director and Command Economy).

### **3. Policy Diffusion Literature Review**

#### **3.1. Introduction**

This chapter examines how state-of-the-art diffusion research expects the policy diffusion process to lead to convergence, transformation and variation. This is achieved by reviewing existing diffusion scholarship and then outlining hypotheses for how the varying levels of specificity of multiple diffusion items and the diffusion mechanisms contribute to varying policy choices. My literature review builds on a new, but growing, area within policy diffusion scholarship – the examination of the means by which diffusion leads to only degrees of convergence rather than complete convergence.

The state-of-the-art diffusion research examines sources of degrees of convergence. In doing so, these studies show that, as they diffuse, norms, ideas, and practices often change in form and content. Painter and Yeo (2011) examine what they call the ‘transmutation’ of a global model of telecom regulation as it diffused to China and Vietnam. In a similar way, Acharya (2004) reveals how international norms were localized as they diffused into ASEAN institutional context. Also, Radelli (2005) found that different “institutional riverbeds” led to incomplete convergence on the American regulatory impact assessment when it diffused across European Union member states. Pointing to the impact of multiple diffusion items on policy choices, Falkner and Gupta (2009) argue that the existence of two competing models of genetically modified organism regulatory policies led to diversity in the policies adopted in developing countries.

As a starting point for my literature review, I discuss how International Relations research has used several terms to describe similar, but distinct, phenomena: diffusion, convergence, transfer,

transmutation, transformative approaches and isomorphism. Given the conceptual overlap in this area, before going any further, these terms are defined in the context of this thesis. Diffusion has been defined as “the spread of something within a social system” (Strang & Soule, 1998: 266) and, more specifically, as “the *process* in which an innovation is communicated through certain channels over time among the members of a social system” (Rogers, 1995: 5; Italics added for emphasis). In this thesis, diffusion refers to the process of policy ideas and instruments crossing borders. In this way, diffusion describes the spread of policy information that *may or may not* result in certain policy choices.

Policy convergence, transfer and isomorphism, on the other hand, are more specific terms that describe outcomes of the diffusion process characterized by greater degrees of similarity. Policy convergence is evidenced by “narrowing gaps” in national policies over time (Drezner, 2007: 11). In this way, convergence refers only to increased similarities in policy forms across an adopting universe in a temporal context. Another term used here, policy transfer, is defined as “the process by which knowledge about policies, administrative arrangements, institutions and ideas in one political system (past or present),” is used in another political system (Dolowitz and Marsh, 2000: 5). In contrast to convergence, policy transfer has more of a focus on process tracing what happens between the point of origin and point of adoption. The origin to endpoint focus of policy transfer research constitutes a different lens than policy convergence, which identifies patterns across the adoption universe (Dolowitz and Sharman, 2009). The third term used in this vein is isomorphism. Unlike the others, isomorphism has been used to refer specifically to the spread of institutional or organizational designs, rather than policies (Knill, 2005: 768). To be sure, though transfer, convergence and isomorphism differ in the precise phenomenon they describe, they all portray an increasing similarity in choices as the result of the spread of information. Diffusion, on the other hand, describes the process of the information being transmitted internationally without describing the result of the process.

In addition to the terms used to describe the replication of diffusion items elsewhere, there are also terms used to describe changes to the diffusion item as the result of policy diffusion processes. These terms are transmutation and transformative approaches (Yeo and Painter, 2011). Transmutation and transformation both describe processes in which there is adaption to the diffusion item between the point of origin and the point of adoption. As such, these terms speak to a singular diffusion between two entities, as policy transfer also did, rather than broad patterns across adopting populations. However, when using these terms, scholars specifically refer to an outcome characterized by adaptation and differences rather than increasing similarity.

Policy transfer literature has also developed terminology for specifying the forms and degrees of convergence that encompasses these different results of the transfer process. According to Knill (2005: 769), the two most common forms of convergence studied in the policy diffusion literature are (1) increasing similarities between the point of origin and the point of adoption and (2) increasing similarities amongst adopter populations. These are what he calls  $\delta$ - and  $\sigma$ - convergence, respectively.<sup>44</sup> Policy transfer literature delineates the range of convergent outcomes stemming from the diffusion from point of origin to point of adoption. Rose's (1991) schema distinguishes between duplication, adaption, hybridization, and synthesis.<sup>45</sup> Duplication describes diffusion processes that essentially replicate the source model, thus leading to complete convergence. In contrast, adaption (i.e. the selective employment of elements of the source model), hybrid adoption (i.e. selecting components of more than one source policy), and synthesis (i.e. deployment of various elements of different models in markedly new ways) are used to describe different degrees of transformation. In addition to this spectrum, rejection has also been identified as a potential result of the diffusion

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<sup>44</sup> Besides  $\sigma$ - and  $\delta$ -convergence, Knill distinguishes two other types of convergence:  $\beta$  and  $\gamma$ : “First,  $\beta$ -convergence occurs when laggard countries catch up with leader countries over time, implying, for instance, that the former strengthen their regulatory standards more quickly and fundamentally than the latter. Second,  $\gamma$ -convergence is measured by changes of country rankings with respect to a certain policy.” (Knill, 2005: 769).

<sup>45</sup> Dolowitz and Marsh (2000: 13) also offered categories to describe the range of potential policy transfer choices. They are similar to Rose's: copying, emulation, combinations, and inspiration.

process (Acharya, 2004; Rogers, 1995:21). Rejection, or 'nondiffusion' as it is called by Weyland (2006: 16) and 'policy failure' as used by Dolowitz and Marsh (2000: 17-18), describes a situation in which actors gain knowledge of the diffusion item and actively decide not to deploy any form of the source model(s).

This literature review focuses on how and why the policy diffusion processes lead to varying degrees of convergence. As a result, here I use the term diffusion to describe the spread of policy information that may produce complete convergence, transformation, hybridization, synthesis, adaption, or rejection between the point of origin and points of adoption. In doing so, my thesis primarily examines the drivers of  $\delta$  convergence, or transformation between the point of origin and the point of adoption. Then, as a result of investigations of transformation between points of origin and individual points of adoption, it addresses the degrees of  $\sigma$  convergence that results across the adopting population.

Taking a step back from these tools for explaining diversity amongst convergence, I briefly discuss the broader policy diffusion research agenda. Diffusion tools were initially employed in IPE as scholars looked at the impact of increased capital mobility and economic competition to attract capital on the increasing similarity of national policies. In so doing, research such as that conducted by Simmons and Elkins (2004) have identified the constraining impact that the diffusion of policy ideas and structural pressures have had on policymakers. They have found that these differing pressures have resulted in a convergence towards neoliberal market policies. In this vein, diffusion scholarship has helped explain the spread of policies across numerous issue areas. These include financial liberalization and democratization (Simmons *et al*, 2008), tax rate decreases (Swank, 2008), state lottery policy (Berry and Berry, 1990), privatization (Kogut and Macpherson, 2008), regulatory regimes (Drezner, 2007; Levi-Faur, 2005), telecommunication sector regulation (Painter and Yeo, 2011), Europeanization (Börzel and Risse, 2012), environmental policies (Lenschow *et al*,

2005), and genetically modified organisms policy (Falkner and Gupta, 2009).

Over time, policy diffusion research has expanded beyond the economic competition and learning mechanisms. Now, the policy diffusion analytical toolkit leverages a broad swath of IPE frames, including realist (coercion) to liberal (competition), as well as rationalist (learning) and constructivist (emulation) strands. These mechanisms identify ideational and material, as well as structure and agent-based, elements of the diffusion process. Across the mechanisms, policy diffusion scholarship has harnessed the S-shaped curve of policy innovations to explain why and how policies diffuse within a social system (Simmons *et al*, 2008).

In doing so, IPE scholars have extended Rogers' diffusion of innovation theory that articulates the ways in which innovators, early adopters, early majority, late majority and laggards adopt innovations over time (1995: 22). According to his theory, the timing of each adopter's action is determined by their cost-benefit analysis of how the innovation may impact them. More specifically, this analysis depends upon the potential adopters' perception of the following: relative advantage, compatibility, trial-ability, observe-ability and level of complexity (Rogers, 1995: 16-17). While diffusion of innovations research is helpful in explaining the temporal aspect of policy diffusion, analytical frameworks employing these analytical tools have only initially attempted to formalize theories of how the diffusion process can spawn the spread of varied policy forms – which is where this thesis seeks to contribute to the further the development of diffusion research.

The remainder of this chapter is structured as follows. Attention is first paid to introducing the arguments around the impact of the multiple VC policy items and varying levels of specificity on policy choices. Section 3.3 then identifies how the diffusion mechanisms are expected to contribute to varying degrees of convergence. Drawing on the literature review in the early sections of the chapter, Section 3.4 distills hypotheses for how multiple diffusion items, varying levels of



specificity and the different diffusion mechanisms are expected to impact policy choices.

### **3.2. Multiple VC Policy Diffusion Items**

The number of diffusion items, and the mode by which policies are diffused, has also been casually linked to impacting the results of policy diffusion. In this way, when there is more than one model, scholars have found that there is a propensity for adopting states to vary in their policy choices. Falkner and Gupta (2009) showed this in the genetically-modified organisms area, as they found that states in the global South combined elements of the two competing models (the US and European Union regulations), and also synthesized their own approaches. In addition to the existence of competing policy modes, diffusion processes can also be “iterative” in nature. In an iterative process, there is the “adoption of policies across a number of different nations” temporally such that adopters innovate different versions of the source model, and as a result, the menu of potential versions of the policy grows over time (Dolowitz and Marsh, 2000). March (1999: 199) called this “chain mode” whereas the diffusion of a single model is the “broadcasting mode.” Said another way, an iterative policy diffusion is characterized as one in which there are additional diffusion items stemming from the original innovation.<sup>46</sup>

For iterative models the hypothesis is, particularly as time goes on, that there will be variation in policy choices. The following logic leads us to this hypothesis. The menu of policy items to choose from grows as additional diffusion items are created. With a growing number of diffusion items for adopting policymakers to choose from, adopters may come to a variety of policy choices. In this way, they may adopt one single diffusion item, adapt a diffusion item, combine existing innovations, create their own innovation or reject the diffusion items all together. If the policy area was instead characterized by just single model diffusing, then the potential for combining, or

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<sup>46</sup> Here we note that innovations only need to be “perceived as new” by individuals or units of adoption, rather than entirely new (Rogers, 1995: 475).

creating hybrids of, models would not exist.

### 3.3. Diffusion Items' Varying Levels of Specificity

Diffusion items differ in their levels of specificity, ranging from precise policy blueprints to more general styles or ideas. More precisely, scholars have defined the main dimensions of diffusion items – in order of specificity – as the overarching ideas, the instruments, and the precise settings (Hall, 1993, Lenschow *et al.*, 2005). To this end, Lenschow *et al.* (2005) provide examples of the three policy dimensions for the field of environmental governance. In their example, the overarching diffusion idea is the concept of human stewardship over nature and the diffusion instruments are governance techniques such as direct regulation, fiscal instruments or voluntary agreements. The most specific dimensions in their empirical illustration, the precise settings, are the levels of emission standards or taxes (Lenschow *et al.*, 2005: 803). In a similar way, Weyland (2006: 18) posits that principles are "*general and vague on details*" whereas a model is a "*concrete, specific blueprint*." He suggests that the Bismarckian welfare state and the Chilean-style pension system are examples of specific models. In contrast, examples of more loose principles include the notion of capital account liberalization or central bank independence (Weyland, 2006: 17).

Weyland (2006) and Lenschow *et al* (2005) hypothesize how diffusion items' varying levels of specificity impact the degree of transformation and variance across adopting states' policy choices. If the level of specificity is low, these authors argue that there will be variation in how the diffusion item translates into concrete policy language. The logic here is that the low level of specificity of principles and ideas creates room for interpretation. Said another way, items characterized by low specificity chart "an overall direction but not a specific course of action" (Weyland, 2006: 18). As a result, adopters may each decide on a different version of how to operationalize the principle. Then, even when the actors attempt to deploy local duplications of the

idea, their choices differ as they have varied understandings of what they are trying to replicate. If the diffusion item has a high level of specificity, on the other hand, then convergence on the source model becomes more likely. That is because adopters have more precise information about what to reproduce and how, and therefore there is less room for interpretation (Lenschow *et al*, 2005).

As an illustration of how the different levels of specificity impact policy choices, Weyland (2006) describes differences in the diffusion of health and pension system reforms in Latin America. In the case of the diffusion of the Chilean pension system, all of the Latin American countries studied by Weyland instituted the “core” of the Chilean model. In contrast, although some similarities could be observed, national healthcare reforms were found to be much more diverse. Weyland traces these different choices back to the fact that Chile provided a clear blueprint for pension reform, whereas no model of similar specificity existed in the area of healthcare reform (Weyland, 2006: 18-20). Following from this, in this thesis I test the hypothesis that low levels of specificity beg transformation while high diffusion item specificity drives convergence.

For the VC policy context, in Lenschow *et al* (2005) terms, the lowest level of specificity, the idea, is that policymakers believe that they should deploy VC policies in an effort to support VC markets. The notion of wanting to replicate Silicon Valley is an idea in this sense as it does not refer to one specific policy tool. The middle level of specificity, the instruments, refers to the policy tools (FoVCFs, tax incentives and regulations). The Taiwanese and Israeli models, as will be elaborated shortly, refer to specific instruments. In this way, they are more specific than the Silicon Valley policy environment. Finally, the most specific diffusion items are the specifications of the FoVCFs’ amounts of funding and repayment terms or precise tax rates and credits. VC policy elements, in Weyland (2006) categories, would similarly be as follows. Silicon Valley would best be understood as a “principle” and the later, more specific policy tools created Taiwan and Israel would be categorized as “models.”

### 3.4. Policy Diffusion Mechanisms

As background, the four diffusion mechanisms – competition, coercion, learning, and emulation – have been identified as the primary ways in which policies and organizational structures are diffused across states, international and transnational organizations (Shipan & Volden, 2008). Some policy diffusion research has clearly pitted policy diffusion mechanisms against each other, such as Meseguer’s (2006) analysis of the spread of neoliberal policies, which specifically tested for evidence of learning, imitation and coercion. Research projects that delineate diffusion mechanisms can bear greater analytical weight than studies that simply show that policies do diffuse across borders. While it is valuable that diffusion studies are able to specify precisely how policies are diffused, the four mechanisms are not so distinct from each other in practice (Kogut and Macpherson, 2008). Instead, in reality, the diffusion mechanisms may drive one another or occur simultaneously (Meseguer (2009) makes the point that emulation and learning are not mutually exclusive).<sup>47</sup> This chapter acknowledges diffusion mechanisms’ distinct yet interrelated nature and takes this delineation a step further.

When policymakers work to design policies for new issue areas, with which they are not yet familiar, policy learning or emulation may occur. Such proactive efforts may occur as the successful deployment of a policy in one locality may create an “information externality” (Swank, 2008: 77) or “public good” (Kogut and Macpherson, 2008: 110) for other policymakers. This essentially means that by virtue of a policy’s employment in one locality, other policymakers may hear of such a policy innovation as they become familiar with the issue area. If, in this process, policymakers

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<sup>47</sup> In light of the time required to see the outputs of other policies and to conduct sufficient research, policy learning and competition may be associated with slower policy adoptions, whereas emulation and coercion may be swift (Shipan and Volden, 2008). A cluster amongst a number of states does not alone suggest emulation. Though timing can be used as a ways to determine if learning or emulation has occurred I do not pursue this strategy. Instead, my qualitative case studies investigate the ways in which policymakers acquired and evaluated policy information to determine if they have learned of policy items, or simply imitated them.

study a set of policies that have been successfully deployed elsewhere, then learning is said to occur (Berry and Baybeck, 2005: 505). The core of learning is that it entails a rigorous review of the policy information. Whereas policy learning is focused on researching the merits of other policies, policy emulation is a mechanism in which policymakers imitate other policies merely in an effort to appear similar (Shipan and Volden, 2008). In this way, emulation consists of policymakers “mindlessly” duplicating policies from other states (often economically larger countries, or states more successful in the particular issue area) without researching the precise policy attributes and choices (Meseguer, 2009: 4).<sup>48</sup>

The emulation mechanism, in contrast to learning, is expected to be conducive to convergence. This is because emulation is expected to propel similar choices across adopting populations as policymakers try to copy the already proven policy items. In many cases, this occurs as actors hope to gain legitimacy, and ultimately, enhance their survival prospects, in uncertain environments. For example, Sylvia Maxfield (1998) found that developing country politicians push for central bank independence in an effort to imitate policies in industrialized countries. By appearing similar to key industrialized states, the developing country policymakers strived to signal credibility to international investors. In emulation, localization may have less of a role in the policy choice as policymakers strive simply to reproduce what has been successful or what will help them to signal greater credibility.

However, depending upon the level of information available and the structural differences between the point of origin and the point of adoption, emulation may involve an unavoidable adaption away from the source model. Such adaption is expected when the imitator does not possess the “blueprints” of what they are trying to imitate. In this way, if policymakers do not have access

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<sup>48</sup> However, given that national systems differ, 100% duplication of the source model is unlikely in international policy diffusion. Some adjustments are expected to be needed to make the policy fit the local environment. If, in contrast, we were looking at emulation across provinces or states within a nation, such as the United States, then we may expect more perfect imitation.

to the documents, or policymakers responsible for the policy item, they do not have the ability to fully duplicate the details of the original. In addition, when there are substantive differences in national systems, for example in the legal system, even if policymakers wanting to duplicate a policy may have to change the terminology or provisions just to fit with their legal system. For these reasons, international emulation is almost always an imperfect duplication of the original. Against this background, I expect that the accuracy of emulation will depend on the information available to the emulator and the similarity between the point of origin and the point of adoption in terms of legal, or other, frameworks.

Learning – which is understood here to be boundedly rational, rather than rational – is investigated for the role that cognitive heuristics, or shortcuts, have on how policymakers ascertain, evaluate and localize policy information. Normative, or cognitive, biases are expected to lead policymakers studying the same information to arrive “at very different conclusions about the consequences of policies” and hence choose “divergent policies” (Meseguer, 2009: 19). Weyland (2006) has blazed the trail for cognitive bias conceptualization in IPE research, particularly in his development of how three cognitive heuristics (availability, representativeness and anchoring) affect the bounded learning process. Drawing upon cognitive psychology tools, Weyland evokes cognitive biases to explain policy diffusion trends concerns “human information processing in uncertain and risky environments”, such as social policymaking (McDermott, 2008: 2).

Weyland (2006: 50-51) specifies how availability, representativeness and anchoring heuristics propel the diffusion of core policy elements, but not mimicking. The first cognitive heuristic, the availability bias, refers to “people’s reliance on vivid, concrete, salient examples, which remain disproportionately cognitively ‘available’ in making choices about appropriate examples for emulation” (McDermott, 2008: 2). Said another way, availability is the cognitive tendency to study the policy experiences of leaders (e.g. US or EU) or peers (geographically or culturally proximate).

National policymakers are more motivated to learn about successful external policies that are proximate to their existing belief system (Volden, Ting, and Carpenter, 2008). Peer countries with “similar policy orientations and legacies (e.g. shared traditions of political development and form of state interventions) framed within shared histories of political development, institutional patterns, and cultures” are expected to be interested in each other’s policies (Swank, 2008: 78). The availability heuristic skews policymakers’ attention towards studying policy items of states they believe are their peers or leaders.

Representativeness, the second cognitive bias, refers to a tendency to assume that one country’s (positive) policy experience is likely to be representative of the experience elsewhere (Weyland, 2006: 50; McDermott, 2008: 2). Policymakers’ beliefs shape the perceived value of potential policy choices (Knill, 2005), which clearly impacts the valuation stage of the policymaking process (Weyland, 2006: 50). More specifically, representativeness biases lead policymakers to conclusions about the expected performance of the policy they are studying.

Weyland’s third heuristic that shapes the bounded learning process, anchoring, describes people’s tendency to ‘focus on the ‘anchor’ of the original model’ (McDermott, 2008: 2). The anchoring heuristic affects policy design as Weyland portends that anchors lead to policymakers being “reluctant to diverge radically” from the original model (Weyland, 2006: 51). This, he argues, is why we see patterns of policy adoption – as policymakers overlook their local context because of their cognitive bias in favor of not deviating from the anchor.

Moving on from learning, the remaining two diffusion mechanisms, competition and coercion, are the mechanisms that describe unsolicited external forces that shape policymakers’ policy choice sets. Depending on their strength, these pressures are expected to lead to similar policy choices across adopters. In the case of competition, the globalization thesis has posited that states converge

towards the model that appears to enjoy the competitive advantage. More specifically, convergence is expected on policies that successfully attract capital holders. As an example of how this mechanism works, Simmons and Elkins (2004) found that the adoption of capital account liberalization policies in one state changes the competitive landscape for its peer states and this in turn constrains policymakers' policy choice sets (and this pressure intensifies as the number of peers that liberalize their capital accounts increases). The strength of economic competition is investigated by measuring policymakers' concerns that capital would be redirected elsewhere (Berry and Baybeck, 2005). To be sure, the globalization thesis expects that, when faced with increasing competitive pressures, policymakers are pressured to deploy internationally orthodox, market friendly policies. As a consequence, policymakers dealing with heightened competitive pressures are not expected to adjust policies in the way that states learning about policies do.

The coercion mechanism describes diffusion cases where power asymmetries create conditions in which policy choices are forced by external actors. Such diffusion via coercion may occur when an IO, such as the IMF, requires economic reforms as a condition for funding. As scholars work to identify instances of coercion, their empirical investigations strive to demonstrate the impact of formal conditionality or "persuasive opportunities" on policy choices (Simmons *et al*, 2008: 13; Kogut and Macpherson, 2008). Then, the strength of coercive forces is determined by the financial need of the less powerful state, as well as the capabilities of its policymakers. In this way, policymakers that feel most in need of external financing and least capable of formulating policies are expected to be more susceptible to coercive pressures.

In sum, according to diffusion literature, only the (bounded) learning mechanism is expected to drive low degrees of convergence. If competition, emulation and coercion are the primary diffusion mechanisms, then a high degree of convergence is expected. There are caveats; the globalization hypothesis has been refuted by studies showing that economic competition has not



made states converge on a singular model (Hall and Soskice, 2001) or trigger a global “race to the bottom” (Mosley, 2005). In a similar vein, Weyland (2006), Swank (2008) and others point to the centrality of domestic contexts in undermining the competition and coercion mechanisms.

### **3.5. Conclusion**

This chapter examined state-of-the-art policy diffusion research to identify how elements of the diffusion process, particularly multiple diffusion items, diffusion items’ varying levels of specificity and diffusion mechanisms, are expected to lead to varying degrees of convergence. To do so, the chapter has delineated the ways that the diffusion mechanisms frame VC policy options available to policymakers. In this chapter I have synthesized diffusion literature to argue that coercion, emulation and competition are hypothesized to result in little adaptation. Bounded learning, however, is hypothesized to produce adaptation, synthesis or hybridization as policymakers at the point of adoption assess the policy items differently in light of their cognitive biases. Thus, if coercion, emulation and competition are primary mechanisms then I expect high degrees of convergence. If, however, bounded learning is the primary mechanism, the hypothesis is that there will be lower degrees of convergence.

With respect to the impact of the level of specificity on policy diffusion, the less specific diffusion item (Silicon Valley) is expected to propel transformation. The Silicon Valley policy environment’s low specificity is expected to lend to different interpretations. In light of the role of interpretation, adopters are expected to transform VC policies in line with their different normative contexts. In contrast, more precise policy blueprints (Taiwan and Israel) are expected to lead to higher degrees of convergence across states that deploy these policy items. This is expected because highly specific diffusion items are not as open to interpretation and localization since they effectively offer a blueprint of what to do. In sum, diffusion of the Silicon Valley idea is expected to

drive low degrees of convergence while diffusion of the Taiwanese and Israeli innovations is expected to result in greater convergence as these highly specific models are replicated.

With that said, if policymakers combine the multiple diffusion items, even if they do not adapt the individual diffusion items that much, hybrid VC policy combinations are expected to be the result of diffusion. Here, the iterative nature of VC policy diffusion comes into play as the existence of multiple policy items is expected to lend to hybridization or synthesis. In this way, the iterative character of the VC policy area leads me to expect combinations of diffusion items or new innovations by policy adopters over time. As such, as the policy innovations came into being (Taiwan in 1983 and Israel in 1993), subsequent adopters are more likely to deploy more than just one VC policy instrument. For example, late adopters and laggards may deploy LP regulatory structures alongside tax credits and a FoVCF. So, as mentioned before, while there may be less transformation of the specific tax and FoVCF blueprints, adopting policymakers may combine multiple blueprints, which would still represent an adaption from any of the singular diffusion items. All together, the existence of multiple policy items of varying levels of specificity leads me to expect varied interventionist policy choices over time. Since the Taiwanese and Israeli policy innovations have been medium to high interventionist in character, policy adopters that have been exposed to information on these policy items are expected to choose more interventionist VC policies than the original Silicon Valley policy environment.

Multiple policy diffusion items, varying levels of specificity and different diffusion mechanisms offer hypotheses for what VC policy adoption patterns are expected to look like. But, these hypotheses cannot explain the precise policy choices in different states. Said another way, these hypotheses about the degrees of convergence cannot alone account for why one state chooses to deploy a large FoVCF while another focuses on tax credits. To do that, Chapter 4 formalizes hypotheses for how domestic economic management norms and economic structures shape policy

choices. Thus, the next chapter develops typologies that map out how the differing roles of the state in the market in East Asia shape VC policy diffusion. In doing so, the next chapter draws domestically-generated predictions into the diffusion toolkit.

## 4. Analytical Framework

### 4.1. Introduction

This chapter advances a bounded-learning diffusion framework to explore how, in policy diffusion, “all politics is local.” While local contexts have been argued to be important to explaining specific choices (see Lenschow *et al*, 2005; Painter and Yeo, 2011; Acharya, 2004), as of yet, IPE scholars have not sufficiently developed structured tools to investigate the role of different domestic environments in policy diffusion processes. Here, I address this gap by developing typologies and hypotheses for the ways in which domestic economic management norms adapt policy items to fit local contexts. To be sure, my hypotheses strive to determine the extent to which VC policy choices are the product of policymakers’ local economic management norms. If they are, then my aim is to draw generalizations from these findings that the diversity across the large-N dataset is the result of each state’s policymakers’ unique economic management norms.

In much of the diffusion research, the process by which diffusion items enter the local context is conceptualized as a binary accept or reject decision (Rogers, 1995: 364). Scholars have criticized this “black box” treatment of domestic environments in the diffusion process (Yeo & Painter, 2011: 379). In so doing, these scholars argue that the local context needs to be investigated for its impact on how practices are received and implemented (see Acharya, 2004; Lenschow *et al*, 2005). In this way, they have pointed to the role of the prevailing normative context, political institutions, and economic structures in the diffusion process.

Before going any further, it is first necessary to clearly define institutions and their application within this thesis. Here, institutions are conceptualized in a manner consistent with the three

categories articulated by Douglass North in his classic 1990 text *Institutions, Institutional Change and Economic Performance*: informal institutions, formal institutions and organizations. North defines informal institutions as norms and cultural understandings that guide actors' behavior and shape their choice sets. In this VC policy study, the informal institutions that are investigated are the five norms that guide the state's role in economic management. For North, formal institutions are the laws and rules guiding economic and political interaction.<sup>49</sup> My investigation of formal institutions focus on the government regime types, democratization, legal systems, and the distribution of budgetary power. Finally, North's conceptualization of organizations points to the (governmental) agencies, firms and departments. Organizations, in this project, are the bodies that make VC policy choices. In the VC policy context this includes Hong Kong's Innovation and Technology Commission ("ITC"), Singapore's Economic Development Board ("EDB") and Vietnam's Agency for SME Development ("ASMED").

The next sections 4.2, 4.3 and 4.4) define the economic management norms, economic structures and formal institutions that are investigated for their impact on VC policy diffusion. Then, Section 4.5 develops the four typologies of East Asian states in terms of economic management norms and economic structures. Section 4.6 links the typologies to VC policy choice hypotheses in terms of the low, medium or high interventionist continuum developed in Chapter 2. Finally, Section 4.7 details how these East Asian capitalism typologies guide the case study examinations. Section 4.7 brings together the hypotheses developed in the Literature Review chapter as well as the hypotheses developed in this chapter.

## **4.2. Economic Management Norms**

Norms, as argued here, shape the entire policymaking processing – the agenda setting,

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<sup>49</sup> Lenschow *et al* define institutions quite similarly: "organizational structures, formal and informal rules, and policy-making procedures" (Lenschow *et al*, 2005: 802).

evaluation, design and implementation stages. The agenda setting stage of policymaking is impacted by domestic norms as they play a significant role in filtering external policy models for further studying (Gilardi, 2010: 651). This is the case both because of their role in determining the institutional fit of external policies and also because national policymakers are more motivated to learn about successful external policies that are proximate to their existing belief system (Volden, Ting, and Carpenter, 2008). In this way, norms determine which policies are studied in the first place. Peer countries with “similar policy orientations and legacies (i.e. shared traditions of political development and form of state interventions) framed within shared histories of political development, institutional patterns, and cultures” are expected to learn about or emulate each other’s policies (Swank, 2008: 78). This is effectively what Weyland refers to as the availability heuristic. At the next stage, policymakers’ beliefs shape the perceived value of potential policy choices (Knill, 2005), which clearly impacts the valuation stage of the policymaking process. Weyland’s representative heuristic most closely corresponds to this idea – that local policymakers determine the extent to which foreign models would achieve the same result in their context.

But, the relationship between the foreign information and local norms is not static; instead, diffusion between external practices and local norms creates frictions that can alter diffusion items. In this way, cultural similarities and differences are said to affect the “rate and form” of diffusion (Hall, 1993; Strang and Soule, 1998; Lenschow, *et al*, 2005: 799). External information’s entrance into the local context does not only lead to policymakers’ acceptance or rejection of the diffusion item. Policy items are expected to be reframed to increase their fit with the local normative environment. This is what Acharya refers to as “localization” (2004: 240-241), in which adopters reinterpret an external item (which affects the policy design and implementation), in order to increase its “fitness” with prevailing local norms.

In light of the localization that occurs in the diffusion process, I believe that Weyland’s

heuristics give insufficient attention to domestic policymakers' area-specific beliefs in explaining diffusion outcomes. To start with, the availability heuristic does not sufficiently account for how policymakers' industry-specific biases determine which models are studied. While the availability heuristic provides insight into the idea that normative biases shape which models are selected for study (and that they generally lend to the studying of peers or leaders), it does not give predictive insight into which foreign model(s), specifically, will be studied for that particular policy area. I argue that policymakers choose which states they study (e.g. what models they hold as "available") as a result of their preferences in that *particular* policy area.

Representativeness and anchoring heuristics, similarly, can be more accurately conceptualized as derivative of policymakers' policy area-specific norms. Policymakers do not simply believe that successful policies elsewhere are representative of the results that they will have (which the representativeness heuristic contends). Instead, I contend that the representativeness of the model is determined by the extent to which the foreign model is a fit with specific domestic norms. If local norms are a fit with the policy item, then there may be a strong degree of representativeness and therefore minimal adaptation. However, if policymakers' biases are not close to that at the source model, then they will not hold the diffusion item's experience as fully representative, and will come to the conclusion that adaptation is needed. Similarly, rather than policymakers not adjusting the policy model due to anchoring, I argue that policymakers' degree of adjustment of policy items can be better predicted by identifying specific local norms, rather than the success of the model. By delineating policymakers' area-specific norms we can hypothesize about the unique localization that will occur in each state.

In sum, I argue that greater domestic normative delineation is needed to determine how cognitive biases shape bounded learning processes. To this end, my framework builds on Weyland's work by identifying how contextual economic management norms determine

policymakers' biases, and therefore the extent and direction of adaptation. Thus, rather than Weyland's three general heuristics, I delineate the precise economic management norms that determine policymakers' biases in the policy area that I am investigating (VC policy): (1) interventionist orientation, (2) private sector financing norms, (3) international or local firm preferences, (4) large or small firm preferences, and (5) bank or capital market preferences. Due to differences in these five economic management norms, my hypothesis is that policymakers come to unique conclusions about the extent to which the model's experience is representative, and the extent to which they deviate from the (Silicon Valley) anchor.

The five economic management norms help to explain why VC policy information may be interpreted, evaluated and reconstituted in different ways. For example, economic management norms that favor private sector financing going directly to select firms, are expected to encourage policymakers to seek out information about the FoVCF policy item. In such a case, the hypothesis is that the FoVCF would be diffused and then adjusted depending upon the other economic management norms, like local or international firm preferences. Similarly, in cases where policymakers hold pre-existing economic management norms in favor of the state staying out of market activity, there may be rejection of such interventionist VC policy tools. In such neoliberal normative environments, policymakers are expected to study and attempt to replicate the hands-off, but enabling, Silicon Valley regulatory environment.

The first economic management norm examined is policymakers' belief about the appropriate level, and form, of state intervention in the economy. Said another way, interventionist orientation norms inform the level, and ways in which, policymakers believe their state should intervene in the economy. As an illustration, some Asian policymakers, according to Chalmers Johnson's work on Japan (1982), have gone so far as to say that the private sector would not know what to do unless told. Others, such as the colonial Hong Kong government, have been avid



believers that the markets can better manage production and the allocation of resources than the state. Policymakers approach their policymaking for new issue areas according to these preferences for the general level of involvement and the tools they prefer to use.

This interventionist orientation is similar to the notion of “path dependence” and informs the background by which policymakers consider industrial policies. Policymakers’ orientation towards neoliberal or interventionist roles in the economy sets the tone for how they are expected to evaluate and adapt VC policy information. More specifically, it speaks to whether, and how, policymakers are likely to accept, adapt or reject regulatory, tax or funding policy information. For example, in laissez-faire Hong Kong, neoliberal policies that achieved success abroad may be adopted with few alterations by Hong Kong policymakers. In contrast, more interventionist policy items are expected to be discounted or adjusted towards less heavy-handed forms in Hong Kong.

The second economic management norm investigated here concerns policymakers’ preference for using finance to support private sector activity. More specifically, the private sector financing norm informs whether and how policymakers fund private sector activity. Private sector financing norms in East Asia range from states that direct large sums of financing to many private firms, to states that do not allocate any financing to any private firms. There are two extreme private sector financing norms that are both expected to reject the adoption of private sector funding initiatives, such as FoVCFs. First, rejection of the FoVCF item is expected in neoliberal states where policymakers hold private sector financing norms that oppose directing funding to specific private firms. Second, FoVCF rejection is expected where private sector financing norms dictate that the state should solely invest in state production (i.e. SOEs). In this way, these policymakers’ anti-private sector financing norms would similarly preclude private firm funding as they prefer to invest in public production. Thus, FoVCF rejection is expected to come either as a result of extreme liberal or statist private sector financing contexts.

The third economic management norm investigated in this research area is policymakers' preference for international or local firm support. This norm informs whether policymakers focus on supporting local companies or if they spend resources attracting foreign firms. States where policymakers' preferences dictate that they focus on promoting local SMEs, compared to states that invest in attracting MNC production, are expected to adapt VC policy items differently. In states where policymakers prefer to support local VC firms, VC policy choices are expected to be designed to drive the growth of *local* VC managers. This may manifest into the deployment of regulations inconsistent with international orthodoxy as well as financial or tax incentives being restricted to local participants only. Policymakers' international preference, on the other hand, is expected to prompt the adoption of orthodox regulatory environments as well as international investors' eligibility for FoVCFs and tax credits.

Fourth, policymakers' preferences for supporting large or small firms, specifically SMEs, MNCs or SOEs, are investigated for their impact on policy choices. These preferences dictate policymakers' propensity to study and design policy initiatives for small, often new, firms or for larger, often more experienced, firms. Because VC policy, in its essence, is focused on SMEs, this norm is explored for its impact on VC policies in two ways. First, it is expected to determine policymakers' interest in learning about a policy to supply financing to SMEs – VC policy being one of those options. The logic here is that policymakers inclined to support SMEs may be more likely to learn about VC policy as one way to improve its SMEs access to capital. Second, within the VC market there are, as in virtually every industry, small and large firms. Policymakers that prefer to support large firms may be more inclined to direct VC policies towards big financial institutions or blue-chip VC managers. On the other hand, policymakers that prefer to support small businesses are expected to be more inclined to help small, fledgling VC firms. The large or small firm preference is expected to impact whether tax credits focus on VC managers with certain AuMs

(e.g. a minimum AuM to be eligible) and in terms of whom FoVCF money is allocated to – small VC managers or to larger, more established VC firms.

Finally, the fifth economic management norm is policymakers' preference for supporting either the bank or the capital markets sector. Similar to the other economic management norms, there has not been one uniform norm motivating how East Asian policymakers interact with their financial systems.<sup>50</sup> Policymakers' preferences for debt or equity instruments inform whether they support the bank (debt focused) or capital markets (equity) sectors. Since the VC asset class is situated within the capital markets segment of the financial sector, a preference for banks over capital markets is expected to facilitate a low level of interest in VC policy. Furthermore, a preference for credit rather than equity instruments is expected to favor loan-based SME financing schemes rather than equity-based VC policy items. The preference for capital markets, or banks, is expected to contribute to, or detract from, policymakers deploying equity-based capital market development policies such as VC policy. In cases where policymakers have a strong preference for banks (and debt), we can expect VC policies to be slow to diffuse and to take the form of loans, rather than equity, instruments.

As mentioned, these five economic management norms are not set in stone, they can change as a result of “critical junctures” (Streeck and Thelen, 2009: 103). Because of their ability to shift, the empirical work investigates any changes in these norms over time. So, in addition to identifying these five norms in each case, my research investigates changes in each norm over the period of investigation. Changes towards neoliberalism or interventionism, as well as changes in favor of SME support (and away from large company support), for example, may shape subsequent policy studying efforts as well as policy choices.

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<sup>50</sup> The singular ‘Asian model’ (Amable, 2003) portends that the Asian state pushes banks to lend to firms and industries of its choosing. State-bank relations have not been uniform across banking systems or industrial sectors within Asian states (Walter and Zhang, 2012).

### 4.3. Economic Structures

Scholars argue that states at different levels of economic development, or with different economic structures, are not expected to adopt internationally diffused policies in the same way. Swank (2008) advances an argument that American neoliberal tax policies diffuse differently across economic systems depending upon the economy's degree of sector-coordinated capitalism. In this way, Swank argues that the US tax model diffused according to whether the state's economy was predominantly liberal or coordinated in character. Taking the relationship between economic factors and policy diffusion results a step further, scholars suggest that socio-economic factors are particularly impactful in determining the settings of policies, such as thresholds, funding and exact legal language (Lenschow, *et al*, 2005: 810).

In this thesis, economic structures are hypothesized to determine the *timing* of VC policy diffusion. The economic structure characteristics are not expected to explain the neoliberal or interventionist character of VC policy choices in a way that Lenschow *et al* (2005) argue. Instead of determining the precise specifications of the policies, here it is argued that *economic characteristics help explain the timing of VC policy diffusion*. To further develop this hypothesis, the following paragraphs explain why two aspects of states' economic structure are expected to matter most to the timing of VC policy diffusion: high-tech, SME activity levels and the bank versus capital market nature of the financial system.

Technology-sector SME activity is a determinant of the timing of VC policy diffusion given the relationship between VC and technology start-ups. This is because VC funds primarily invest in high-growth, early-stage SMEs. Technology start-ups are a favored area for VC investors since technology-focused firms are thought to be capable of delivering disruptive products and services.

Similarly, technology start-ups rely on VC managers for early-stage funding since banks do not give adequate credit, and banks and other types of investors lack the operational expertise and networks to help start-ups grow. As a result of the mutual dependence that technology start-ups and VC managers have on each other, the number of high-growth ICT start-ups constitutes the amount of natural demand for VC markets. What's more, the levels of start-up activity indicate the health of the environment that VC managers need to operate locally. In this way, technology start-up activity levels indicate private sector actors' (start-ups and VC managers) need for VC policies.

Said another way, if an economy has few SMEs and those few firms are not competitive in the technology sector, there is no catalyst for VC policy diffusion. Where there is low technology start-up activity levels, VC policy action would not be responding to the needs of high-tech start-ups. On the other hand, in economies where high-tech SME activity is strong, VC markets are desired as a means to provide early-stage financing and operational expertise to capital hungry high-tech SMEs. In either case, the levels of technology SME activity, and changes in those activity levels, are expected to indicate the timing of VC policy diffusion.

The bank versus capital market nature of the financial sector is the second economic characteristic investigated. My examination of the impact of the financial system on industrial policymaking is not unique, as differences in national financial structures, it is argued, can help explain why states have taken varied approaches to driving economic growth (see Zysman, 1983; Whitley, 1999). This economic structure characteristic is closely related to the banks versus capital markets economic management norms. Just as variety exists in the normative contexts, in some East Asian states, the banking sectors have been (increasingly) balanced with weighty stock markets, and banks have been independent of credit decision pressure from the state (i.e. Hong Kong). In contrast, in other East Asian states, the state has owned credit decision-making via state-owned banks, and capital markets have been nearly non-existent (i.e. Vietnam through the end of the 20<sup>th</sup>

century).

Though there are differences, I do not want to minimize the strong nature of banking sectors across East Asian financial systems. In this way, historically East Asian states' financial systems have been broadly characterized as bank-centric, and debt instruments have been noted as being crucial to corporate financing (Walter and Zhang, 2012: 11). However, equity markets have grown across East Asia, in absolute terms as well as a percentage of financial transactions, driven by market forces (i.e. the Asian financial crisis) and by the states' industrial policies to support capital market development (Rethel, 2010: 493-494). My empirical investigations of the financial systems in East Asia appreciate the relative differences and changes within states and across the region over time. It does so by assessing the balance of bank lending versus capital market, equity-focused, fundraising on VC policy diffusion.

#### **4.4. Formal Institutions**

Formal institutions (i.e. political regime types, the distribution of budgetary power, legal system, etc.) function as filters through which diffusion items pass. In this regard, Radelli (2005: 933-939) shows how different institutional "riverbeds" influence the ways in which EU states have adopted the American practice of regulatory impact assessment. He argues that different institutional contexts explain the variability in terms of who has had power over impact assessment across countries and thus how the practice has been implemented differently across member states. David Vogel (1986) similarly found that the degree of similarity in national regulatory styles affected the spread of environmental policy in the US and Great Britain. The formal institutions examined in this empirical area are the distribution of budgetary power to policymaking bodies, democratization, government regime types and legal frameworks. Though not included in the typologies, these formal institutions are examined for their impact on VC policy item adaptations.

Policy diffusion processes are expected to be impacted by the different political environments, specifically regime types and democratization shifts. Policymakers are charged to deliver economic policies in line with the objectives (and oftentimes, ethos) of the current Government. When the regime is democratic, the ruling party is subject to removal from office should the voting populace not approve of their policy choices. Democracies, it is argued, are more likely to instill property rights, and other beneficial institutions, as a result of such political pressures (see, for example, Przeworski and Limongi, 1993; Rodrik, 1997, 2000; Knack and Keefer, 1995). In authoritarian or single-party regimes, in contrast, policy choices can be made in accordance with the Government's strategic vision without fear of unseating. Oftentimes, authoritarian regimes are therefore able to design and implement longer-term industrial strategies, because they do not have to accommodate political opinion on a short-term basis. Following this logic, more open, democratic political environments are thought to endow greater scrutiny on policymakers' industrial policies, particularly their use of budget. In contrast, more closed, authoritarian regimes are expected to shield policymakers from direct public scrutiny of their policy and budget allocation decisions.

There is a rich range of political regimes within the East Asian arena, ranging from authoritarian states, to one-party democracies, to an autonomous state within the PRC to multi-party democracies. To be more precise about the degree of authoritarian or democratic character of the East Asian states investigated in this thesis, I draw on the polity categorization data provided by the World Bank Political Institution Database and the Polity IV Project (Systemic Peace) led by Monty Marshall and Ted Robert Gurr. Before relaying their coding of the regime types and changes in democratization in Taiwan, Singapore and Vietnam, I first note that both databases do not specify the polity type in Hong Kong, in light of its status as a Special Autonomous Region within China.

Because Hong Kong is not included in these datasets, I draw on recent work on the political system in Hong Kong to depict its regime type and changes in democratization. Cheng (2013: 224) notes that most analysts describe Hong Kong's executive-led system as a "hybrid regime type with varying levels of democracy in various political institutions." He laments that fifteen years after Hong Kong's transition began (in 1997), there "has been no significant progress in democracy" (Cheng (2013: 226). But, a more genuine level of democratization may take place in the future in Hong Kong. A major protest for democracy took place in Hong Kong on the 1<sup>st</sup> January, 2014, with protestors expressing their "dissatisfaction with the pace of democratization" and, specifically, their desire to directly elect the Chief Executive (Yung, 2014: 1). In line with recent calls for further democratization, the Chinese government promised that the Hong Kong populace can elect their Chief Executive in the 2017 election, and elect all seats in the Legislative Council in the 2020 election (Cheng, 2013: 242). In summary, despite transition from the British colonial leadership to an SAR within the People's Republic of China in 1997, Hong Kong's government type is still categorized as hybrid (rather than democratic) without significant advances in democratization.

For Taiwan, the World Bank categorization of its regime type changed from an "Assembly-elected President" to a "Presidential" regime in 1996 (Beck *et al*, 2001; Keefer, 2012). Taiwan's democratization process began following Chiang-Kai-shek's death in 1975, and then political parties were legalized in 1987 as the Martial Law era ended (Marshall and Gurr, 2010: 1-2). However, major constitutional changes did not occur for another decade, as the populace was only allowed to elect the president in 1996 (Beck *et al*, 2001) – which explains the timing of the World Bank re-categorization. What's more, it was then only in the 2000 election when a rival political party, the Democratic People's Party ("DPP") won government, as the Kuomintang ("KMT") had held power since Taiwan's founding in 1949. To be sure, the March 2000 election "brought the first transition of executive power from one party to another in Taiwan" (Marshall and Gurr, 2012: 1-2).



The World Bank Database of Political Institutions codes Singapore a “Parliamentary” system for the entirety of their dataset (1975-2012). The Parliamentary coding means that Singapore’s chief executive (the Prime Minister) is elected by the legislature, not directly by the people. The legislative party that has been effectively choosing the Prime Minister since Singapore’s inception in 1965 is the People’s Action Party (“PAP”). Singapore’s PAP has achieved a remarkable proportion of votes at each election, with its worst ever election result coming in 2011, as the PAP only won approximately 60 per cent of the popular vote, and won only 81 of the 87 parliament seats (Gopalakrishnan and Lim, 2011).<sup>51</sup> In addition to Singapore’s categorization as Parliamentary, it should also be noted that the PAP dominated legislature have only chosen three Prime Ministers since 1965 – with founding father Lee Kuan Yew serving 24 years, his right-hand man Goh Chock Tong for 14 years and Lee’s son, Lee Hsien Loong, for nearly nine years (Beck, *et al*, 2001). Finally, Singapore’s Parliamentary system has been described as being particularly strict given the PAP’s historic discouragement of genuine opposition parties. Lee Kuan Yew, in particular, has been:

dead-set against allowing anything more than a token opposition in Singapore, warning factions would weaken the government, scare off investors and undermine prosperity. From the 1960s to the 1980s, he...bankrupted opposition leaders figures with defamation lawsuits” (Kennedy, 2011: 2).

Though the Singaporean political system’s categorization in the Polity IV project and the World Bank Political Institution Database remains static, recent election results – particularly the 2006 and 2011 elections which saw only 66 and 60 per cent of the vote go to the PAP – have increased sentiment that democratization, or at least politicization – is on the rise (Klingler-Vidra, 2012: 69).

Vietnam’s system retained the same classification throughout the period – an “Assembly-

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<sup>51</sup> PAP historically dominated, winning every single parliamentary seat from the nation’s founding until the 1981 election (Kennedy, 2011: 1).

elected President”, according to the World Bank Political Institution Database (Beck *et al*, 2001). Vietnam remains dominated by its Communist Party of Vietnam (“CPV”); the Polity IV project laments that although there were political reforms via the 1986 Sixth National Congress of the CPV in 1986, through today, “Vietnam remains for all practical purposes a one-party communist dictatorship” (Marshall and Gurr, 2010b: 1). Political parties are not permitted to operate, the judiciary does not have independence from the CPV, and the CPV’s Politburo and Standing Board have a very central role in policymaking (Marshall and Gurr, 2010b: 2). In Vietnam, though there has been liberalization through new constitutions – its regime type has seen little change in terms of democratization or politicization.

The different regime types represent, as discussed above, a range of public scrutiny into the industrial policymaking process. The level of involvement of the public, as well as politicians, is expected to shape the speed of policymaking as well as the potential choosing of interventionist forms of VC policy. For instance, my Taiwanese exploration addresses the impact that different political parties have had on the sustainability of VC policy choices and the PAP’s recent election results are examined for how Singaporean policymakers may be more constrained in their ability to quickly deploy finance-laden industrial policies.

The third formal institution examined is the distribution of budgetary power. The distribution of budgetary power is expected to affect the extent to which interventionist policy diffusion items (the tax credit and FoVCF) are given funding, implemented swiftly, held to public scrutiny, etc. In this way, differences in budgetary access are expected to affect the funding element of VC policy choices. For example, in Hong Kong’s case, the ITC has needed legislative approval to deploy funding. My fieldwork in Hong Kong investigates how the ITC’s need to ascertain approval affects policymakers’ ability to deploy VC policies. In Singapore, on the other hand, the bodies responsible for creating and implementing economic policies, do not need sign off from

other entities to secure funding. Singaporean policymakers' ease of access to funding is examined to ascertain if, and how, this affects their implementation of interventionist policies.

Finally, the legal framework is examined for its impact on the range of possible VC policy choices, especially regulations. The legal system affects which, and how, policy items can be implemented locally. The existing legal treatment of investment vehicles affects the starting point for VC regulatory structures. As an example, states that do not have limited liability structures would need to change the treatment of fund managers in order to accept the LP diffusion item. For example, the Vietnamese legal framework for private company operations has made incremental strides in opening areas for private firms to operate. But, when the Vietnamese regulatory framework restricted SME production (until the 1986 *Doi Moi* reforms private businesses were not allowed in Vietnam), the adoption of VC regulations, tax incentives or FoVCFs would have been beyond the realm of possibilities.

All together, the regime types, democratization patterns, distribution of budgetary power, and legal systems are expected to shape VC policy diffusion, The formal institutions discussed in this sections, which will be explored in the East Asian case study chapters, are summarized in the Table below:

**Table 4.1:** *East Asian Formal Institutions*

	Hong Kong	Taiwan	Singapore	Vietnam
Regime Type	Hybrid	Assembly-elected President (until 1996); then Presidential	Parliamentary	Assembly-elected President
Democratization	Increased politicization, democratization, following 1997 transition to PRC;	Initial democratization steps in 1975; end of Martial Law in 1987; first change	Recent advance by opposition parties; PAP results in last two elections (2006 &	Little change; CPV maintains complete control of political system despite

	further suffrage promised	in political party in Government in 2000	2011) worst ever (“only” 66 and 60% of votes)	changes to the constitutional landscape
<b>Distribution of Budgetary Power</b>	Policymakers must request all budget from Legislative Council	Policymaking and Budget separated	Policymakers hold budgetary power	Budget comes from donors and State Bank
<b>Legal System</b>	Common Law (British heritage)	Civil Law (Japanese and Chinese heritage)	Modified Common Law (British heritage)	Civil law and communist theory (French heritage)
<b>Regulatory Environment for Private Sector</b>	Open	Restricted during Martial Law; Open since 1987	Open	Restricted; Improving following initial <i>doi moi</i> reforms in 1986

#### 4.5. East Asian Capitalism Typologies

By pulling together the five economic management norms detailed in Section 4.2, I now develop the East Asian capitalism ideal types.<sup>52</sup> The typologies constitute the four positions of policymakers’ norms in approaching VC policymaking. They are as follows: Nightwatch-man, Private Sector Promoter, Financier and Director, and Command Economy. *Their varied normative contexts are expected to be the primary driver of each case study’s unique VC policy diffusion outcome.* Table 4.2 summarizes the typologies’ economic management norms as well as their East Asian proxies:

<sup>52</sup> Though Sections 4.3 and 4.4 delineated economic structures and formal institutions in the four case studies, the economic structures and formal institutions are not included in the typologies. The previous discussions of economic structures and formal institutions add to the contextualization of this East Asia research project, but not the analytically-derived typologies. The typologies center on the five economic management norms’ role in shaping bounded learning processes – which is the primary focus of this investigation.

**Table 4.2: Typologies of Asian Capitalism**

Typologies →		Nightwatch-man State	Private Sector Promoter	Financier and Director	Command Economy
ECONOMIC MANAGEMENT NORMS	(1) Pre-existing Government intervention	Neo-liberal ideal	Promotion of industry via tax credits and R&D	Direction of industry and large financing	State production
	(2) Private sector financing	Low	Moderate	High	Low
	(3) Company size preference	No preference	Small	Large	Large
	(4) International versus local	No preference	Local	International	Local
	(5) State-bank relations	Banks privately owned and managed	Some state direction of credit	Little state direction of credit	State directs credit
Proxies →		Hong Kong	Taiwan	Singapore	Vietnam

The anchors at the ends of the neoliberal to statist spectrum are the Nightwatch-man state and the Command Economy. The Nightwatch-man state’s policymakers possess norms that the state should allow the market to operate freely and only provide an institutional framework to facilitate the market’s operation (Evans, 1995). At the opposite end is the Command Economy, in which policymakers’ norms dictate that the state should run production and suppress private sector activity in favor of public activity. These extreme ends of the ideal types do not fully exist in practice; however, there are two East Asian states that approximate their characteristics. Hong Kong is the Nightwatch-man state proxy since it has been named the freest economy in the world while Vietnam is the Command Economy proxy since the CPV, until 1986, completely suppressed private sector activity.<sup>53</sup>

<sup>53</sup> Since the *doi moi* reforms in 1986, the fall of the Soviet Union in 1989, the Enterprise Laws and the 2007 WTO accession, the Vietnamese economy has increasingly allowed space for private sector activity. However, the private sector’s operations are still restricted, and the state runs public enterprises (“equitized” and SOEs). Though the

In terms of the Nightwatch-man State and Command Economy economic management norms, for polar opposite reasons, these two types both indicate a propensity for rejection of interventionist VC policy diffusion items. This is because their policymakers' economic management norms dictate the state's limited role in the market or the state's preference for public production, respectively. The two typologies in the middle of the spectrum, in contrast, possess elements of state direction and neoliberalism, as well as varying bank versus capital market preferences, local versus international, and small versus large, firm focuses, private sector financing norms and pre-existing economic management norms.

The Private Sector Promoter ideal type, which is one step away from the neoliberal ideal, envisages the government as the supporter, but not director, of private sector activity. This typology is inspired by, and consistent with, Karl Polanyi's assessment, in *Great Transformations* (1944), that the state's employment of policies that encourage private activity is a prerequisite for markets to occur. To this end, the Private Sector Promoter provides a broadly enabling regulatory arena and moderate financial support. The Private Sector Promoter policymakers' pre-existing economic management norms dictate that the state concedes revenue through tax concessions to industry participants and offers general incentives for R&D or similar activities. As a result of the Private Sector Promoter's preference for non-direct financial support, direct funding to selected VC firms via a FoVCF is not expected.

The Private Sector Promoter prefers to support local companies; this preference means that its policymakers focus on building local firms' capacity, rather than attracting foreign firms. As such, this type's VC policy adaptations are expected to be domestically oriented. Taiwanese policymakers are therefore expected to develop regulations and tax incentives that favor local activity rather than

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relationship between state and private sector is now less antagonistic, norms and the economic structure in Vietnam are still not tilted in favor of private SMEs.

offer an environment attract to international investors. In terms of firm size preference, policymakers' prefer to support SMEs over large firms, including MNCs and SOEs. In this way, VC policy choices are expected to focus on growing new, small VC managers instead of attracting large, existing VC firms. The last economic management norm shaping the Private Sector Promoter's VC policy choices is the bank versus capital market preferences. Though there is some state direction of credit in this type, these policymakers do not exhibit a strong preference for banks over capital markets. Taiwan acts as a proxy for the Private Sector Promoter ideal type given its reticence to allocate government funding directly to private sector actors and for its policymakers' preference for local SMEs.

The Financier and Director type is one step closer to public command of the economy. This type centers on economic management norms that prefer the state's overt direction of capital and organizing of private interests. The Financier and Director type is akin to Gerschenkron's vision of the state's role as one of addressing market failures by investing in private activity and in organizing financial markets (Forsyth and Verdier, 2003) and not one where the state crowds out private activity in favor of public production. The Financier and Director type is supportive of private activity, but unlike the Private Sector Promoter, its policymakers' pre-existing economic management norms prefer a more interventionist approach. More specifically, this type's policymakers prefer to give financing and other incentives to select firms. In this way, the Financier and Director policymakers are guided by private sector financing norms that motivate them to allocate financing directly to the private sector.

The Financier and Director type prefers to support large firms rather than small firms, and international over local firms. Due to its company size and international versus local preferences, its policymakers attract MNCs and place a lower priority on SME and local production support. Its policymakers do not have a preference for bank or capital markets solutions. The East Asian state

that best embodies strong government direction and financing of the private sector is Singapore given Singaporean policymakers' concerted efforts to attract international MNCs and neutrality for debt or equity instruments. As part of its strategy, Singapore, unlike Japan or Korea, has not strived to build national champions.

The typologies developed here help formulate hypotheses for the impact of economic management norms, specifically the state's pre-existing economic management norms, private sector financing norms, company size preferences, local versus international company focus, bank or capital market preferences, on VC policy diffusion in East Asia. The five economic management norms are investigated for how they shape policymakers' biases and actions throughout the bounded learning process. The SME technology sector activity in the economy and the bank versus capital market character of the financial sector are the economic structure characteristics delineated in Section 4.3 that are assessed for their effect on the timing of VC policy diffusion. Formal institutions (political regime type, the distribution of budgetary power and the legal framework) are described for their role in calibrating policy choices in each case.

#### **4.6. VC Policy Choice Hypotheses**

As policymakers learn of policy diffusion items through bounded rational processes, policymakers are expected to rely on cognitive biases. My framework extends the bounded learning tools by delineating the economic management norms that result in unique VC policy choices across the neoliberal to command economy range of varied normative contexts. Policy diffusion literature hypothesizes that the existence of multiple diffusion items and diffusion items' varying levels of specificity drive transformation and variation in policymakers' VC policy choices. By testing the relative strengths of these ways in which transformation can occur, my framework helps to develop diffusion scholars' ability to explain why diffusion does not always, or even frequently,



result in “universal convergence.”

There are similarities in the hypotheses for VC policy choices in the extreme typologies, the Nightwatch-man state and the Command Economy. In an ideal type where the state drives production via SOEs and controls credit allocations (the Command Economy), I expect rejection of diffusion items centered on equity-based capital market building. The Command Economy is therefore expected to reject VC policy items all together, across the regulatory, tax or funding elements. Such rejection is expected to occur even though VC policy information diffuses. Rejection is expected to occur either because policymakers decided that they do not want to develop a local Silicon Valley or because they come to believe that the policy environment has not been responsible for the VC industry’s success or is not something they would like to replicate. To be sure, rejection would occur if the Vietnamese policymakers are found to be aware of the VC policy items and have decided not to employ any VC policies, across the regulatory, tax or funding areas.

On the other hand, in the Nightwatch-man state, I expect a favorable regulatory framework to be deployed as the state’s offering to help facilitate market activity. However, due to its policymakers’ neoliberal norms, I do not expect VC specific tax treatments or FoVCFs to be pursued. In this way, in both extreme cases, the hypothesis is that FoVCFs or tax credits will not be deployed. The Nightwatch-man type, if they are to act, is instead expected to implement “low” forms of VC policies, particularly the LP structure and the ERISA-like legislation, given the policymakers’ norms opposed to financing private sector activity and their orientation towards generally enabling regulatory environments. Table 4.3 below puts these typologies’ hypotheses together, along with the hypotheses for the two middle types. It also includes hypotheses for the timing of VC policy diffusion, based upon the economic structures discussed in Section 4.3.

**Table 4.3: Hypotheses**

Typologies →	Nightwatch-man State	Private Sector Promoter	Financier and Director	Command Economy
VC Policy Choice Hypotheses	Regulatory-focused VC policies that please international investors	Tax-centric VC policies focus on local VC managers	Large, internationally-focused funding for VC policies	Rejection
Timing	Majority (early or late)	Innovator or early adopter	Majority (early or late)	N/A

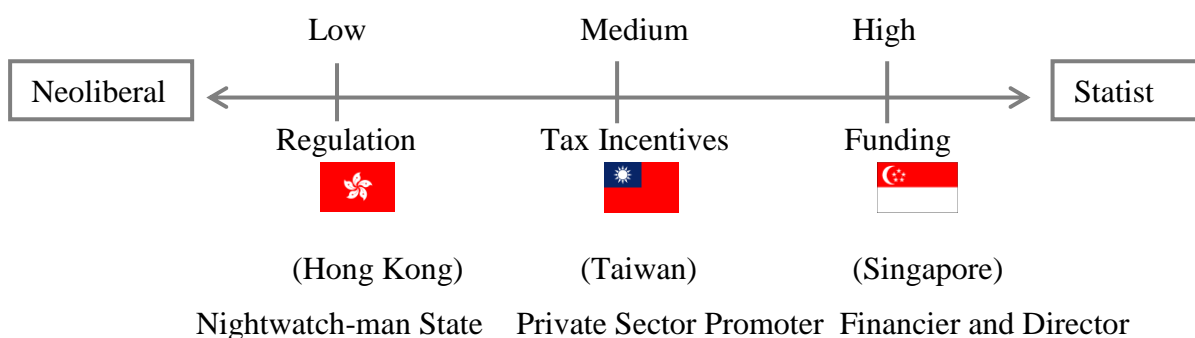
In the Private Sector Promoter type, policymakers’ norms dictate that they support private sector activity, especially small, local firms through non-financial means. In this way, the hypothesis is for adaption of VC policy item(s) towards tax-centric VC policy choices. The Private Sector Promoter, in light of the economy’s robust technology sector and SME activity levels, is expected to have VC policy diffusion occur early on. Taken together, the hypothesis is that, when acting in response to their natural VC policy demand (vis-à-vis high-technology sector SME activity levels), the Private Sector Promoter’s economic management norms shape VC policy choices towards tax instruments focused on local VC managers.

In the fourth and final type, the Financier and Director state, the economic management norms point to either no VC policy action (rejection), or highly interventionist, internationally-focused VC policy choices. The late, but interventionist, VC policy choice hypothesis stems from the following economic management norms. The state’s private sector financing norms favor funding-intense policies and policymakers’ company size and international versus domestic firm preferences, which prefer large and international firms. In this way, the state is expected to use funding instruments

such as the FoVCF to attract international VC managers or investors. In sum, the Financier and Director state is not expected to be a natural supporter of VC policy in light of norms favoring the support of MNCs and due to its moderate levels of technology and SME activity. But, if the state does decide to implement VC policies, it is expected to do so by using the large coffers it typically brings to attracting international firms to establish local operations.

In summary, my overarching hypothesis is that the four typologies' varied domestic normative contexts' are the central driver of their unique VC policy choices. In light of the above discussions of each typology's economic management norms, the proxy states' expected VC policy choices are:

**Figure 4.1: VC Policy Choice Hypotheses on a Neoliberal to Statist Continuum<sup>54</sup>**



As demonstrated by the above Figure, the Nightwatch-man state is expected to favor neoliberal, regulatory-focused VC policies akin to the broadly enabling regulatory environment that Silicon Valley benefited from. The Financier and Director (see the Singapore flag), on the other hand, is placed on the high end of the spectrum as it is expected to direct large amounts of funding, such as a FoVCF, if and when they do deploy VC policies. Yet again different, the Taiwanese flag is placed at the middle of the spectrum as the Private Sector Promoter is expected to focus on tax incentives rather than funding. Finally, the Command Economy is left off of the above continuum as it is expected to reject VC policy items altogether.

<sup>54</sup> Vietnam not included as it is not expected to adopt any VC policy item.

Now that the domestically-generated hypotheses have been expressed, I bring back in diffusion literature’s hypotheses for how the diffusion process is expected to impact policy diffusion outcomes. The attributes of the VC policy diffusion process, which I refer to as “external” in this thesis, beg the following hypotheses:

**Table 4.4:** *Diffusion Literature’s Hypotheses*

Convergence		
	More	Less
Level of Specificity	High	Low
Multiple Diffusion Items	N/A	Increased likelihood for hybridization and adaptation
Diffusion Mechanisms	Competition, coercion and emulation	(Bounded) learning

As detailed in the table above, the level of specificity of the diffusion items predicts less convergence when vague principles are diffused and more convergence when specific models diffuse. Given the existence of multiple VC policy diffusion items, depending upon when and which item(s) are diffused, there may be more or less convergence. More specifically, if the Israeli or Taiwanese policy innovations are diffused, then I expect more convergence across the policy choices. However, when the less specific Silicon Valley policy environment is diffused, I expect states to adapt the policy item to better fit their domestic normative environment.

Bringing the hypotheses together, I expect states most similar to Silicon Valley in terms of norms to have less adaption away from the neoliberal approach. In this way, I expect a

predominantly neoliberal VC policy choice in Hong Kong. Similarly, if more interventionist Singapore strives to develop a local Silicon Valley, we expect – given the combination of the Silicon Valley diffusion item’s vague character and Singaporean policymakers’ finance-laden norms – adaptation towards more interventionist VC policy choices (particularly FoVCFs). More interventionist states are expected to study more interventionist diffusion items – i.e. Taiwan’s tax incentive or Israel’s FoVCF. In this way, though Silicon Valley may still serve as the goal for the Financier and Director state, the more specific, and interventionist, tools (i.e. tax credits and the FoVCF) are expected to be used as blueprints as a means for creating their local Silicon Valley.

The selected diffusion item(s) in each case, taken with the amount of congruence between economic management norms at the point of origin and the point of adoption, are investigated to determine the degree of convergence across VC policy choices.<sup>55</sup> The underlying hypothesis is that the local context matters more to the degree of convergence when the vague Silicon Valley policy environment is the primary diffusion item. When the Israeli and Taiwanese blueprints are diffused, however, I expect less room for interpretation because of their specificity, and therefore less adaptation of those diffusion items. To be sure, the degree of convergence with the Silicon Valley, Taiwanese or Israeli policy items could not be determined simply by the policy item’s level of specificity alone. Instead, the level of specificity along with the impact of local economic management norms in shaping the adaptation needs to be defined before we are able to expect a certain degree of the difference between the source model(s) and the policy choice.

The iterative character of VC policy diffusion (the existence of more policy items over time) as identified through the large-N research, means that the menu of diffusion items has grown over time, so the number of potential combinations of VC policy items continues to grow. As such,

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<sup>55</sup> The congruence of economic management norms with that at the policy item (e.g. Silicon Valley, Israel or Taiwan) is one reason why a qualitative research design best fit this project. The coding and analysis of economic management norms across the large-N dataset, in addition to trying to identify the diffusion items at work, simply lends to a better formulated small-N case study design.

instead of later policy adopters just employing an adaptation of the Taiwanese tax innovation, they may choose to employ the tax credit as well as the LP structure. Another adopter, however, may deploy a FoVCF and legislation similar to the ERISA reinterpretation, but no tax incentive, and so on, and so on. Thus, the iterative nature of VC policy diffusion suggests at least the same amount of variance in VC policy choices over time. This hypothesis is in contrast to hypotheses for greater convergence over time, which comes from the logic that as there is more (positive) evidence of the policy item's performance, deviation from replicating the proven model becomes less attractive (Meseguer, 2009).

The bounded learning mechanism is the glue that binds the external and domestic realms together. This is because bounded learning is determined by domestic policymakers' economic management norms. These norms determine how policy items are sought out, evaluated and translated into local adaptations. Bounded learning is therefore hypothesized to take different shapes in each case (according to each state's policymakers' economic management norms). This stands in stark contrast to Bayesian or rational updating, in which learning leads to policymakers reaching the same beliefs and conclusions.

#### **4.7. Conclusion**

This chapter has extended tools for researching the impact of East Asian policymakers' economic management norms on VC policy diffusion. As mentioned earlier, the singular 'Asian model' advanced in comparative research thus far has not adequately captured the range of normative settings in East Asia. To remedy this gap, this chapter has furthered the tools available for structured investigations of the impact of economic management norms. To provide further context for the East Asian study, formal institutions and economic structures have been discussed for their impact on VC policy choices. In doing so, the typologies articulated here help move

diffusion research beyond the “black box” treatment of domestic contexts.

Hypotheses have been drawn about VC policy choices in the proxy states based upon the five economic management norms. Altogether, the hypotheses are as follows. The Nightwatch-man state of Hong Kong will deploy VC policies that are characterized as “low” level of interventionism. Hong Kong’s regulatory-focused policies are expected to be deployed during the “majority” stage of adoption. The Private Sector Promoter, Taiwan, is hypothesized to deploy VC policies in the “medium” level of intervention, meaning that they will focus on tax policy. Taiwan is expected to deploy their VC policy as an “innovator” or “early adopter”. Singapore, the Financier and Director, is hypothesized to deploy VC policies characterized by their “high” interventionist nature given the focus on funding instruments. Singapore is expected to be a “majority” adopter of VC policy. Finally, the Command Economy of Vietnam is expected to be a rejecter of VC policy action. The chapter also advanced the premise that varying economic structures affect the timing of VC policy diffusion to a state, but has not claimed that functionalist explanations alone can account for the shape of VC policy choices. In this way, the economic structure characteristics inform hypotheses about timing – specifically whether each state will be an early adopter, majority or laggard adopter. The chapter also delineated how formal institutions (regime type, democratization, distribution of budgetary power and legal systems) are expected to shape VC policy choices.

The thesis now applies this analytical framework to investigate VC policy diffusion to the East Asian empirical cases – Hong Kong, Taiwan, Singapore and Vietnam – in the following four chapters. The framework is applied by analyzing the impact of the economic management norms, multiple diffusion items and varying levels of specificity. The diffusion literature’s expectations (about the impact of multiple diffusion items, varying levels of specificity and diffusion mechanisms) are referred to as “external factors” throughout the case studies while the economic management norms, economic structures and formal institutions are covered under “domestic

factors” headings. The case study findings are drawn together in Chapter 9 (Analysis), to identify themes and analyze what the analytically-driven empirical investigations tell us about the sources of varying degrees of VC policy convergence. Of particular importance is the testing of my central hypothesis that policymakers’ economic management norms are the primary drivers of the precise shape of policy diffusion in each state.



## 5. Hong Kong: Nightwatch-man State

### 5.1. Introduction

“The words ‘industrial policy’ make me curl up inside”

– *Last Governor of Hong Kong, Chris Patten: East and West (1998): 243.*

Hong Kong has been ranked the freest economy in the world by the Heritage Economic Freedom Index for more than fifteen consecutive years. To this end, Hong Kong is a state whose policymakers have historically been guided by neoliberal economic management norms. It is also a state with an economic structure with little high-technology SME activity and a financial system consisting of thriving banking, as well as capital markets, sectors. The Nightwatch-man state hypothesis, in light of these characteristics, is that Hong Kong would only be a late adopter of an attractive regulatory framework for the VC market. Yet, my research found that competitive pressures to attract and retain capital, particularly from international investors accessing the Chinese start-up market and fear that their Asian Tiger peers were outpacing their innovation and technology prowess, has driven a normative shift amongst its policymakers in favor of interventionist innovation-related policies. This normative shift facilitated Hong Kong policymakers’ deployment of a FoVCF in the late 1990s and a VC tax incentive in 2005. As a result of the choice of these interventionist policies, Hong Kong’s VC policy choices have not been as hands off, or as Silicon Valley-like, as expected – this chapter investigates the drivers of these VC policy choices.

Hong Kong’s neoliberal norms have been long established as it served as an entrepôt hub during 100 years of British colonial rule. Today, Hong Kong remains a low tax, open trading post and one of the top 10 global economies per capita, in purchasing power parity terms (Latter, 2007). Hong

Kong's leadership has lamented that the neoliberal nature of its role in the economy is the result of its belief that the private sector can better allocate resources than it can (GIS, 1992; Info HK, 2002). Hong Kong politicians' strongly negative views of interventionist policies, at least until the British handover of Hong Kong in 1997, is demonstrated in the last Governor of Hong Kong's colorful statement about industrial policy that opened this chapter. Think tanks have affirmed the reputation of Hong Kong as a laissez-faire bastion; the Heritage Foundation and the Cato Institute have given the number one global ranking to Hong Kong for economic freedom for 15+ and 35+ years, respectively. However, in recent years scholars have been increasingly critical of the notion that Hong Kong's government takes a truly neoliberal approach in practice (Fuller, 2010; Latter, 2007; Youngson, 1982: 132-136; Choi, 1994: 42).<sup>56</sup>

The Hong Kong VC industry, like the broader Hong Kong economy, is effectively entrepôt, as funding comes from abroad and investments are made into SMEs based across Asia (HKVCA, 2013). The remarkable growth of Hong Kong's VC market has come as Hong Kong has had a formidable position as a global financial center and exceptional access to the mainland Chinese market (Author Interview, Hong Kong, 3 January 2012). As a product of this enabling environment and competitive positioning, Hong Kong's VC industry overtook Japan's VC market as Asia's largest VC center by the year 2000. At that time, Hong Kong VC managers' AuM had already reached USD 26 billion (Dietrich *et al*, 2003: 4). The Hong Kong VC market is just slightly larger now – with approximately USD 30 billion in AuM (HKVCA, 2013).

In line with the neoliberal narrative, the large and internationally-inclined Hong Kong VC industry has been said to have grown in the absence of government VC policy (see Dietrich, 2003; Kenney *et al*, 2002). However, this thesis' research found that there has been more government intervention in Hong Kong's VC market than what has thus far been recognized by academics and

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<sup>56</sup> With this said, even critics acknowledge that Hong Kong does remain closer to the neoliberal ideal than many, if not all, other states.

industry analysts. My finding is that previous studies were correct in that the Hong Kong VC policies were largely absent until the 1990s. In this way, through the 1980s, the government VC strategy was consistent with Hong Kong's broader "positive non-intervention" approach to economic management (Mole, 1996: 1). However, by 1990s, the Hong Kong state's approach changed as its policymakers began to feel the "limits of laissez-faire" economic management (Fuller, 2010).

It was then, in the late 1990s, that Hong Kong policymakers first learned about and then launched VC policies. Hong Kong policymakers' initiation of VC policy learning sprung from concern that private investors might not shoulder the necessary risk of financing early-stage companies, and therefore government action was deemed necessary (Wong, 1996: 29). This interventionist mantra purported that VC investments were needed to spark entrepreneurial activity in the local technology sector, to maintain Hong Kong's position as the investment gateway to China and to further develop a local culture of technology investments (see Hong Kong Trade and Industry Bureau, 1998). Hong Kong policymakers' VC policy choices that have been made as a result of the competition and learning mechanisms have included over USD 100 million in a FoVCF and a tax exemption. The deployment of these interventionist VC policy efforts are in addition to the Hong Kong regulatory environment's longstanding offering of the non-VC specific LP structure.

As mentioned at the outset, this chapter examines the drivers of Hong Kong's more-interventionist-than-expected VC policy choices. This examination of the Hong Kong VC policy choices provides a lens for viewing the changing nature of the Hong Kong state's intervention in its economy. The chapter proceeds as follows. Section 5.2 outlines Hong Kong's VC policies and its VC industry to help us compare how they fit the Nightwatch-man state's regulatory-focused VC policy hypotheses. Section 5.3 examines the external factors that impacted Hong Kong's VC policy

choices, including the diffusion mechanism(s) and the existence of multiple diffusion items of varying specificity. Then, Section 5.4 investigates the impact of domestic factors – particularly economic management norms, formal institutions and economic structures – on Hong Kong’s VC policy choices. The Conclusion assesses how these external and domestic factors interacted to shape Hong Kong’s VC policy choices.

## 5.2. Hong Kong’s VC Policy Choices and VC Market

The 2003 APEC-sponsored research report on Asia Pacific VC ecosystems commented that “all Asian APEC economies in this study, except China Hong Kong, have special laws and special regulatory authority designated by law or regulation for venture capital firms” (Dietrich, 2003: 22). While Hong Kong still lacks VC-specific regulations, this statement is misleading as it suggests that no policy action has been deployed by the Hong Kong state. As mentioned earlier, this thesis’ empirical research has revealed that there has been more government involvement in supporting VC than what these reports have previously recognized. More specifically, the Hong Kong government has employed tax incentives and a FoVCF. The below table details Hong Kong’s VC policies:

**Table 5.1:** Key Dates in Hong Kong’s VC Policy Choices

Year	Milestone
1993	<b>Applied Research Fund (“ARF”)</b> , a government VC fund managed by the Applied Research Council with USD 32m in budget, began administering financing (mostly loans) to SMEs with a target annual return of 5%
1998	<b>ARF took the shape of a FoVCF, following a Legislative Council review, and received another USD 96m in funding;</b> in November 1998 the ITC appointed three private VC fund managers – Walden Technology Management, AsiaTech Ventures and HSBC Private Equity Management – to manage the Fund
1999	ARF added Softech Investment Management as the fourth VC manager and the

	Innovation and Technology Fund (“ITF”) was launched with HK\$5 billion as a means of supporting the transition of local industries to higher value-added activities (the ITF subsumed the Industrial Support Fund (which had been launched in 1994) and the Services Support Fund (which had been launched in 1996))
2000	Applied Science and Technology Research Institute (“ASTRI”) was created to conduct industry-oriented R&D, using Taiwan’s ITRI as a model
2000	The <b>Innovation and Technology Commission (“ITC”)</b> <sup>57</sup> was formed along with the 1 July 2000 re-organization of the Trade and Industry Bureau into the Commerce and Industry Bureau
2001	Small and Medium Enterprise Fund was set up in 2001 to improve SME financing
2004	The ITF set up the Small Enterprise Research Assistance Program to finance start-ups’ R&D; re-payment is contingent on their success (producing a profit or exiting)
2005	Revenue Bill (Profits Tax Exemption for Offshore Funds) 2005 ensures that offshore VC funds domiciled in Hong Kong are entitled to a tax exemption and China passed its first VC legislative package - Provisional Measures for the Administration of Venture Capital Enterprises
2007	Hong Kong passed the avoidance of double taxation legislation for Chinese investments

*Sources: HKVCA, ISD (2000, 2005, 2009), Kenney et al (2002: 100-105); Au and White (2009: 13); Shih and Chen (2010: 117).*

Table 5.1 illustrates that Hong Kong policymakers have invested in the local VC industry, particularly by allocating capital to private VC managers via the 1998 ARF FoVCF. The government has been an investor in VC managers and has conceded tax revenues, which rebuffs the misconception that the Hong Kong government has not funded its VC industry and also shows that Hong Kong’s VC policy choices have not fit with the Nightwatch-man hypotheses.

As detailed above, Hong Kong’s first government VC funding initiative was the Applied Research Fund (“ARF”) (GIS, 1995). The ARF was originally called the Applied Research and

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<sup>57</sup> The ITC is the government agency with oversight for most of the initiatives relevant to VC policy and SME support. Since its creation, public funds for SMEs and VC managers, including the ITF, the ARF, DesignSmart Initiative and the Patent Application Grant schemes, have been under the ITC’s oversight.

Development Scheme and its funding totaled HK \$200 million (Hong Kong Legislative Council, 1999: 3).<sup>58</sup> The first ARF, in 1993, came in the form of loans and grants administered by the government (a private entity wholly owned by the state) and its goal was to produce a 5% return on investment (Kenney *et al*, 2002: 104). The 1993 government-administered ARF was not deemed a success. Policymakers were motivated to pursue annual returns motivating loan-based (rather than equity) financing and the lack of early-stage investment expertise within the ARC (Hong Kong Trade and Industry Bureau, 1998: 2). As a result of the Legislative Council review of the ARF in 1997, a new management strategy was deployed for the 1998 ARF (Author Interview, Hong Kong, 21 December 2011; ISD, 2005).

It was following this review that Hong Kong's first, and only, FoVCF was created. Rather than have civil servants run the second incarnation of the ARF, the 1997 Administration review of the ARF recommended that "professional venture capital firms with the experience in technology investments" manage the ARF (Hong Kong Legislative Council, 1999: 1). The goal of the ARF was to "prop up a local VC industry" (Author Interview, Hong Kong, 21 December 2011). In this way, the 1997 Administrative review affirmed that the goal of the ARF was to "promote technology ventures and to fill a gap in the local capital market" (Hong Kong Legislative Council, 1999: 1). To reiterate the point, the involvement of VC managers in the ARF's operations was to "further promote the capital market's interest in technology projects" which was hoped to "help build up a culture of technology investment in Hong Kong" in the long term (Hong Kong Trade and Industry Bureau, 1998: 2). Following this advice, the Finance Committee of the Legislative Council approved this recommendation in March 1998 and appointed three VC firms to manage the ARF's investment activity beginning in November 1998.

Three VC managers were hired to manage investments for the 1998 ARF, making it a

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<sup>58</sup> Funding for the first ARF came from the Finance Committee of the Legislative Council, as it approved HK\$ 200 million from the Capital Investment Fund in December 1991 (GIO, 1994: 87).

FoVCF. When explaining why more than one VC manager was selected to manage the 1998 ARF, the Trade and Industry Bureau commented that “we believe the involvement of more venture capital firms will create more synergy between the Government and the venture capital industry, and will gradually build up a culture of technology investment in Hong Kong” (Hong Kong Trade and Industry Bureau, 1998: 3). These VC managers were responsible for selecting investment targets and providing “management and network advice to the investee companies” (ISD, 2000: 111). The three VC managers were Walden Technology Management, HSBC Private Equity Management and AsiaTech Ventures and they were entrusted with HK \$300 million (for Walden and HSBC) and HK \$150 million for AsiaTech (Hong Kong Legislative Council Panel, 2000: 1). Then, in November 1999, a fourth VC manager was added (Softtech Investment Management Ltd) with HK \$250 million to manage following a two-stage selection process (Hong Kong Legislative Council Panel, 2000: 2). All of the VC managers included in the ARF scheme were remunerated through a 3 to 4% management fee and a formula-based share of the profits (Hong Kong Trade and Industry Bureau, 1998: 2). The ARF II did not have a 5% return target; it instead expected a best return achievable.<sup>59</sup>

As of May 2000, the ARF, which was then operating as a FoVCF, had invested in 14 technology companies with HK \$230 million in funding (Hong Kong Legislative Council, 2000: 2). These investments were hailed an “initial success,” as four of the portfolio companies had won 1999 Hong Kong awards for technology and innovation and another portfolio company was acquired by a public traded company (Hong Kong Legislative Council, 2000: 2). Despite the initial success, the ARF went on to lose over HK\$ 240 million (Au and White, 2009: 15). In fact, the ARF has been described as “something of a disaster” as the fund had to write off over half of the invested

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<sup>59</sup> An Industry and Trade Bureau review “pointed out the need to protect the seed capital and the requirement for a 5% return have created a hampering effect on the ARC in providing equity injection to approved projects because the return in the form of dividend is less certain. Consequently, most of the approved projects have been given loans with rather stringent conditions” (Hong Kong Industry and Trade Bureau, 1998: 2).

amount (Latter, 2007: 30).<sup>60</sup> The poor performance of the ARF has been attributed to the “invasive government restrictions on investment opportunities” (Author Interview, Hong Kong, 21 December 2011). In addition to transparency and (quarterly) reporting requirements, the private VC managers were subject to produce returns within an unrealistic timeframe (Au and White, 2009: 15-16).

As a result of public scrutiny of its poor performance, in 2004 the ITC made the decision (at the recommendation of the Legislative Council Audit Committee) to wind down the structure (ISD, 2005).<sup>61</sup> The negative perception of the ARF’s performance and its subsequent winding down, as well as the antagonistic role of the LegCo in the budget approval process, have “made it difficult for the ITC to start, or continue, similar initiatives” (Author Interview, Hong Kong, 21 December 2011). In sum, Hong Kong policymakers launched one FoVCF (as a means of outsourcing the investment sourcing and decision responsibility) in 1998 but started to wind it down by 2004.

The second VC policy area, the tax element, has also been pursued in Hong Kong. VC-specific tax treatment has come in contrast with Hong Kong’s typical tax approach. As an illustration of its general tax environment, Hong Kong’s leadership has lamented that its “continuing success... is due to a simple tax structure and low tax rate” (GIO, 1992: 80). Hong Kong’s focus on its horizontally low tax rates was established by Colonial Regulations and its Basic Law<sup>62</sup> as a SAR of China. In this way, Hong Kong has not historically offered tax incentives to select industries. Instead, Hong Kong policymakers have offered a generally low tax rate environment, across four types.<sup>63</sup> Breaking with this tradition, in 2005, Hong Kong passed

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<sup>60</sup> As of 31 May, 2011 the valuation of the 24 investments made by the fund managers was 50% of the corresponding total investment costs (Hong Kong Legislative Council Panel on Commerce and Industry, 2011: 2).

<sup>61</sup> The ARF assets have been in liquidation ever since. As at the “end May 2011, 20 projects were exited while 4 are still active” (Hong Kong Legislative Council Panel on Commerce and Industry, 2011: 2).

<sup>62</sup> Articles 107 and 108 of the Basic Law lay out the objective of Hong Kong’s low-tax policy.

<sup>63</sup> The Hong Kong tax regime consists of low tax rates across four types: profits tax (for corporations), salaries tax (individual tax), property tax and estates tax (Shu-hung, 1996: 40).



legislation for off-shore VC funds domiciled in Hong Kong to be tax exempt. This was accomplished by way of the Revenue Bill, also known as the Profits Tax Exemption for Offshore Funds. Prior to this 2005 bill, tax incentives to attract VC managers to Hong Kong had not been VC-market specific. Whereas Taiwan offered a 20% tax deduction for VC investors beginning in the 1980s and Singapore ensured that the VC asset class was tax-free early on, it was not until 2005 when Hong Kong policymakers enacted a VC tax exemption.

As for the third and final element of VC policy – regulation – Hong Kong policymakers have not deployed VC industry specific regulations. While Hong Kong still lacks its own VC regulatory framework, Hong Kong-domiciled VC managers have been able to use the LP structure that was first established by the British colonial government in Hong Kong in 1912 and then updated as Capital Ordinance 37, section 4 in 1950 (Hong Kong Legal Information Institute, 2013). The generally well-governed Hong Kong financial system, including the provision of the LP structure, has paved the way for its financial services sector to expand to VC investment activities (Kenney *et al*, 2002: 100). Though the use of the LP structure is consistent with the LP structure popular in Silicon Valley, the Hong Kong government has not duplicated legislation akin to the 1979 reinterpretation of the US ERISA act, or what is known as the “Prudent Man Rule,” which enabled American pension funds to invest in VC funds. Instead, Hong Kong’s regulations stipulate that public funds (e.g. pension funds who would be investors in the VC asset class) are restricted to invest in publicly-traded equities, debts, warrants and futures – and have therefore not been able to invest in VC funds (Au and White, 2009: 24-25). In this way, Hong Kong policymakers have not deployed regulations in an attempt to be more like the Silicon Valley policy environment.

Though the Hong Kong SAR regime has not deployed VC-specific regulations, the PRC has. The PRC’s VC regulations matter to Hong Kong as Hong Kong law has, since 1997, needed to be

consistent with PRC government legislation, given the “one country, two systems” arrangement.<sup>64</sup> So, Hong Kong’s VC regulations, if there were any, would need to be consistent with Chinese VC regulations. The first, national Chinese VC legislation came via the PRC’s “Provisional Measures for the Administration of Venture Capital Enterprises.” The Provisional Measures detail registration requirements for domestic and foreign VC managers operating in China, as a means for the PRC government to “promote the development of” VC, to “standardize their investment activities and to encourage them to invest” in high-technology SMEs (Wang & Co, 2006).<sup>65</sup> The PRC’s Provisional Measures have named the regulatory authority, reporting requirements, structures available (e.g. the limited liability company) and the scope of business activities considered to be VC activity in China. Given that Hong Kong does not have its own regulatory package for VC markets China’s 2005 VC legislation has not yet acted as a constraint on Hong Kong’s VC industry governance. However, if in the future Hong Kong policymakers design VC regulations, they would need to comply with the PRC’s provisional measures.

In summary, Hong Kong’s VC policy choices to date have consisted of a FoVCF, a tax exemption and a broadly enabling (though not VC specific) legal structure. As expected, Hong Kong was a late adopter of VC policies, as its first efforts, the ARF, only occurred in 1998. However, in contrast to the Nightwatch-man state hypotheses, Hong Kong has not only deployed the Silicon Valley-consistent LP structure for its VC industry. Instead, Hong Kong policymakers broke with the generally low tax rate in 2005 by offering tax exemption to Hong Kong-based, offshore domiciled, VC managers. Even more interventionist than the tax incentive for its VC

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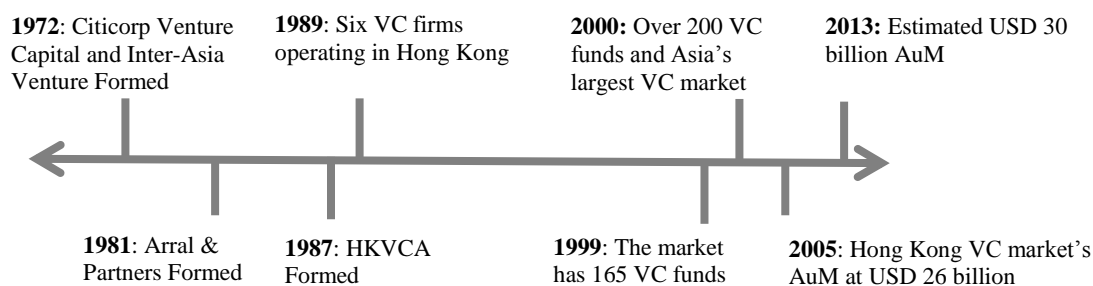
<sup>64</sup> Hong Kong operates a common law system and, as of 1997, has been ruled by the Basic Law since its handover from British colonial rule to being a SAR of China. The Basic Law is effectively a constitution which outlines the governance of Hong Kong across a number of economic issues, including the maintenance of its low tax policy (Shu-hung, 1996: 47).

<sup>65</sup> The PRC’s 2002 research paper outlined the best practices for the government’s role in building the VC market, which laid the groundwork for the 2005 Provisional Measures: the need to produce a coordinated plan for the VC industry, strengthen macro guidance and governance for the VC industry, stimulate the industry through the provision of financial services, perfect law and regulation formulate to standardize VC, use favorable tax policies, standardize the securities market, establish information exchange and provide training to VC managers (PRC, 2002: 14-18).

industry, Hong Kong policymakers deployed a FoVCF (the ARF) in the late 1990s. The combination of these VC market initiatives means that Hong Kong has acted more interventionist than the Nightwatch-man typology expected. What's more, Hong Kong policymakers have not attempted to replicate the Silicon Valley regulatory environment as they have not allowed its large retirement funds to invest in VC funds, as the America ERISA reinterpretation did. *In total, Hong Kong did not deploy duplications of the Silicon Valley regulatory environment. Instead, its policymakers chose interventionist tools (FoVCF and tax exemption) to support its VC market.*

The remainder of this section provides a brief summary of the Hong Kong VC industry's history. The Hong Kong VC market was initiated by the private sector in the 1970s as part of the island's overall financial services sector growth (Author Interview, Hong Kong, 3 January 2012). The first VC managers in Hong Kong were corporate subsidiaries (Citicorp Venture Capital and Inter-Asia Venture Management) and were launched in 1972 (Kenney *et al*, 2002). The Hong Kong Stock Exchange (which was launched in 1986) produced exceptional returns, which brought international attention to equity investments in pre-IPO companies in Hong Kong (Au and White, 2009: 9). Because of this IPO activity, investments in private equity grew, and Hong Kong was increasingly used as a base for VC managers investing across Asia. By the end of the 1980s, there were six VC firms operating in Hong Kong, two Prudential subsidiaries and one subsidiary of AIG (Kenney *et al*, 2002: 102). Figure 5.1 highlights milestones in the Hong Kong VC industry:

**Figure 5.1: Hong Kong VC Market Timeline**



Sources: Kenney *et al* (2002), AVCJ (2005), HKVCA (2013)

As the largest VC market in Asia, Hong Kong has been a “hub” for VC managers investing in Asian start-ups (especially in China) since 2000 (HKVCA, 2009: 8).

Hong Kong’s VC market remains an extension of its international financial services offering, rather than being integrated with its domestic technology SME sector (as Taiwan’s VC industry has been). With a strong banking history, VC professionals in Hong Kong have viewed VC investments as “pure play, late-stage financial transactions” as opposed to long-term financial and operational partnerships with early-stage start-ups (Author Interview, Hong Kong, 21 December 2011). On the personnel level, staff joining VC firms in Hong Kong has typically come from banking backgrounds as opposed to having start-up or operational experience in the technology sector (Au and White, 2009: 30). In this way, Hong Kong VC has been an extension of its banking sector as opposed to an independent, early-stage investment arena. The bank-related nature of the VC industry in Hong Kong is further discussed in Section 5.4.

### **5.3. External Sources**

Now that Hong Kong’s VC policy choices and the Hong Kong VC industry have been introduced, this section turns to examining the external forces that have shaped Hong Kong’s VC policy choices. To do so, it reveals the impact of Hong Kong’s efforts to maintain a competitive position vis-à-vis the other Asian financial centers on its VC policy choice. In addition, it examines how Hong Kong policymakers have learned what other regions, including Silicon Valley and Israel, have done to support their innovative ecosystems. In doing so, it identifies the primary diffusion mechanisms and the diffusion items (and their level(s) of specificity) in this case. It also discusses the impact of the existence of multiple diffusion items on Hong Kong’s VC policy choices.

The competition mechanism has motivated VC policy diffusion in Hong Kong. Competition has mattered since, as a quintessential entrepôt trading post, Hong Kong has relied heavily on its hub position in the world financial system. More specifically, Hong Kong has competed for capital particularly hard against Singapore in line with China's economic rise, as both states have vied to be the preferred hub for VC managers investing in the Chinese mainland (Author Interview, Hong Kong, 3 January 2012). In recent years, as China has improved its institutional infrastructure and investors, including VC managers, have gained confidence in operating in the mainland, Hong Kong has also competed to be the location for VC investment activity against Beijing and Shanghai. As Singapore and Chinese mainland cities have gained as regional financial hubs, Hong Kong's position as the gateway to China has been increasingly contested (Kenney *et al*, 2002: 105). The threat of VC managers opening offices directly in China, and companies executing IPOs on Chinese exchanges, has "helped to motivate the Hong Kong government to support VC" (Author Interview, Hong Kong, 3 January 2012).

More specifically, increasing competition from other financial centers, particularly Singapore, has been named as a force that pressured Hong Kong's policymakers to lower VC funds' profit tax rates to zero. The Financial Secretary's 2003 Budget Speech is evidence of the competitive pressures that motivated the government to implement its tax incentive:

Hong Kong is facing keen competition from other major IFCs [international financial centers] in attracting foreign investments. Major financial centers such as New York and London as well as the other major player in the region, Singapore, all exempt offshore funds from tax. The financial services industry has expressed the view that it is vital for us to provide tax exemption for offshore funds, or otherwise some of these funds may relocate away from Hong Kong (Low Tax, 2011).

Within two years of this speech, the Revenue Bill 2005 was passed to help Hong Kong better compete with other financial hubs (Chen and Lee, 2007). In this way, Hong Kong's leadership

demonstrated their awareness of the growing competition and responded by offering a similar tax exemption to maintain their position as a regional fund management center. As evidence of the continued competitive pressures since 2005, in the spring of 2013, the Financial Secretary further extended the tax exemption specifications. This was done to “address local concerns that Hong Kong is losing ground to Singapore, which offers greater certainty on tax treatment and clearer regulation of private equity” (AVCJ, 2013).

In response to these broad competitive pressures, Hong Kong policymakers have also learned what other countries have done to support successful innovation ecosystems. To this end, they have studied government policies to support technological development, particularly those of Singapore, Taiwan and South Korea. As a SME-specific example, the following argument was made in the Hong Kong Legislative Council’s proceedings:

In South Korea, Taiwan and Singapore, there are officially sponsored organizations which have been set up to give support to small and medium-sized factories, but in Hong Kong there is as yet no such organization. This is an area which the Hong Kong Government should study carefully as to what is being done in the three places mentioned, and establish a similar type of organization adapted to Hong Kong circumstances (Hong Kong Legislative Council, 1987: 715).

This urging to study East Asian peers’ industrial policies, particularly Taiwan’s research institute, ITRI, has manifested itself in Hong Kong’s also looking “into the possibility of establishing a permanent research institute” and the later launch of ASTRI, its version of ITRI (Hong Kong Legislative Council, 1987: 728; Au and White, 2009; Hong Kong Legislative Council, 2011).

Hong Kong’s learning of VC policy items has been facilitated by their “cosmopolitan capitalists” (Hamilton, 1999) who have long established *guanxi*. Leveraging these private sector networks, Hong Kong policymakers have been said to be “keenly aware of Silicon Valley and have

imported information on how to build a Silicon Valley-like cluster” at home (Author Interview, Hong Kong, 21 December 2011). Hong Kong policymakers’ admiration for Silicon Valley has been expressed in numerous ways by innovation policymakers. As an example, the chairman of the Hong Kong Science Park said that the creators of the park “looked to the US, particularly Silicon Valley, and their incubation model” when designing the science park (Author Interview, Hong Kong, 20 December 2011). In a similar vein, a Legislative Council report found that Stanford University’s science park “helped transform the Silicon Valley area from one of the poorest regions in the United States into a global center of technology, finance, education and research” (Hong Kong Legislative Council, 2011: 7). Specific to the role of the VC industry in Silicon Valley, the Hong Kong government learned that a:

major factor behind the success of Silicon Valley as a leading R&D hub is the availability and contributions of private capital, in particular from *venture capitalists*, to support projects with good realization” (Hong Kong Legislative Council, 2010: 6; Italics added for emphasis).

To institutionalize its acquisition of knowledge on the Silicon Valley policy environment, the Hong Kong state has hired policymakers that possess Silicon Valley experience. The ITC’s senior manager for technology entrepreneurship funding (as of 2012) is a great example of this. He lived in Canada for over twenty years and “was sent to Silicon Valley to spend time researching the incubation model” while working for IBM (Author Interview, Hong Kong, 21 December 2011). Upon his return to Hong Kong in 2005 he was hired by the ITC to be the manager for its entrepreneurial funding initiatives. He said he won the highly competitive position due to his Silicon Valley knowledge and entrepreneurial experience. These internationally experienced policymakers at agencies such as the ITC have helped acquire information on VC policy efforts – especially on Silicon Valley – through their knowledge and personal networks.

In addition to Hong Kong policymakers' learning about Silicon Valley, evidence was also found of Hong Kong policymakers learning about the Israeli FoVCF. To this end, in May 2000, Hong Kong's Financial Secretary, Donald Tsang, visited Israel "to gain first-hand knowledge on the country's success in the development of innovation and technology" (ISD, 2000: 361). His trip was organized by Israel's OCS (the Israeli office responsible for the Yozma Fund and other VC policy measures), and had been designed to help Hong Kong policymakers "learn about how the Israeli Government provides assistance and support" (People's Daily, 2000). Prior to his trip (which took place from May 25-30, 2000), Mr. Tsang commented:

To enhance Hong Kong's competitiveness in an increasingly technology-driven world economy, we must harness the power of innovation and technology. I *understand that Israel has been known as 'Silicon Valley II' in recent years, with sharply defined policies towards scientific and technological activities. The insights gained from the visit will be helpful in the formulation and implementation of our own innovation and technology policy* (People's Daily, 2000; Italics added for emphasis).

Mr. Tsang's statement indicates Hong Kong policymakers' awareness and reverence for both the Silicon Valley and Israeli policy environments. In 2001, the HKVCA lamented that they "continue to update ourselves with venture capital developments in Israel through our regular contact with the Israeli Consul" (HKVCA, 2001: 2). These insights gleaned by the HKVCA have then been relayed to the ITC regarding their efforts to support technology entrepreneurship and VC activity in Hong Kong (Author Interview, Hong Kong, 3 January 2012). However, their learning of the Israeli policy item has not come through direct encounters with the Yozma team (Author Interview, Tel Aviv, 6 October 2013) and has not been found to have driven the ARF II's FoVCF structure in 1998.

Instead, my research found that Hong Kong's policymakers' domestic policy experimentation and learning shaped their FoVCF design. Hong Kong policymakers' use of the



FoVCF structure (in the 1998 ARF) was the product of their finding that the 1993 ARF's operations (with the ARC running the VC fund itself) were not optimal (Author Interview, Hong Kong, 21 December 2011). More specific to the rationale for its FoVCF structure, as previously mentioned, policymakers found that the ARC did not have the expertise to manage the VC investments, so external management was sought out. Hong Kong policymakers' decision to select more than one external VC manager was the result of the desire to "diversify the risks involved" and "introduce an element of competition." So, rather than the 1998 ARF being a duplicate of an external VC policy diffusion item (namely the Yozma Fund), its structure has been a reflection of internal reviews and policy learning derived from earlier policy experimentation (particularly the 1993 ARF).

Contrary to the multiple diffusion item hypothesis, the existence of all three VC policy diffusion items by the time Hong Kong policymakers began to act was not found to account for Hong Kong's VC policy choices. Hong Kong policymakers have learned about the Silicon Valley, Israel, Taiwan and Singapore clusters for ways the state could support high-tech growth (Author Interview, Hong Kong, 20 December 2011). But, Hong Kong policymakers have not duplicated what they have learned of the Silicon Valley policy environment (beyond the continued use of the LP structure), the Israeli Yozma Fund or the Taiwanese tax model. As a result, Hong Kong policymakers have not created hybrids of existing VC policy diffusion items.

Instead, Hong Kong policymakers have synthesized their own versions of two policy elements (tax and funding). While Hong Kong policymakers knew about the VC policy items, they have not duplicated the specifics of these foreign models nor have they expressed a desire to replicate the VC policy diffusion items. In this way, Hong Kong's FoVCF (the 1998 ARF) was not closely modeled after Israel's Yozma Fund. In addition, Hong Kong's VC tax exemption is also different than Taiwan's 20% credit. Rather than Hong Kong policymakers replicating Taiwan's VC tax credit, evidence was found of Hong Kong policymakers learning about and then replicating

Singapore's tax exempt status due to its direct competition with Singapore. In short, these external inputs cannot alone account for the unique form of Hong Kong's VC policy choices, so we turn to domestic factors to explain the precise shape of Hong Kong's VC policies.

#### **5.4. Domestic Factors**

The Hong Kong government's self-proclaimed role in economic management has been described as merely "one of facilitation" as the state "neither protects nor subsidizes manufacturers" (GIS, 1992: 79). Their positive non-intervention approach has meant that the government strives to provide services that are "good for business," including education, health, housing and infrastructure, without unnecessary interference in business and without high tax rates (Mole, 1996: 4). Another popular mantra has been that Hong Kong policymakers are guided by their belief in "small government, big market" (Author Interview, Hong Kong, 21 December 2011). However, as already mentioned, scholars have found that the Hong Kong policymakers' norms have become more interventionist in response to its hollowing out and loss of a competitive edge in technological innovations (see Fuller, 2010). It has been in response to these pressures as Hong Kong policymakers have embraced more interventionist norms in order to advance their "technology sector and further build out its financial services sector offerings" in an effort to better diversify the economy (Author Interview, Hong Kong, 20 December 2011).

Under British colonial leadership, Hong Kong policymakers' economic management norms were broadly oriented towards positive non-intervention. Britain's approach to ruling Hong Kong involved not having a heavy hand in economic management and maintaining a balanced budget (Au and White, 2009: 8). The motivations for Britain's economic management strategy was both the value of Hong Kong as an export-oriented trading post within the empire, and Britain's desire to minimize its financial obligations involved in running colonies after World War II (Choi, 1994: 40-

41). As a result of these economic management norms, Hong Kong's industrial policymaking had been limited as the government refrained from implementing sector-specific policies. Growth, particularly of Hong Kong's financial sector, was expected to continue without industrial policy. In this way, neoliberal norms prevailed in Hong Kong through the 1980s, even though there has been initial awareness that if Hong Kong was to maintain its competitiveness, more government support, such as an institute like the Japanese MITI, may be needed (Hong Kong Legislative Council, 1987; Youngson, 1982: 147).<sup>66</sup>

**Neoliberal economic management norms delayed the onset of VC policy diffusion during the British colonial era.** The idea that VC activity could contribute to Hong Kong's economic and technological upgrading had been mentioned as far back as the Hong Kong Legislative Council's 1987 proceedings. In the 14 January 1987 LegCo meeting, a participant suggested a new category of investment dealers that he called "venture capital investment dealers" and explained that VC manager's use of equity investments could help promote start-ups, as well as VC managers' ability to "provide managerial, technological or professional support" (Hong Kong Legislative Council, 1987: 714). But, in this representative anecdote, the very next person to speak reiterated the role of non-interventionism in Hong Kong's economic success, effectively rebuffing the notion of overtly supporting the VC sector. In this way, through the 1980s, VC sector specific policy initiatives were not compatible with Hong Kong policymakers' neoliberal pre-existing economic management norms.

**Beginning in the 1990s, however, there was a palpable shift in the pre-existing economic management norms, in a move away from its laissez faire approach.** The shift came as policymakers started believing that "the government had to get involved as early stage R&D" and "risk [equity] investments would not have been picked up by the private sector" (Author

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<sup>66</sup> Some today blame Hong Kong's weak positioning as a tech centre in Asia on the government's neoliberal approach, and therefore its lack of industry-specific industrial policies, through the 1980s (Lall, 2004: 17; Fuller, 2010: 1-5).

Interview, Hong Kong, 21 December 2011). As a result of these shifting pre-existing economic management norms, in the 1990s the government:

took steps to improve the technological infrastructure to support the move towards high value-added, technologically advanced industries, including the launch of a special fund for projects which enhance the territory's technological and industrial development" (GIS, 1995: 103).

Hong Kong policymakers' normative shift can also be evidenced by the revolving fund that financed projects recommended by the Industry and Technology Development Council (GIS, 1995: 110), the launch of the Cyberport and Hong Kong Science and Technology Parks Corporation initiatives and the ITC's formation in 2000 (Shih and Chen, 2010: 114).

In addition, Hong Kong policymakers' normative shift towards interventionism since the 1990s has been expressed in speeches given by senior government officials, such as the 2002-2003 budget speech given by Financial Secretary Mr. Antony Leung in March 2002. In this speech, Mr. Leung said that being a believer in a market economy does not mean that the "government should be passive." Instead, he lamented that one of the roles of the state is to provide "infrastructure in which the private sector will not invest" (Info HK, 2002). In addition, Hong Kong's Chief Executive's 1997 Policy Address set out "his vision of developing Hong Kong into a center for innovation and technology" and appointed the ITC to advise him on how to achieve the vision (Hong Kong Trade and Industry Bureau, 1999: 4).

Hong Kong's private sector financing norms also shifted towards policymakers believing that they could add value to private sector activity by allocating government funding. The shift in favor of private sector financing resulted in the marquee SME funding initiative, the HK\$ 5 billion ITF,<sup>67</sup>

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<sup>67</sup> The ITF was launched to support "projects that will help upgrade the level of technology and promote innovation in the manufacturing and services industries" (ISD, 2000: 111). Through 2005, the ITF provided financial support of

which was established in June 1999 (Hong Kong Public Finance Ordinance, 1999). As further evidence of the 1990s shift in favor of private sector financing, SME financing schemes have been deployed to incentivize cross-border, technology sector focused activities with China. To this end, the 1995 CARDS (which was folded into the ARF in 1998) was “launched to support product development projects undertaken in collaboration with China’s research institutes” (ISD, 1996: 99). The ARF initiative, which was adjusted into a FoVCF in 1998, was made possible by this shift in favor of directing money to specific private sector firms.

Hong Kong policymakers’ company size and local versus international firm preferences began shifting in favor of local SMEs. This shift in favor of small, local firms has helped motivate policymakers to deploy efforts to “increase the high-tech start-up activity in Hong Kong” as part of the Silicon Harbor ambitions (Author Interview, Hong Kong, 20 December 2011). To this end, Hong Kong policymakers have created incubation centers such as the Hong Kong Industrial Technology Centre, which was opened in 1995, the Hong Kong Science and Technology Park, which launched in 2001, and the Cyberport that was initiated in 1999 (ISD, 1996; ISD 2005).

However, while local SMEs have been given greater priority in recent years, Hong Kong policymakers continue to be driven by their entrepot tradition of attracting large, international firms to set up a regional hub. To this end, as VC policymakers have deployed VC policies they continue to attract international investment and allocate money to large, international VC managers. As an illustration, the ARF II endowed money to Walden and other international VC managers, rather than to new, local VC managers.

The fifth and final economic management norm that is examined here is the policymakers’

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approximately HK\$ 2 billion to 758 projects (ISD, 2005: 121). Earlier, the Industrial Support Fund (which was folded into the ITF) invested HK\$ 195.85 million across 122 research projects (ISD, 1996: 99). Between 2001 and 2002 alone the ITF launched four SME funding schemes – the SME Loan Guarantee Scheme, the SME Export Marketing Fund, the SME Training Fund and the SME Development Fund (ISD, 2005: 120-121).

preference for capital markets or bank sector promotion. In this economic management norm, Hong Kong's policymakers' have promoted the comprehensive suite of financial services offered by its entrepot financial hub. This balanced banking-capital markets sector norm comes as the Hong Kong state has not directed credit to the private sector vis-à-vis public banks as other East Asian states, such as Korea and Japan, have (Whiteley, 1992: 39-43). Overall, Hong Kong policymakers have strived to reinforce its "position as an international financial center in general and as a capital formation center, an offshore Renminbi (RMB) center and an asset management center" (ISD, 2009: 66). While a major banking center, attracting international fund managers, offering a full suite of capital market services and developing its ability to be the financial centre for investments in China, has also been central to the Hong Kong financial sector policy.

In this vein, Hong Kong's policymakers have conceptualized the VC industry as an extension of its banking sector. A working party was set up by the Hong Kong Association of Banks to assess "the demand for venture capital as a source of investment funds alternative to bank loans, examining how venture capital operations might be facilitated, and considering how such operations might help" SMEs (Hong Kong Legislative Council, 1987: 742). Taken together, Hong Kong's VC industry support has been propagated – and subsumed – by its banking sector, rather than being a reflection of its policymakers' preference for capital markets or banks.

To bring this discussion of economic management norms to a close, Hong Kong's pre-1990s economic policymaking was driven by policymakers' adherence to neoliberal ideologies. However, since the 1990s there has been a shift in policymakers' economic management norms towards greater intervention in the market, particularly with respect to financing private sector activity and supporting small, local technology start-ups. Hong Kong policymakers' normative shift in favor of state intervention, particularly to aid technology-focused SMEs, as argued here, helps explain the deployment of interventionist VC policies, namely the ARF. Hong Kong policymakers' capital

markets versus banking sector preferences have been relatively balanced, and this contributed to policymakers seeing their support of the local VC industry as a means for supporting the completeness of their financial system (though the banking industry took the initiative of treating VC as its extension).

Turning to formal institutions, the Hong Kong policymaking process during British rule has been described as “executive led” as the Governor, key business people and civil servant elites set the policymaking agenda and had decision-making power. In the Colonial system, the Executive Council (“ExCo”) and the LegCo served advisory roles to the Governor; however they did not have binding power over the Governor’s policy decisions (Choi, 1994: 47). As a result, the Governor’s grasp on power during this era was not rivaled by the LegCo nor ExCo elites (Koehn, 2001: 98-99). Colonial policymakers, not beholden to public opinion and without fear of public scrutiny, were able to make swift policy choices in line with the vision of its leaders. The following passage reiterates these points on the concentration of power:

The policy-making process in Hong Kong was very much executive-led...the Governor and the elite Administrative Officer grade dominated decision-making through the Executive Council...while the legislature mainly served to endorse the government’s proposals...carefully staged public consultation exercises were used largely to legitimize the policy process and civil society was relatively weak (Cheung, 2011: 114).

This speaks to the Governor and top administrative officials’ authority over policy design. In addition to the concentration of power and shielding from public scrutiny, Hong Kong’s colonial leadership shared a consensus view in favor of neoliberal economic management. In light of this context, industrial policy, which made senior officials’ stomachs “curl up inside,” aimed at the VC industry was not a fit with the concentrated and neoliberal colonial policymaking process.

As Hong Kong's transition to a Chinese SAR took shape in the 1990s, politicization and public scrutiny increased along with policymakers' normative shift towards actively promote industry. Thus, just as economic management norms moved in favor of more intervention to support local start-up activity, Hong Kong's policymaking process changed to mitigate its policymakers' ability to deploy policies that used government coffers. In this way, the increased public scrutiny that has come alongside the rise in the politicized environment has contributed to "a risk-averse culture" amongst policymakers (Author Interview, Hong Kong, 3 January 2012; Latter, 2007: 136). What's more, in explaining the different environments across the two periods, an interviewee went so far as to say that "we never had politics before 1997, until the British left" (Author Interview, Hong Kong, 3 January 2012).

Part of the steps towards democratization in Hong Kong has been the increased power of the LegCo over budget, which has been a central determinant of how the post-1990s policymaking process has discouraged intervention, even as norms shifted in favor of greater private sector financing. As a result of the democratic shift, the LegCo went from being an appointed body that only "rubber stamped" policies to a partially elected group that controls the choices of civil servants hoping to pass and maintain budget for policies (Author Interview, Hong Kong, 21 December 2011).<sup>68</sup> ITC policymakers have had to ask the LegCo for funding and approval if they want to make any substantive changes to existing programs (Author Interview, Hong Kong, 21 December 2011). The LegCo has directly impacted VC policies as it passed the Revenue Bill in 2005 (taxation) and it has audited the ITC's funding initiatives (notably the ARF in 2004, which led to its winding down).

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<sup>68</sup> During the British colonial period the LegCo members were largely the Governor's appointments of prominent businessman and other elite members of society. The Hong Kong legislature has grown in its positioning vis-à-vis civil servants in their policymaking power, through the introduction of direct elections of 30 seats (Koehn, 2001: 107). Civil servants, no longer guaranteed legislative approval of policy, had to start lobbying the LegCo to gain sign-off in the Hong Kong SAR government. The LegCo, since the 1990s, questions officials via "value-for-money" audits or in asking for oral or written answers in response to their questions about operations (GIO, 1995: 27, 42).



To illustrate the impact of the LegCo on VC policy, in an April 2004 report, the LegCo's Audit Commission found that the ITC Commissioner "should take vigorous actions to strengthen control over the disposal of ARF investments" (Hong Kong Legislative Council, 2004). This critical finding was "the beginning of the end of the ARF initiative" as public pressures recommended that the ITC scrutinize ARF outputs and reconsider its operations (Author Interview, Hong Kong, 20 December 2011). In total, the scrutiny that VC policymakers have endured when requesting funding from the LegCo has been significant and has resulted in the winding down of Hong Kong's only FoVCF, the ARF. In addition, the LegCo's control of budgetary power has deterred ITC policymakers from proposing other finance-laden VC initiatives (Author Interview, Hong Kong, 20 December 2011).

Moving on from the formal institutions, we turn to the impact of Hong Kong's economic structure on the timing of its VC policy choices. First, Hong Kong's financial sector is characterized by the relative balance of its bank and capital market components. Though Hong Kong's banking sector is one of the world's largest, with 70 of the world's 100 top banking institutions operating in Hong Kong, it also has a formidable capital markets sector. As an illustration of the stature of the fund management industry in Hong Kong's economy today, the asset management industry in Hong Kong has approximately USD 1.2 trillion in AuM (Asia Private Equity Forum, 2013). The growth of Hong Kong's fund management industry, as well as Hong Kong's development as a major financial services hub, came in the 1990s as the Hong Kong banking sector was liberalized (GuideMeHongKong, 2013). This relative bank-capital market balance, even following the 1990s liberalization efforts, has not been found to speed or slow Hong Kong's VC policy diffusion.

The second economic structure characteristic indicator for the timing of VC policy diffusion here is Hong Kong's technology SME activity levels. These levels still remain low today even as the government has ramped up its efforts to promote technology sector SMEs. Though Hong Kong

has about 282,000 SMEs (ISD, 2009: 105), Hong Kong SMEs have largely been traditional retailers and manufacturers, rather than high-technology start-ups. Though technology start-up activity levels remain low, the Hong Kong government has aimed to strengthen “technology development and application, build up a critical mass of fine scientists and engineers, skilled technicians and venture capitalists” (ISD, 2000: 103). Supporting technology start-ups has been an aim because Hong Kong has not had a large number of technology-focused SMEs. The amount of technology SMEs has grown since the 1990s, largely as the result of government efforts like the Cyberport and Science Park. But, I found that it has not been the growth of domestic technology start-up activity that has driven VC policy diffusion. Rather, VC policies have been pursued due to a *desire* to change Hong Kong’s economic structure in favor of more technology SME activity. In this way, the policymakers have promoted “innovation and technological improvement” to facilitate Hong Kong’s economic structure to shift in this direction (ISD, 2005: 107).

VC policy diffusion was expected to occur early in environments with high SME activity levels, and in line with increases in high technology start-up activity. However, as mentioned in the previous paragraph, despite Hong Kong’s persistently low levels of technology SME activity, in Hong Kong VC policy diffusion has come as an effort to develop Silicon Valley-like activity. This is because policymakers have believed that VC activity would drive SME activity and further develop its financial services offering. As such, the shift of Hong Kong policymakers’ economic management norms in favor of industrial policy, rather than an increase in start-up activities, prompted its late 1990s VC policy action.

## **5.5. Conclusion**

While categorized by Milton Friedman and others as a textbook example of *laissez-faire*, this chapter has found that Hong Kong has not acted as “low” interventionist, or a hands-off, state

in the VC policy area. Instead, Hong Kong policymakers began to deploy interventionist VC policy tools in the late 1990s. To this end, the Hong Kong VC policy choices have included the use of a tax exemption and a FoVCF. These interventionist policy choices have been found to be the result of a normative shift towards interventionist economic management norms, domestic policy learning and rising competition in the fund management sector from Singapore and China. Hong Kong's policymakers have learned about successful policy items; however they did not replicate the Silicon Valley regulatory environment, nor the Israeli FoVCF or Taiwanese tax credit. Instead, Hong Kong policymakers came to their FoVCF structure via their own policy experimentation and offered a tax exemption instead of a tax credit. In this way, Hong Kong has not imitated the neoliberal Silicon Valley diffusion item as the Nightwatch-man typology expected. Instead, they have synthesized their own interventionist policies.

The competition mechanism was found to have stimulated VC policy diffusion. Competitive forces stemmed from Hong Kong's continuing bid to be a leading financial center, and more specifically, a hub for international VC investment in mainland Chinese start-ups. In this way, Hong Kong has competed against VC managers being based in Singapore and China, as Beijing and Shanghai have become preeminent investment and operational destinations. In addition, competitive pressures on low tax rates have come from peers, particularly Singapore, as these states have offered tax exemptions for VC funds' profits. In response to this competitive pressure, in 2005 Hong Kong lowered their horizontally low tax rate specifically for offshore VC funds to a zero rate.

In response to competitive pressures, the Hong Kong government has intentionally recruited policymakers with Silicon Valley expertise and has conducted study trips to Israel and Silicon Valley. By leveraging their *guanxi*, Hong Kong policymakers have learned about the VC policy items. However, though Silicon Valley's VC regulatory environment has been studied, it has not resulted in policymakers enacting legislation to allow its retirement fund managers to invest in local

VC funds. Moreover, though the Hong Kong state has worked to institutionalize knowledge of Silicon Valley in Hong Kong, this has not resulted in Hong Kong's VC policymakers attempting to replicate the Silicon Valley policy environment. Competition in Hong Kong only prompted certain hiring decisions and learning efforts – it was not found to have propelled Silicon Valley duplication policy decisions.

Despite the existence of all three VC policy items (Silicon Valley regulations, Israel's FoVCF and Taiwan's tax incentive) by the time Hong Kong policymakers began to act in the 1990s, their policy choices have not mimicked any one of the existing diffusion items. Hong Kong did synthesize its own versions of the core elements of two of the policy items, as it has deployed a FoVCF and a tax tool, in addition to the use of its generic regulatory scheme. But its FoVCF and tax policies have been the result of its domestic policy experiences and awareness of other financial centers tax exemption offerings. More specifically, the 1993 ARF experience had been critiqued by the LegCo and the Trade and Industry Bureau. Their reviews led to the 1998 ARF moving from a VC fund structure to a FoVCF. This change was driven by the LegCo's identification of suboptimal aspects of the running of the 1993 ARF, particularly the (lack of) management team expertise and the impact of the Fund's target on incentivizing loan-based investment activity.

In this way, Hong Kong's policymakers changed the structure of the ARF II as a consequence of domestic politics and domestic policy learning via the ARF VC fund. Based upon the challenges experienced with the ARF, Hong Kong's 1998 ARF II was structured as a FoVCF that paid 3 to 4% management fees and a market rate for performance fees. This was done rather than charge a 5% interest rate to the private VC managers as the Yozma Fund did. This management fee structure was developed since policymakers viewed the VC managers in the ARF FoVCF as outsourced service providers that they paid annual fees to, rather than partners they wanted to incentivize with large potential returns on equity investments. The ARF II structure

exemplifies how Hong Kong policymakers designed VC policies in line with their domestic environment rather than adapted what they learned from foreign sources.

A shift in economic management norms was found to have aided the deployment of more-interventionist-than-expected VC policies as Hong Kong VC policymakers. Hong Kong's VC policymakers' norms shifted from ensuring an open environment towards providing financial support to private sector firms, including small, local firms. In doing so, Hong Kong policymakers have come some distance from the last Governor of Hong Kong's statement that the phrase industrial policy made him "curl up inside." The shift in private sector financing norms was found to have aided the deployment of the ARF FoVCF, especially because the government started funding private firms in the 1990s.

However, Hong Kong's increased politicization, and the LegCo Audit Commission's power over budget in particular, has kept the scale of VC funding initiatives in check. The LegCo's growing power over the budget, and ITC policymakers' need to respond to public pressure, were found to have had a direct impact on the winding down of the ARF. In this way, while changes in domestic economic management norms created the opportunity for VC funding efforts, the Hong Kong policymaking process (particularly access to budget and public scrutiny of policy performance) has restrained the deployment, and sustainability, of FoVCFs.

Hong Kong's economic structure, especially the low levels of technology SME activity levels, contributed to its late VC policy diffusion. Though technopreneurship activity levels remain relatively low even today, policymakers in the 1990s began supporting VC as a means of increasing technology SME activity as the "Silicon Harbor" and aiding the competitiveness of Hong Kong's financial services sector. Their shifting economic management norms motivated VC policy action, even though there was not increased technology start-up activity that increased demand for more

early-stage equity capital. The balanced bank-capital markets nature of Hong Kong's financial system enabled the support of equity instruments. The Hong Kong banking sector conceptualized VC as part of its service offering, so policymakers have not had to choose a preference for bank or capital market sector initiatives.

Finally, the Hong Kong VC policy case study finding is contrary to the globalization thesis' hypothesis for the widespread adoption of neoliberal policies. The finding that Hong Kong chose to deploy interventionist VC policy tools is particularly interesting given Hong Kong's ranking as the freest economy in the world during this same period. If even the neoliberal poster child was pressured into deploying interventionist VC policies in the 1990s, then what can we expect of states that held more interventionist economic management norms to begin with? We will find out as the next two chapters investigate the VC policy choices in the two most interventionist states – Singapore and Vietnam. The implications of the Hong Kong findings will be assessed in the Analysis chapter, in line with a discussion of the other case studies' findings to determine the generalizability, or uniqueness, of Hong Kong's more-interventionist-than-expected policy choices.

## 6. Taiwan: Private Sector Promoter

### 6.1. Introduction

“The successful model of a developed country can be used as a reference but cannot be duplicated as every nation must respond to its own social background and economic conditions.”

- *ROC (Taiwan) Government Information Office's 1983 Reference Guide: 159*

Turning to the Private Sector Promoter proxy, this chapter investigates the sources of Taiwanese VC policy choices. Volumes of academic research have already examined the mechanics behind the economic miracles achieved in Taiwan and other East Asian economies, notably research by Robert Wade (1990), Alice Amsden (1979; 2001), Chalmers Johnson (1982), Sanjaya Lall (1996), Meredith Woo-Cummings (1999), and Stephan Haggard (1990). These scholars have provided insights into the industrial policies behind Taiwan's miracle, the importance of economic success to the martial law government, and the drivers of the Taiwanese technology cluster's outstanding performance. However, both Dan Breznitz's *Innovation and the State* (2007) and J. Megan Greene's *The Origins of the Developmental State in Taiwan* (2008) have lamented that there has been an insufficient examination of the *sources* of the Taiwanese state's industrial policies. To this end, they comment that scholars have not adequately investigated how Taiwanese policymakers learned about and decided on the form of their industrial policies. Here, I address this lacuna in the literature by exploring why and how Taiwanese policymakers designed their VC policies, as part of their policy efforts to become a “Silicon Island” (GIO, 2001: 161).

Identifying the sources of the Taiwanese VC policy choices will be valuable to IPE scholars

for four reasons. First, Taiwan serves as the Private Sector Promoter proxy in this thesis, providing us the opportunity to examine the impact of policymakers' norms that favor small, local firms and tax incentives on VC policy diffusion outcomes. Taiwan also offers a case with an SME, high-technology laden economic structure. Second, the origins of Taiwan's VC policy are of interest to industrial policymakers since the local VC industry has been a central part of its high-technology competitiveness efforts. As I mentioned in this chapter's opening paragraph, despite the VC industry's contribution to the Taiwanese economic miracle, the sources of Taiwan's VC policy choices have not yet been fully explored. As an illustration of the role of VC investments on the Taiwanese economy, its VC managers have invested in over 3,000 local companies and VC-backed technology companies constitute approximately half of all technology companies listed on the Taiwanese stock exchanges (Yeh, 2006: 22). Further, international competitiveness rankings, such as the one conducted by Swiss business school, IMD, rank Taiwan highly because of its local SMEs' access to VC (Taipei Economic and Cultural Representative Office in the US, 2010).

Third, Taiwan's VC policies are of interest to numerous states' policymakers given the achievements of the Taiwanese VC market. To this end, scholars have lamented that "Taiwan's venture capital market is arguably the most successful engineered venture capital market in the world" (Gulinello, 2005: 848). Taiwan's VC industry had become the fourth largest VC market in Asia (behind Japan, Hong Kong and Singapore) and the world's third most active, in terms of deal volume, behind the US and Israel, by the early 2000s (AVCJ, 2005). The fourth, and final, reason why it is important to investigate the drivers of Taiwan's VC policy choice is that Taiwan's tax incentive has been one of the VC policy innovations identified in international VC policy circles. Accordingly, Taiwan's tax credit is conceptualized as a VC policy diffusion item in this thesis.

As brief background on the onset of VC policy diffusion in Taiwan, by the early 1980s Taiwanese policymaking elites had already come to believe that a local VC market, like that in



Silicon Valley, would be essential support to its burgeoning high-technology industry and SME-dominated economy (Author Interview, Taipei, 6 January 2012; Yeh, 2006; Taiwan Info, 1986). At that time, VC was a relatively new asset class that had only achieved early success in Silicon Valley and Boston's Route 128. As a result of its newness, hard evidence of the positive impact of VC investment activity on technology, innovation and the broader American economy was not yet available (Kortum and Lerner, 2000). Given the VC industry's new, unproven nature at that time, how did Taiwanese policymakers come to be one of the first states outside the US to initiate VC policy diffusion? Further, after learning about the Silicon Valley VC policy environment, what shaped Taiwanese policymakers' choice of their specific VC policy form?

The first answer to the question about what has shaped Taiwan's VC policy choice is functionalist. Here, the explanation is that VC investment activity was needed by Taiwanese start-ups early on given the economy's high-technology SME focus and its banks' insufficient allocation of capital to SMEs. In response to their high technology SMEs' need for early-stage financing, in 1981 senior policymakers and private sector actors<sup>69</sup> took a study trip to the US (specifically Silicon Valley and Boston) and Japan. Former Finance Minister, Kwoh-Ting ("K.T.") Li pushed for the trip given his interest in learning about the drivers of technology clusters' and VC industries' success, especially Silicon Valley.<sup>70</sup> As a result of the trip, the three men found that Silicon Valley's VC industry, the university environment (Stanford University) and the Science Park were primarily responsible for its innovative environment (Author Interview, Taipei, 5 January 2012). Moreover, they had come to believe that a VC market, in particular, would help build out Taiwan's incomplete financial services sector, promote its domestic technology start-ups, and help advance the local use of modern management techniques (Author Interview, Taipei, 6 January 2012; Saxenian and Li, 2000: 4).

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<sup>69</sup> The three men were the Minister of Finance, a partner of a major law firm in Taiwan and a partner from Hambrecht & Quist (Author Interview, Taipei, 5 January 2012).

<sup>70</sup> A partner at H&Q "came to Taiwan and introduced the idea of VC to K.T. Li. He listened to the H&Q executive and then supporting VC became K.T.'s idea" (Author Interview, Taipei, 6 January 2012).

During, and beyond, the study trip the diffusion of information on the Silicon Valley VC policy environment had been transmitted to Taiwanese policymakers through an epistemic community of Silicon Valley and Taiwan-based investors and entrepreneurs. Then, as will be demonstrated in this chapter, Taiwan's economic management norms and formal institutions shaped its VC policy adaption towards the deployment of tax-centric VC policies and a paper company – rather than LP – regulatory structure. As a result of these factors adapting what they learned of the Silicon Valley policy environment, shortly after the VC study trip, Taiwan's Council for Economic Planning and Development (“CEPD”)<sup>71</sup> passed a Ministry of Finance (“MoF”) bill that gave a 20% tax credit for first time VC investors beginning in 1983 (Taiwan Info, 1986). In this way, the chapter's opening quotation about the necessity for Taiwanese policymakers to adapt foreign models to the local context foreshadows this chapter's finding about the central role of domestic factors in adapting Taiwan's VC policy choices away from the Silicon Valley policy environment.

To better account for the outcome of VC policy diffusion in the Taiwanese case, this chapter examines the impact of the confluence of international and domestic drivers on Taiwanese policymakers' VC policy choices. Section 6.2 first provides context for the examination by detailing the VC policies deployed in Taiwan, across the funding, tax and regulatory components. It also introduces the history and character of the Taiwanese VC market that has grown in tandem with, and as a result of, its VC policies. Then, Section 6.3 investigates the impact of the external sources of VC policy diffusion, namely the primary diffusion mechanisms and the low-specificity Silicon Valley policy environment. Section 6.4 then explores how domestic factors, particularly Taiwan's economic management norms, formal institutions and economic structure, have helped

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<sup>71</sup> The CEPD is an advisory body to the Executive Yuan cabinet and is outside the “ordinary machinery” of the Taiwanese government (Wade, 2004: 196-198). In terms of how the CEPD fits into the policymaking process, the CEPD sets the broad policy plan, the IDB crafts specific industrial policies and then implements them (GRIPS, 2011: 2; Wade, 2004: 201) and the ITRI, III and other research institutes and think tanks help set industry strategies based on research in their respective industries (Breznitz, 2007: 100-135; GIO, 1986: 288).

drive its particular VC policy adaptation. To bring the findings together, the conclusion assesses how the combination of international and domestic factors have shaped Taiwan’s VC policy choice.

## 6.2. Taiwan’s VC Policies and VC market

To get started, this section details the three elements (funding, tax and regulation) of Taiwan’s VC policy choice. The below table summarizes the key VC policy milestones in chronological order:

**Table 6.1:** Key Dates in Taiwan’s VC Policy Choice

Year	Milestone
1981	K.T. Li and Li-Te Hsu, former finance ministers, a partner at Hambrecht & Quist (“H&Q”), a partner at a Taiwanese law firm and a few others, took a VC study trip to the US and Japan
Nov-1983	Issuance of Regulations for the Administration of Venture Capital Enterprises and the “Project for Promoting Venture Capital Investment Enterprises” which gave a 20% tax deduction to first time VC investors
Sep-1985	The Development Fund and Chiao Tung Bank provide NT\$50m and NT\$30m, respectively, to the First VC Investment Program
Feb-1991	The Development Fund and Chiao Tung Bank provide NT\$1b and NT\$60m, respectively, to the Second VC Investment Program
Jan-1998	The Development Fund appoints and funds the administration of the 3 <sup>rd</sup> VC Investment Program to the International Commercial Bank of China
2000	VC investor tax credit discontinued
May-2001	Repeal of the Regulations for the Administration of Venture Capital Enterprises and introduction of the Scope and Guidance legislation
Jun-2001	Issuance of “Regulations on the Scope and Guidance of Venture Capital Enterprises” (hereafter referred to as the “Scope”; the “Financial Holding Company Act” in 2001 allowed financial holding companies to invest in VC
Oct-2001	Plans to strengthen the VC industry under the National Development Plan to be matched by the establishment of an NT\$100 billion VC fund (NT\$30 billion public

	and NT\$70 billion private funding)
Feb-2004	Amendment of Regulations on the Scope and Guidance of Venture Capital Enterprises to expand funding channels and ease restrictions on investment scope and fund utilization
Sep-2004	The Development Fund is placed under direct jurisdiction of the Executive Yuan (Cabinet)
Dec-2004	Executive Yuan places VC industry guidance and assistance under jurisdiction of MoEA
2005	Scope revisions require VC funds with capital commitments from banks, insurance companies, securities firms, financial holding companies or pension funds to apply to the IDB for approval
2006	Relaxed Scope makes it easier for investors to exit their positions by decreasing the required holding time of company securities and lifting the limit on share sales
2008	“Challenge 2008” has the Development Fund investing NT\$ 30 billion alongside NT\$ 70 billion in VC
Mar-2012	Bilateral FoVCF (Strategic Cooperation on Joint Investments in Venture Capital Funds) formed with the Development Fund and the New Zealand Venture Investment Fund

Sources: Adapted from Yeh (2006), TVCA (2011), MoEA (2012), Executive Yuan Development Fund (2013)

Whilst the Taiwanese VC policy efforts were first tax based, Table 6.1 illustrates that the Taiwanese government *has also* offered funding to its VC managers. Taiwanese VC funding has been channeled vis-à-vis co-investment in VC-backed start-ups beginning in 1985 (Pandey and Jang, 1996). In addition, funding has come through a FoVCF structure, via a partnership with New Zealand’s FoVCF, beginning in March 2012 (MoEA, 2012).

Tax incentives were the first, and have been revered as the flagship, VC policy choice in Taiwan. Taiwan’s tax credit for VC investors was launched via the 1983 MoF issuance of the Regulations for the Administration of Venture Capital Enterprises (Kenney *et al*, 2002). The Regulations gave a 20% tax deduction for first time VC investors, as long as they maintained their

high-technology VC investment for a minimum of two years (TVCA, 2011). The tax credit was expanded to include corporations investing in VC funds in 1991 and this helped to expand the size of Taiwan's corporate VC investor base (Kenney *et al*, 2002). Tax exemptions were also offered on the capital gains earned by VC managers investing in high-technology SMEs (Wang, 1995) and for earnings from VC monies that were reinvested in VC funds (Koh & Wong, 2005: 26). These tax incentives have aided the growth of Taiwan's vibrant VC market and high-technology sector (Dietrich, 2003: 22). In fact, due to the very success of the VC tax credits in building Taiwan's VC market by the new millennium, the VC industry's 20% tax incentive was discontinued in 2000 (Author Interview, Taipei, 5 January 2012).<sup>72</sup>

Though not in a FoVCF structure, Taiwanese policymakers have been co-investing in start-ups along with private VC managers via the National Development Fund (hereafter referred to as the "Development Fund"). These funding efforts first began in 1985 as the Chiao Tung Bank formed a VC fund by providing capital along with the Development Fund and the Sino-American Foundation, with the other 50% coming from the private American investment bank H&Q. The Development Fund and Chiao Tung Bank initiative was renewed in 1991 (as the Second VC Investment Program), when the USD 25 million fund was increased to a USD 75 million VC fund (Koh & Wong, 2005: 26-27; Kenney *et al*, 2002: 38-39). Additional government funding for the VC industry came in October 2001 as the Development Fund participated in the National Development Plan ("NDP"). Starting in the early 2000s and continuing until today, the NDP has raised 30% of its capital from the Development Fund and the remaining 70% has come from the private sector (Author Interview, Taipei, 6 January 2012).

Taiwan's first official FoVCF only came into being much later, in March 2012, as Taiwan

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<sup>72</sup> As is discussed in the domestic factors section of this chapter, the decision to discontinue the tax incentive was also part of a broader change in industrial strategy, said to be driven by the March 2000 election of the DPP, which did not believe in sector-specific subsidies.

and New Zealand launched a bilateral public FoVCF via the Strategic Cooperation on Joint Investments in Venture Capital Funds, with assets under management of USD 160 million (each state has allocated approximately USD 80 million) (MoEA, 2012). The bilateral FoVCF involves Taiwan's Development Fund and the New Zealand Venture Investment Fund ("NZVIF"), which has been modeled after Israel's Yozma Fund (Lerner, 2009: 133-135). For Taiwan, the bilateral FoVCF affords access to "New Zealand's bio-tech, agri-tech and creative technology sectors" (Krupp, 2012). The Taiwan-New Zealand FoVCF structure – akin to the NZVIF and the Yozma Fund – requires that VC managers raise at least 40% of their capital from private sources and half of the investment capital will go to start-ups in each country.

Prior to the New Zealand-Taiwan bilateral FoVCF, a quasi FoVCF had been in motion in Taiwan, via the Development Fund, beginning in the 2000s. For example, as part of the Challenge 2008 initiative, the Development Fund committed to co-investing NT\$ 30 billion when private investors allocate NT\$ 70 billion to Taiwanese VC funds (Executive Yuan Development Fund, 2013). Through 2004, the Development Fund had invested NT\$ 62.5 billion in 42 different VC firms to "augment investment in the venture capital industry" in Taiwan (Executive Yuan Development Fund, 2013). Thus, prior to the bilateral FoVCF with Taiwan in 2012, FoVCF-style investments had occurred by way of the Development Fund beginning in the 2000s.

Though the Silicon Valley VC regulatory environment has been the primary diffusion item in this case, the Taiwanese VC regulatory framework (the "paper company") has not been consistent with the Silicon Valley LP structure. Instead, in the Taiwanese paper company structure, the VC management firm (private company) has a consulting relationship with the fund (paper company). In addition, Taiwan's paper company structure has several attributes that differ from the LP structure. First, a central aspect of the paper company structure is that Taiwanese VC funds effectively have their own board of directors representing shareholders – investors in the fund,

rather than the VC manager, have authority over investment decisions (Yeh, 2006: 4). In this way, the VC management company only does the due diligence and makes recommendations for investments (Author Interview, Taipei, 5 January 2012). In contrast, in the American LP structure, the investors (LPs) do not have such rights, and instead the VC manager (the general partner) makes buy and sell decisions unilaterally. Second, in Taiwan only the VC management companies' founders have equity stakes in the paper company (the VC funds). As a result, even senior employees do not have large financial interests in the profit of the fund (Kenney *et al*, 2002: 42).

The third difference between the LP structure and Taiwan's paper company structure is that Taiwanese paper companies do not have liquidation dates. This "evergreen fund" structure means that VC managers may run overlapping VC funds, instead of the American model of raising, investing and liquidating funds. The fourth difference is that Taiwanese paper companies are required to invest in registered firms (in the high-technology sector to be eligible for the tax credits, at least through the early 1990s). This requirement decreases the VC managers' abilities to invest in seed opportunities as very early stage start-ups are oftentimes not yet incorporated as firms (Breznitz, 2007: 141). At least since 2006, the CEPD has been lobbied by Taiwan's VC association, the TVCA,<sup>73</sup> for the adoption of the LP structure in Taiwan as a means of better attracting international investment, but nothing has materialized as of yet (Author Interview, Taipei, 5 January 2012).

Also different from Silicon Valley's VC regulations, the Taiwanese regulatory environment has restricted the ways in which investors can exit, or profit, from the sale of SMEs. To exit via an IPO through the late 1980s, according to Taiwan Stock Exchange requirements, companies must first have five consecutive years of profitability (Breznitz, 2007: 140). Partially a result of these exit restrictions, in Taiwan a primary channel for exiting had been through the private, or grey, market,

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<sup>73</sup> The TVCA was founded in 1992 by 22 VC fund managers in Taipei (TVCA, 2011). The TVCA was a private sector creation, and maintains its independence from the government (Author Interview, Taipei, 5 January 2012).

instead of trade sales or public equity listings (Author Interview, Taipei, 6 January 2012). On the grey market, ownership stakes in VC-backed companies are oftentimes bought and sold via private, unregulated means rather than through public equity markets (e.g. stock exchanges). However, Taiwanese policymakers have created institutions to encourage public market exits instead of these grey market transactions. To this end, in 1988, the Taiwan stock exchange launched a third kind of listing for SMEs that had previously failed to meet profitability requirements. Then, in April 2000, the Taiwan Innovative Growing Entrepreneurs, an over-the-counter stock exchange, was launched to further help SMEs “overcome the hurdle of listing regulations” (GIO, 2001: 184). As a result of these efforts, VC exits via IPOs increased markedly and IPOs have become a primary channel for Taiwanese VC exits (Wang, 1995: 10-11).

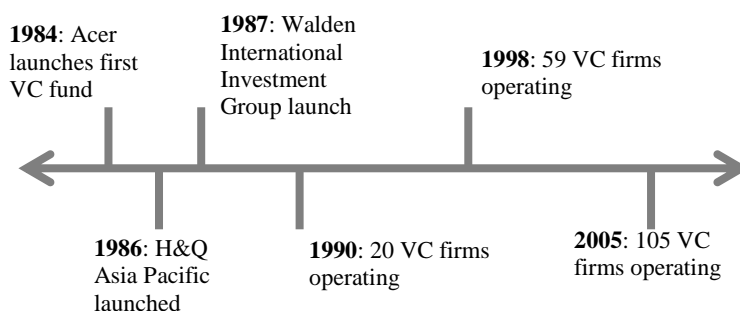
The last element of the Taiwanese VC regulatory environment that stands in contrast to that of the Silicon Valley policy environment is its VC fundraising restrictions. Taiwanese pension funds have not been allowed to invest in VC funds (Wang, 1995: 23; TVCA, 2011). Further, Taiwanese VC managers need to apply for a recommendation from the IDB (previously the Ministry of Finance) if they have capital commitments from banks, insurance companies or securities firms. There has been a limit on the percentage of a VC fund’s AuM that banks, insurance companies, etc. can constitute - with banks at 5% and insurance companies at 25% (Kenney *et al*, 2002). Thus, unlike the Silicon Valley regulatory environment vis-à-vis the 1979 ERISA reinterpretation, launching a VC fund in Taiwan has meant securing the right percentages of capital from a restricted universe of potential investors. These restrictions have been partially relaxed, as in 2004 the MoEA drafted a relaxation of the Scope, to ease the limit on bank and insurance company investment amounts in VC (Yeh, 2006: 8). Yet, pension funds have still not been afforded access to investing in the VC asset class in Taiwan, which means a critical component of the Silicon Valley regulatory environment (the ERISA reinterpretation in 1979) has not been deployed in Taiwan.



To conclude this overview of Taiwanese VC policy choices, Taiwan’s VC policies have included funding (co-investments alongside VC managers and then a FoVCF beginning in 2012), VC-specific tax credits and a restrictive, non-Silicon Valley consistent regulatory framework. As introduced here, Taiwan’s VC policies have differed quite significantly from the Silicon Valley policy environment that its policymakers had studied. Rather than duplicating Silicon Valley’s regulatory context for VC investments and exits, Taiwan’s VC policymakers innovated a new VC policy tool by offering tax credits to VC investors beginning in 1983.

The remainder of this section briefly outlines Taiwan’s VC industry evolution as further context for the investigation. The Taiwanese VC industry was established in the early 1980s, following the implementation of the first VC tax credit in 1983. The below timeline details the launch of the first VC fund (Acer’s Multiventure Capital Corporation) (Wang, 1995: 4) in 1984, as well as the next few VC fund launches and milestones in the Taiwanese VC market’s development:

**Figure 6.1:** *Taiwanese VC market timeline*



*Sources: Saxenian and Li, 2000: 5, Kenney et al, 2002: 21*

As previously mentioned, Taiwan had the world’s third most active VC market, in terms of deal volume, with approximately USD 10 billion under management by the early 2000s (AVCJ, 2005). Though not the largest AuM in the region, the Taiwanese VC industry has been the most active in Asia (in terms of the number of investments and exits), as well as the market “most similar to

Silicon Valley” in its activity and investment behavior (Kenney *et al*, 2002: 29). Taiwan’s VC industry has not been bank dominated (as in Hong Kong) as it has had numerous corporate VC managers (e.g. Acer).

### 6.3. External Sources

Political economy scholars have lamented that economic competitiveness has been critical to Taiwan’s strategy to survive as a state (see Amsden, 2001). Taiwanese policymakers’ belief in the need for economic outperformance began when the state was formed in the late 1940s. But, from October 1971, when the United Nations voted to recognize the PRC and simultaneously expel Taiwan from the UN, there had been heightened urgency in the need to be economically competitive. In response to the ROC’s UN de-recognition, Taiwanese policymakers have had to pursue policies that would help ensure that trade and aid would continue to flow to the island (Greene, 2008). Taiwan received the trade and aid it needed from overseas. In fact, these inflows amounted to USD 4.5 billion by 1984 and had already been named as crucial to enabling the “Taiwan economic miracle” by 1986 (GIO, 1986: 237). As its largest trading partner, the US alone accounted for over 41% of this foreign investment into Taiwan (GIO, 1986: 239).<sup>74</sup> Given the critical role of American investment in Taiwan’s economy, a local VC industry is said to have been “at least partially conceived as a means to attract more investment from the US” (Author Interview, Taipei, 6 January 2012).

More broadly, VC has been seen as a tool for improving the competitiveness of Taiwan’s high-technology sector and therefore the state’s broader economic development (Wang, 1995: 4).

Taiwan’s VC policy efforts have therefore been aided by the hope that VC firms would “integrate

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<sup>74</sup> The ROC’s official diplomatic relationship with the US wound down in the years following UN de-recognition, as the US severed diplomatic relations in December 1978 and closed its US Embassy in Taipei in 1979 (GIO, 1983: 346). US public and private exchange continued to flourish with Taiwan despite the unofficial relationship status (CEPD, 2010).

capital, technology, talent and management for the purpose of upgrading Taiwan's technological developments" (Executive Yuan Development Fund, 2013: 1). In this way, the Development Fund's guidelines have aimed to:

strengthen and aid in the development of the domestic venture capital industry, foster the continued growth of knowledge economy industries, enhance the nation's competitive ability, and accelerate domestic economic development (Executive Yuan Development Fund, 2013: 1).

In recent years, competitive pressures to attract money for the Taiwanese VC industry has peaked interest in adopting the LP structure. More specifically, as Taiwan's VC activity levels have declined, particularly since 2000, local VC managers have lobbied their industry association to push for the adoption of the LP structure. To this end, the General Secretary of the TVCA lamented that "if local VC managers want American money they need the LP," and "the LP structure would be for foreign investors" (Author Interview, Taipei, 5 January 2012). Though the TVCA has lobbied CEPD, MoF and MoEA policymakers for an LP structure, it has not yet materialized.

In response to the early competitive pressures to grow a VC industry to support local high-technology SMEs, VC policy learning occurred at the behest of policymakers such as K.T. Li,<sup>75</sup> who has been cited as the "original champion of VC in Taiwan" (Saxenian and Li, 2000: 3). K.T. Li "promoted the conception of VC long before other Taiwanese policymakers were considering it" (Author Interview, Taipei, 5 January 2012). He set out to study the VC policy environment in Silicon Valley and Japan in 1981 as he saw the VC market as a solution to "Taiwanese SMEs' insufficient capital" (Breznitz, 2007: 140; Kenney *et al*, 2002: 36). In this way, domestic champions of VC, such as K.T. Li, were pivotal to Taiwan's VC policy learning process as they "studied the

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<sup>75</sup> K.T. Li was a senior and influential member of the KMT part from the 1960s; Li was the Minister of Economic Affairs from 1965-1969, Minister of Finance 1969-1976 and Minister without Portfolio from 1976-1988 (GIO, 2001b: 71). K.T. Li is called the "father of the economic miracle" in Taiwan, for his vision in building Taiwan's technology industry.

options and then exposed the policy benefits and options to colleagues in Taiwan” (Author Interview, Taipei, 5 January 2012).

The “Silicon Valley – Hsinchu Connection”<sup>76</sup> has aided Taiwanese policymakers to learn about VC policy instruments and investment strategies (Koh & Wong, 2005: 27; Saxenian and Li, 2000). This *guanxi* connection was formed in the 1950s when top Taiwanese students began moving to the US to study (primarily PhDs in engineering) by way of American-Taiwanese funding programs, such as USAID (Greene, 2008: 55). Then, in the early 1980s, Taiwanese policymakers began to conceptualize this brain drain as a “brain bank” and solicited the return of talent by fostering local high-technology sector opportunities (Wade, 2004: 191; GIO, 1983: 196). The local technology opportunities centered around Hsinchu Park, which had been K.T. Li’s creation. Hsinchu Park had been established in 1979 as an effort to build a Taiwanese version of Silicon Valley and to attract overseas Chinese back to Taiwan (Lee, 2000: 562). Through these efforts, by the late 1980s, 180,000 Taiwanese engineers were estimated to have returned from the US, particularly Silicon Valley, to Taiwan (Fuller, 2002: 16). The time Taiwanese students spent abroad has helped establish robust professional networks across Silicon Valley.

More specific to this VC policy diffusion investigation, the “Hsinchu – Silicon Valley” *guanxi* have facilitated VC policy diffusion from Silicon Valley. In this way, the connection has “fostered transfers of institutional know-how as well as capital and market knowledge” (Saxenian and Li, 2000: 1). Taiwan’s VC policy epistemic community primarily consists of Taiwanese entrepreneurs and engineers at MNCs in the US, who have helped acquire information on Taiwan’s innovation-related industrial policies (Breznitz, 2007). Two of the key social agents facilitating

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<sup>76</sup> The term “Silicon Valley – Hsinchu Connection” was coined by AnnaLee Saxenian and refers to the movement and interactions of people and capital between Silicon Valley and Taiwan’s local science park, Hsinchu, as well as the broader collaboration between these two high-technology clusters.

Taiwan's VC policy diffusion process from Silicon Valley have been Dr. Ta-Lin Hsu,<sup>77</sup> a senior IBM manager then VC investor in California, and Morris Chang,<sup>78</sup> as they introduced VC to Taiwanese policymakers (Kenney *et al*, 2002: 25; GIO, 2001b; Saxenian and Li, 2000: 3). Dr. Hsu is said to have brought "Silicon Valley style venture capital to Taiwan" by setting up H&Q in Taiwan and educating policymakers in the Ministry of Finance and the Executive Yuan about the VC asset class (Author Interview, Taipei, 6 January 2012). Stan Shih,<sup>79</sup> the founder of Acer and the first VC firm in Taiwan, has also been central to VC policy diffusion from Silicon Valley to Taiwan. For his part, Mr. Shih helped transmit the VC model by establishing the first VC firm in Taiwan in 1984. He has subsequently been quoted as saying that Taiwan's high technology industry development "is almost 100 per cent related to Silicon Valley" (Kirby, 2002).

Silicon Valley has been the VC diffusion item in the Taiwanese case. The vague Silicon Valley idea has been diffused to Taiwan, but the vague nature of the Silicon Valley policy environment has allowed it to be adapted away from its neoliberal form. In Taiwan, Silicon Valley-motivated VC policy efforts have been formed in line with preferences and constraints dictated by its local institutions and economic structures as the next section will demonstrate. An anecdote illustrates how Silicon Valley VC has been translated to Taiwan's local environment. Instead of K.T. Li choosing the Chinese translation of "risky investor," which is how the phrase venture capital would have been translated, he translated it to "start-up investor" so as to decrease the

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<sup>77</sup> Dr. Ta-Lin Hsu is the founder and chairman of H&Q Asia Pacific, one of the first VC firms to enter Taiwan. H&Q Asia Pacific and was a founding member of the Technology Review Board, which advised the Executive Yuan on technology matters.

<sup>78</sup> Morris Chang had been born in China, moved to Hong Kong in 1948 and then to the US to do his BSc and MSc at MIT. He then worked for Texas Instruments for 25 years and also got his PhD from Stanford University. Texas Instruments had sponsored his PhD in the 1960s and he had become Group Vice President there. He left Texas Instruments in 1983 to become President of General Instrument Corporation (1984-1985). Then he was recruited to Taiwan by K.T. Li to be the head of ITRI and, in 1987 he founded Taiwan Semiconductor Manufacturing Company Ltd. ("TSMC") at the behest of K.T. Li (Author Interview, Taipei, 6 January 2012; GIO, 2001b: 13).

<sup>79</sup> Stan Shih has maintained relationships with senior policymakers; he was appointed as a technology advisor to Presidents Lee and Chen beginning in 1996 (Kirby, 2002; GIO, 2001b: 98) and has also been a Managing Director of the public research institute – the Industrial Technology Research Institute (ITRI).

perception of risk in the asset class (Author Interview, Taipei, 5 January 2012). The point here is that Taiwan's VC policymakers have synthesized new VC policy instruments that better fit its local context rather than try to duplicate the Silicon Valley policy environment.

The Silicon Valley policy item's low specificity has contributed to the Taiwanese adaptation of it. According to Taiwanese policymakers, rather than precise policies, they found that it has been Silicon Valley's "generally enabling environment that has contributed to the VC market's success" (Author Interview, Taipei, 5 January 2012). This finding contributed to Taiwanese policymakers' desire to create a new VC policy item rather than try to recreate all the elements that drove Silicon Valley's success. Taiwanese policymakers therefore designed initiatives specifically to replicate Silicon Valley's university-centric innovation cluster outside of Taipei (in Hsinchu) and build a local VC market (Wang, 1995: 2). The Hsinchu Science Park's late 1970s imitation of Silicon Valley's science park exemplifies Taiwanese policymakers' willingness to adopt more specific policy items "as is." But, in the VC policy context, Taiwanese policymakers felt they had to do more than deploy a local version of one initiative; instead, they felt compelled to replicate key elements of the broad Silicon Valley environment.

However, Taiwanese policymakers found that in the VC policy area a specific blueprint akin to the science park did not exist. Also, Taiwanese policymakers did not believe that Taiwan possessed the same generally enabling characteristics that facilitated Silicon Valley's success. As a result of this assessment, they came to believe that more overt measures have been needed to jump start local VC activity. Thus, the non-specific nature of the Silicon Valley VC policy environment along with the acknowledgement of the other differences between the Taiwanese and Silicon Valley contexts, led Taiwanese policymakers to adapt their own policies. Taiwanese policymakers' recognition of the differences between it and Silicon Valley also motivated them to learn from their more proximate states to help adapt their VC policies (Wang, 1995; Author Interview, Taipei, 6

January, 2012).

To this end, Taiwanese policymakers have also learned about VC policy items in more proximate states. In this vein, a CEPD policymaker lamented that:

Silicon Valley is a good example of liquid human capital and forming business ventures very quickly. In Taiwan we don't have liquidity of human capital talent like in Silicon Valley. So, we have to also learn from Japan, Korea or Germany (Author Interview, Taipei, 6 January 2012).

As a product of this belief in studying peers' policies, agencies such as the CEPD have been mandated to keep abreast of "policies deployed by regional peers and the performance of peers' VC markets, particularly Korea and Japan" (Author Interview, Taipei, 6 January 2012). Also, Taiwanese VC policymakers have regularly monitored VC regulatory developments in Japan, due to their "Japanese legal legacy" and "strong cultural affinity with Japan" (Author Interview, Taipei, 6 January 2012).

In this vein, lessons learned by Taiwanese policymakers from the Japanese VC operational and regulatory environment have helped shape Taiwan's regulations for its VC industry. Japan's VC regulations (until 2002) had forbidden pension funds from investing in VC, prevented VC managers from undertaking their monitoring and control functions, and forced VC investors to accept "unlimited" liability (Kenney *et al*, 2002: 70-79). Moreover, Japan's historically bank-dominated, domestic and credit-biased VC industry, unlike the pension fund and institutional investor mix that is common in Western VC markets, is dominated by banks and insurance companies (31 per cent) and corporate VC managers (19 per cent), while pension funds and endowments only account for less than 5 per cent of investments in Japanese VC funds (Walter and Zhang, 2012: 140-141). The Japanese VC industry became more equity-friendly since the 1990s, but it is important to note here that at the time the Taiwanese policymakers studied the Japanese VC

industry environment, it operated without an LP structure, forbid pension fund investments in the asset class and had a high level of corporate VC managers participating in the market, relative to markets like the United States.

Taiwan's VC regulations have drawn on several aspects of this restrictive Japanese VC regulatory environment. Most notably, Taiwanese VC policymakers found a VC market that operated without the LP structure. Moreover, Taiwan's policymakers learned from Japan how to appease the risk-averse nature of local investors by using a corporate structure different from the LP structure in that it restricts the power that VC managers would have over investment decisions (Author Interview, Taipei, 5 January 2012). Taiwan's paper company structure mimics the Japanese regulatory treatment of pension funds, also does not limit liability and similarly undermines VC managers' power over investment decisions. As a result, the Taiwanese ideas of how to adapt VC regulations away from the Silicon Valley LP structure were impacted by what they have learned from Japan, starting with the 1981 study trip to Japan.

However, it should be said that Taiwanese policymakers have not simply copied VC regulations from the Japanese. Instead, they created their own paper company structure that has not been as restrictive as Japan's unlimited liability structure. In this way, though Taiwanese policymakers learned from Japan in an effort to formulate more proximate VC regulations than those utilized in Silicon Valley, they have not merely emulated the Japanese regulatory framework either.<sup>80</sup> Instead, following the 1981 VC study trip, Taiwanese policymakers developed VC policies – including regulations – that adapted the lessons learned from their studying efforts of both Silicon Valley and Japan.

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<sup>80</sup> Taiwan's adaption away from Japanese legal legacies and lessons learned from Japan is not unique to the VC industry. Taiwan's financial sector laws and regulations have been adapted away from the Japanese model by the KMT's leadership and their desire to suppress major business conglomerates (Aviles, 2009: 23). For example, in Taiwan "banks are prohibited by law from taking shares in the companies to which they lend or from having representatives on the board of directors, in sharp contrast with Japan" (Campos *et al*, 1996: 110).



Much more recently, the Israeli FoVCF policy item has been adapted in Taiwan. Taiwanese VC policymakers' recently formed a bilateral FoVCF with New Zealand's NZVIF (which was formed in 2002) in 2012 (MoEA, 2012). The bilateral New Zealand-Taiwan FoVCF has been shaped by lessons learned from Israel's Yozma fund via the NZVIF and not through direct learning from the Yozma policymakers (Author Interview, Tel Aviv, 6 October 2013). The bilateral FoVCF's structure draws particularly heavily on the experience of the NZVIF, which was modeled after Israel's Yozma fund, as its managers underwent a "formal process of learning from the Yozma program" (Avnimelech, 2009: 22).<sup>81</sup> Notably, like Yozma, the bilateral FoVCF requires private sector matching of funding (to the tune of 40%). In sum, Taiwan's exposure to the Israeli FoVCF model has not been direct (it came through New Zealand's knowledge of the Yozma model) and has therefore been the result of bilateral efforts with New Zealand. In this way, New Zealand FoVCF policymakers have acted as a public intermediary for VC policy information from Israel to Taiwan.

#### **6.4. Domestic Factors**

Taiwanese policymakers have been acutely aware of their domestic economic and normative context when designing VC policies. As an illustration of the centrality of local conditions on Taiwanese policymakers' policy choices, they have been quoted as saying that each state:

has its own model and approach to development, which are intimately related to its cultural, historical, and socio-economic background (GIO, 1983: 159).

Taiwanese policymaking has been guided by this belief that industrial policies must be designed to fit the local context. This section details the VC-relevant characteristics of Taiwan's institutions and

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<sup>81</sup> Yozma founder, Yigal Erlich, was an official consultant to New Zealand policymakers when they created the NZVIF. He was so involved in the creation of the fund that he even chose the original (and current) manager of the Fund. He said that New Zealand is the state that most closely learned from and attempted to duplicate the Yozma model (Author Interview, 6 October 2013, Tel Aviv).

economic structure that have shaped the local fit of its VC policy choices.

From a functionalist perspective, the economic structure of the Taiwanese economy had motivated the relevance of VC policies to Taiwanese policymakers by the early 1980s. For VC to have been successful in a local market, a Taiwanese interviewee quipped, there needed to be four things: “capital, entrepreneurial talent, investing talent and functioning stock exchanges – and Taiwan had all these ingredients” (Author Interview, Taipei, 5 January 2012). Similarly speaking to the existence of high levels of technology start-up activity, technology-focused SMEs have been said to be the “backbone” of the Taiwanese economy, in contrast to “many advanced nations, where conglomerates dominate the economy” (GIO, 1999: 172). In this way, SMEs have accounted for over 98% of Taiwanese companies, up to 80% of employment and 47% of the economic production (GIO, 2000; The Economist, 1998: 8).<sup>82</sup> In addition to the SME-centric nature of the Taiwanese economy, by the year 2000 Taiwan had become a top global producer of high-technology products such as personal notebook computers and semi-conductors (Tsai and Wang, 2001: 65).

Taiwan’s high-technology SME activity levels fostered demand for high-risk capital by the early 1980s. However, in the early 1980s, the providers of capital (banks) were not lending adequate sums to Taiwan’s burgeoning high-technology SMEs. As a result of the high-technology SMEs’ need for capital, Taiwan’s 1983 tax credit was launched with the following five goals: (1) provision of seed funds, (2) management support for technological enterprises, (3) guidance and assistance for the listing of the stock of technological enterprises on the stock exchange, (4) the transfer of technology from industrialized countries, and (5) *the direction of long-term capital from other financial institutions to technological enterprises* (Wang, 1995: 2; Italics added for emphasis). Here, the two Taiwan’s economic structure characteristics pointed to non-bank solutions for its

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<sup>82</sup> The prominent role of SMEs in the Taiwanese economy has been the result of policies that did not support national champions, choosing instead to focus on domestic SMEs producing computer components (Fuller, 2002: 19; Breznitz, 2007). It should be noted that SME centrality to the economy is not unique to Taiwan; SMEs account for 60 to 70% of employment, on average, across the OECD.

SME funding gap.

As evidence of the genuine need that Taiwanese start-ups had for VC investment, the Taiwanese VC industry has had a substantive impact on Taiwan's economy.<sup>83</sup> This impact was attested to in a 2006 presentation given by Thomas M.F. Yeh, the Vice Chairman of the Executive Yuan's CEPD, as he lamented that Taiwan's VC market:

has made a substantial contribution to Taiwan's industrial restructuring, SME development, high-tech industry incubation, job creation, and stability of economic development...Its impact on the nation's most significant period of rapid economic boom has been remarkable (Yeh, 2006: 3).

The Taiwanese VC market's large impact on the local economy has been due to the domestic orientation of its VC managers and their investment targets. In this way, Taiwanese VC managers have been primarily investing local money as foreign money has historically accounted for less than 7% of the investment in Taiwan's VC market (Breznitz, 2007: 141). In addition to VC investors being local, the companies that Taiwanese VC managers have invested in have been overwhelmingly local, as nearly 80% of Taiwan's VC investments have been in domestic start-ups (Dietrich, 2003: 5). The key point here is that the local VC industry in Taiwan has provided needed early-stage equity to local, high-technology start-ups since the 1980s. Said another way, had there not been a need for VC investments, the VC asset class would not have had such an impact on the local economy.

Taiwan's financial system, especially its banks' control of credit away from early-stage technology start-ups through the early 1980s, helped to catalyze VC policy action. In the early 1980s, when VC policy was first launched in Taiwan, its financial system was bank dominated.

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<sup>83</sup> If VC policy had been a political project only, and Taiwan's local SMEs actually did not need nor want this form of early-stage capital, then VC would not have had a large impact on the broader economy beginning in the 1980s.

What's more, a handful of banks had been so dominant over official financing in Taiwan that in 1980 seven banks accounted for nearly 90 per cent of all domestic deposits (Wade, 2004: 159).<sup>84</sup> Taiwan's high-technology SMEs could not secure access to these bank loans. Instead they had to establish credit lines with unregulated and unofficial sources (the grey market). As part of Taiwanese policymakers' efforts to rectify banks' inadequate provision of capital to technology start-ups, they set out to learn about VC policy items. Taiwan's policymakers then established an off-shore banking facility, a unit trust scheme that has allowed foreign companies to take equity stakes in Taiwanese firms, and a VC tax and regulatory scheme (GIO, 1993: 235). Taiwanese policymakers have supported equity financing, particularly VC, to aid the growth of technology SMEs who could not secure financing from its historically bank-dominated financial system.

Moving on from the economic structure, I now examine the impact that the economic management norms have had on the forms of Taiwan's VC policy choices. Taiwanese industrial policymakers' economic management norms have preferred an indirect transfer of resources to target sectors, specifically via tax incentives.<sup>85</sup> In this way, the Taiwanese policymakers' orientation has been towards tax credits for the promotion of SME-produced technology sector exports (see Amsden, 1979; Wade, 1990; Fields, 2012). In part because of this aversion to direct financing, Taiwanese industrial policymakers chose to support computer components production as a strategically important sector as it did not require deep pockets and has been one of the world's fastest growing consumer product markets.<sup>86</sup> The Taiwanese Ministry of Finance began offering tax credits to the tune of 20% for high-technology sector R&D in the 1970s in an effort to support computer components production (Breznitz, 2007: 100-125; Fuller, 2002). In sum, Taiwanese

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<sup>84</sup> The rigid financial structure through the 1980s was said to be politically motivated, so the state could monitor and direct financing as a means of limiting competing centers of private sector power vis-à-vis large companies (Breznitz, 2007: 103-111).

<sup>85</sup> Taiwan's economic management norms have also preferred to support private sector production through the development of intellectual property at public research institutes, like ITRI and III.

<sup>86</sup> The semi-conductor market has had high annual industry growth rates (over 30%) and yearly sales upwards of USD 300 billion (Ford, 2010).

policymakers' pre-existing economic management norms have preferred tax incentives to spur high-technology SME activity.

Robert Wade in *Governing the Market* suggests that Taiwanese policymakers' pre-existing economic management norms have focused on the use of tax incentives because:

The high priority to economic stabilization reinforced the position of the monetary authorities vis-à-vis the industrial authorities, *limiting the use of selective credit as a primary instrument for steering the behavior of private firms* as compared to Korea. Hence the government's reliance on public enterprises, trade controls, and *tax incentives* (Wade, 1990: 296; Italics added for emphasis).

In line with these pre-existing economic management norms, rather than direct financing of the high-technology sector, in the 1970s the state had reduced taxes on technology imports and gave a 20% tax write-off for R&D expenditures. In addition, the Statute for Encouragement of Investment had provided investors with a five-year corporate income tax holiday for “newly established capital or technology-intensive projects” (GIO, 1986: 237). In this way, tax incentives were, therefore, already a “tried and true” strategy by the early 1980s (Author Interview, Taipei, 5 January 2012). #

Thus, by the time VC policy came onto the policy agenda in the early 1980s, the Taiwanese state had already been using tax incentives as the primary mechanism for its technology sector-focused industrial policies since in the 1970s. Instead of trying a new policy formula, VC policymakers deployed the 20% tax incentive that had worked in the technology sector over the previous decade. Moreover, they did not “want to take risks so felt that it's best to be consistent” with strategies that they know have worked before (Author Interview, Taipei, 5 January 2012). Similar to the 20% tax incentives given for high-technology R&D, Taiwan's 20% incentive for VC investments in high-technology companies had been implemented as an effort to reduce “the amount of risk investors were taking with their investment” in risky technology ventures (Author

Interview, Taipei, 5 January 2012). In their various uses, the aim of the tax incentives has been to increase private investment in VC and high-technology SMEs (Wang, 1995: 2).

Related to the tax instrument preference, as expected, Taiwanese policymakers' private sector financing norms dictated that they have not committed large sums of money directly to the high-technology and VC industries. As mentioned in the preceding paragraphs, Taiwan's industrial policies for the high-technology sector have focused on tax credits, R&D provision and commercializing SME products and modest funding efforts (Greene, 2008). In this vein, policymakers have only given modest financing to private sector actors so that businessmen do not become reliant on public funding (GIO, 1983: 160). In the VC policy arena, private sector financing norms translated into the government offering tax incentives and co-investment partnerships with "Walden, H&Q and other VC managers, like Intel Capital and GE Capital" (Author Interview, Taipei, 5 January 2012). As a result of their private sector financing norms, Taiwanese VC policymakers have not allocated capital directly to VC managers without co-investment provisions. Given their preference for non-direct financing to the private sector, through the Development Fund's co-investment, the government has offered modest support while decreasing VC managers' risk on investments in Taiwan. In fact, their only FoVCF initiative came via the 2012 bilateral FoVCF with New Zealand. So, private sector financing norms steered policy choices away from funding, and instead towards indirect transfer via tax credits.

Taiwanese policymakers' company size and international versus local firm preferences have shaped its VC policy terms towards supporting local VC managers and start-ups. In line with their economic management norms that prefer policy tools that stimulate small, local firm activity, the government (the CEPD in particular) has encouraged local corporations, such as Formosa Plastics, to invest in the burgeoning VC asset class. To ensure that VC money has been going to local high-technology SMEs, policymakers have restricted the tax incentive to privately held, Taiwanese

technology firms (Wang, 1995: 2). As a result of such incentives, many of Taiwan's VC managers have been local technology firms that have succeeded and then invest in local start-ups. The corporate nature of Taiwan's VC industry has then in turn shaped its subsequent VC policy choices as Taiwanese corporate VC investors have sought to buy companies for reasons other than strictly their financial return. These reasons include using the SME's technology, acquiring a talented team, or heading off potential competition (Author Interview, Taipei, 6 January 2012). Also, Taiwanese VC managers have accepted the restrictive environment as it affords tax exemption (as long as they invest in high-technology SMEs) as well as the "prestige and credibility that comes with the special approval of the government" (Wang, 1995: 21).

The use of the paper company structure in Taiwan, instead of the Silicon Valley LP structure, has been driven by the preference for supporting local firms. More specifically, Taiwanese VC policymakers were found to have adapted the regulatory environment for VC since their local investment practices have dictated that investors typically have control over investment decisions. As evidence, Taiwanese policymakers:

learned about the LP structure from the US, but they have changed the roles and responsibilities of LPs and GPs since Chinese people like to be involved in investment decisions. Chinese don't like to give their money and then not have the chance to decide about how the money is spent (Author Interview, Taipei, 5 January 2012).

As a result of VC policymakers' sensitivity to local preferences, Taiwanese policymakers adapted the Silicon Valley LP regulatory structure for VC in Taiwan so that it pleased local investors. As a result of the adaptation of the VC regulatory structure in Taiwan, investors, not VC managers, have had the final authority over investment and exit decisions.

Moving on to the impact of formal institutions, Taiwan's VC policymaking process – which

has largely remained intact since the early 1980s – was found to have impacted the timing and shape of its VC policy choices. The insular Martial Law-era policymaking process allowed for the quick deployment of industrial policies in line with the preferences of top politicians and policymakers. By the early 1990s, Taiwan’s industrial policymaking process is said to have changed in step with this democratization (specifically the end of Martial Law in 1987 and then the lift of the national emergency rule in 1991). In this way, Taiwan’s “state corporatism” or “authoritarian-corporatist” political system of 1950 to 1985 evolved into a more inclusive model of “social corporatism” by the late 1980s (Wade, 1990: 228, 290).

Despite political regime changes stemming from Taiwan’s democratization, however, the key actors and general framework of the VC policymaking process largely remained intact across both eras (Breznitz, 2007: 100-125; Author Interview, Taipei, 6 January 2012).<sup>87</sup> Across both eras, the VC policymaking process has consisted of a “few elite leaders and technocrats” crafting policies (GRIPS, 2011: 6). VC policy’s consistent management over time stems from the industry and its policies not being solely the product or responsibility of a single ministry. This is because of the crucial role that K.T. Li played in establishing the VC policy; Mr. Li was not beholden to one specific ministry (as he was minister without portfolio) and neither has VC policy.

As a reflection of the unchanged nature of the VC policymaking process, Taiwan’s VC policies did not change in step with Taiwan’s democratization in the late 1980s. The major VC policy initiatives had been launched during the martial law era; the 20% tax credit for investors was implemented in 1983. The first substantive changes made to Taiwan’s VC regulations and taxation had only been implemented in the early 2000s. At this time, regulations were changed to allow insurance companies to invest in VC. In the year 2000 the biggest change – in which the VC tax

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<sup>87</sup> The most significant change in VC policy oversight has been the shift of VC fund approval from the Ministry of Finance to the IDB, and the VC funding has remained under the separate purview of the CEPD. However, the funding and regulatory power has remained separate until today.



credit was repealed – took place. However, these policies took place nearly 15 years after democratization. The VC policy changes have been said to be a product of the further democratization of the political system, particularly the differing industrial strategy norms of Taiwan’s political parties (Author Interview, Taipei, 6 January 2012). More specifically, this was the first time Taiwan’s challenger political party (the DPP) took office, and the DPP then made industrial policy cuts in line with their less pro-business, and less interventionist, approach. To be sure, the discontinuation of Taiwan’s tax incentive has been found to be the result of the political leadership change:

In 2000 all tax credits were discontinued by the DPP, except for R&D tax credits to really breakthrough technologies. They discontinued tax credits to industries that they deemed to be established and profitable – including the VC market’s tax incentive. There are now only 20% tax credits for special R&D (Author Interview, Taipei, 5 January 2012).

In this way, Taiwan’s VC tax credit discontinuation in 2000 was just one of several industries affected by the DPP’s decision to stop tax credits. Though the VC tax credit discontinuation in Taiwan has not been the direct result of the 1987 democratization, it has been driven by a change in the political party in government, which would of course only occur in a democratic regime.

Taiwanese policymakers’ distribution of budgetary power has reinforced their preference for using tax incentives, rather than FoVCFs, as the primary VC policy tool. The MoF had been the main regulating body for the VC industry from 1983 until 2005. During that time, VC managers had to seek “special approval” from the MoF to operate (Wang, 1995: 5) and the MoF launched the tax credit legislation. However, with the new regulatory package (the Scope) in 2005, the MoEA’s IDB effectively became the regulator. Since then, VC managers have had to seek fundraising and registration approval from the IDB. Though the IDB oversees the VC industry, it has had little authority over financing for the VC industry (Author Interview, Taipei, 5 January 2012). Instead,

the IDB has had more of a coordinating role as it has organized task forces to bring focus, energy and expertise to industry-specific policymaking (Breznitz, 2007: 100-125).<sup>88</sup>

In contrast, the Executive Yuan's CEPD has had budgetary power as it has invested alongside, and in, the VC industry via their Development Fund since 1985. However, the CEPD has not been involved in the tax or regulatory policymaking. Taken together, taxation and regulation have been under the purview of the MoF and the IDB while the CEPD has managed the VC industry's funding. Since the policymaking and funding bodies have been separate in Taiwan, the creation of VC policies laden with financial support has not come easily. This stands in contrast to VC policymaking in Singapore where policymakers design initiatives and also possess large budgets from which they have been able to fund policies, such as FoVCFs.

This distribution of policymaking power for Taiwan's VC industry has also undermined the ability of private actors to lobby for VC policy change. To this end, as of January 2012, the TVCA director lamented that he did not "have a supervisory body to communicate with directly" (Author Interview, Taipei, 5 January 2012). The TVCA has been lobbying to change this, and specifically, to make the CEPD the supervisory authority for the VC industry since they already manage the Development Fund. The TVCA has also been "lobbying for regulations that allow pension funds to invest in VC for the last twenty-five years" (Author Interview, Taipei, 5 January 2012). While the TVCA has been lobbying on these various aspects of VC policy, they have not yet seen a substantive change as a result of their lobbying efforts. The TVCA's inability to drive VC policy change stems from its lack of a centralized policymaking power.

Finally, Taiwan's VC policy adaptation has been shaped by its corporate tax environment. The tax rate in Taiwan for high-technology investment profits is zero as high-technology SMEs

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<sup>88</sup> In fact, some say that the MoEA and IDB do so much consulting of private experts that the IDB "outsources" policymaking to semi-governmental think tanks such as the TIER and the CIER (GRIPS, 2011: 4).

have been categorized as “strategic industry enterprises” that have been afforded a tax holiday (Wang, 1995: 5-6). Only companies “limited by shares” have been qualified to receive these tax exemptions on capital gains in Taiwan (Wang, 1995: 10-11). As a result, the use of an LP structure “which would make VC investments eligible for the individual tax rate has not been attractive at all” to Taiwanese investors in technology-focused VC funds (Author Interview, Taipei, 5 January 2012). In this way, one of the aspects of Silicon Valley’s LP structure would have actually made tax treatment of VC investing less attractive in Taiwan. This is one of the factors that contributed to Taiwanese policymakers’ decision to use the paper company structure (as inspired by studying the Japanese VC policy context) rather than deploying a version of Silicon Valley’s LP structure.

## **6.5. Conclusion**

As Taiwanese policymakers have lamented, “every nation must respond to its own social background and economic conditions” – and this is precisely what Taiwan has done when making its VC policy choices (GIO, 1983). My empirical research found that policymakers did just this by responding to their local normative as well as economic conditions. Taiwan’s technology SME activity levels catalyzed its early VC policy diffusion. In response to technology SMEs’ need for funding, Taiwanese policymakers learned about VC policies as a means to increase the supply of capital and management expertise for Taiwan’s early-stage, high-technology SMEs. In addition to SMEs’ financing needs motivating VC policy diffusion, broader competitive pressures also stimulated Taiwanese VC policy diffusion. These broader competitive pressures have stemmed from Taiwanese policymakers seeking to employ policies that have driven the outperformance of its technology-focused, export-led economy.

In response to these funding and competitive pressures, Taiwan’s highest ranking industrial policymakers organized a study trip to learn more about technology clusters, they focused on

studying the regions they had relations with and believed were most successful. Their boundedly rational determination led Taiwanese policymakers to study VC policy environments in Silicon Valley and Japan in 1981. Through the knowledge gained on this trip, elite policymakers, particularly K.T. Li, came to believe that VC markets had been essential to the success of the Silicon Valley cluster, and that VC would also be critical to Taiwan's high-technology SMEs' competitiveness. Following from their studies, Taiwanese policymakers formulated policies capable of developing a local VC market.

Given the low specificity of the Silicon Valley policy environment, Taiwanese policymakers did not know which elements of the Silicon Valley policy context contributed to its VC industry success. In this way, Taiwanese VC policymakers felt they did not have a specific policy blueprint for how to create their local version of Silicon Valley. As a result, they took what they understood to be the positive elements of the Silicon Valley context (e.g. university-centric innovation and VC) and promoted their development in Taiwan *using industrial policy tools that were tried and tested in the local context*. In addition to the role of pre-existing economic management norms, Taiwanese policymakers have been impacted by their studies of VC policies in more proximate states (e.g. VC regulations in Japan). In this sense, Taiwanese policymakers have been empowered to synthesize VC policy forms based upon their bounded learning process.

Given the role of the bounded learning mechanism, Taiwan's economic management norms have been prominent in shaping the VC policy choices. As such, Taiwan's implementation of 'medium'<sup>89</sup> interventionist VC policies fits the Private Sector Promoter hypothesis for this proxy state. Acting in accordance with the Private Sector Promoter's economic management norms – pre-existing ideas about which policy instruments to use, policymakers' preference for supporting

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<sup>89</sup> Medium is the category assigned to the Taiwanese choice because tax incentives were the centre of gravity of Taiwan's VC policy choice, at least until 2000. See Chapters 1 and 2 for more explanation of the interventionist spectrum of VC policy instruments.

SMEs (over MNCs or SOEs) and local rather than international, and private sector financing norms, Taiwan's early VC policy choices were adapted towards tax credits. The Private Sector Promoter hypothesis did not, however, expect that Taiwanese policymakers would have created the paper company structure or the bilateral FoVCF. Contrary to analytical expectations, my primary research found that Taiwan's unique VC paper company structure has been the result of domestic drivers. The paper company structure was designed to fit local investors' norms regarding having control over investment decisions, implications of the domestic tax environment as well as the corporate nature of Taiwan's VC managers. These other institutional characteristics had not been specified in the framework, but were discovered for their impact on VC policy choices, especially why Taiwanese policymakers have not duplicated Silicon Valley's regulatory environment.

The formal institutions of Taiwan's elite-drive policy process – across both the Martial Law and democratic eras – allowed for the longevity of the tax-centric VC policies until 2000. Formal institutions enabled Taiwanese policymakers, particularly CEPD ministers and K.T. Li as the Minister without Portfolio, who held strong beliefs about the benefits of VC policy, to swiftly implement VC policies in the early 1980s given the concentration of policymaking, but not budgetary, power. Eventually, Taiwan's democratization affected its VC policies as substantive changes to VC policies came in 2000, when the DPP was elected and did away with sector-specific subsidies, including the 20% tax credits for VC investors.

In sum, given that Taiwanese policymakers learned about the vague Silicon Valley idea, some adaption was expected (as vague policy blueprints are expected to experience more adaption when diffused). Though the low specificity of the Silicon Valley policy environment contributed to suggested adaptation, the level of specificity did not alone account for the precise shape of Taiwan's VC policy choice. Instead, Taiwanese policymakers' VC policy choices have reflected their economic management norms and their adherence to domestic investor control practices and local

tax laws. Collectively, domestic economic norms overpowered the impact of competition for (American) capital on Taiwan's VC policy choice. If competitive pressures had been the most impactful factor in Taiwan's VC policy choice, there would have been higher degrees of convergence on the Silicon Valley model. Instead, bounded learning was primary, which facilitated the creation (and persistence) of Taiwan's unique VC policy choices that fit local policymaking and investor norms. Taken together, Taiwanese policymakers learned about the Silicon Valley and Japanese VC policy items based upon their desire to build a local Silicon Valley. But, they then synthesized VC policies to fit the local political economy instead of duplicating Silicon Valley's neoliberal VC policy formula.

## 7. Singapore: Financier and Director

### 7.1. Introduction

“You cannot replicate another Silicon Valley; Singapore had to do it our own way.”

- *K.C. Low, former manager of Singapore’s TIF (FoVCF), 12 September 2012*

Singapore is the proxy for the Director and Financier typology, which expects VC policy choices characterized by high levels of intervention (particularly funding). As background, Singapore is one of the Asian Tigers, and considered an “economic miracle” by many (see for example, World Bank, 1994). To this end, Singapore transitioned from a “third world country to a first world nation” in one generation (Lee, 2000). Since gaining independence in 1965, the *Lion City* (Malay translation of “Singapura”), under the strong leadership of long-time Prime Minister Lee Kuan Yew and the People’s Action Party (“PAP”), has attained infrastructure, institutions, and an economy on a developed country level.<sup>90</sup> The private sector, particularly MNCs, have played a role in the Singapore industrialization story, but the omnipresence of the Government’s supportive tentacles in the economy can almost not be overstated.

For Singaporean policymakers to formulate their interventionist policies, they have picked winning sectors by “imaginatively discerning” which new technologies would be the next big thing (NUS Engineering Faculty, 2012). Based upon these visions of the future, the Economic Development Board (“EDB”) has actively courted high-technology and financial services firms to

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<sup>90</sup> Singapore is classified as a developed country (or advanced economy) according to the IMF and World Bank. Singapore is also included in the MSCI World basket of developed countries, instead of the MSCI Emerging Markets group, which many of its neighbours are classified as. In Asia, only Singapore, Hong Kong, Japan and Australia are included in the MSCI World index (Korea and Taiwan are under consideration for Developed status as of June 2014).

establish their regional headquarters in Singapore (King, 2006). Through these efforts the state has helped integrate the Singapore economy into the world economy, become a top semiconductor manufacturing center, the busiest port in the world and a major financial center. These industrial efforts have been motivated by Singaporean political and policymaking leadership's belief that Singapore's economic competitiveness has been, and will remain, essential to the state's very survival (see Han, *et al*, 2011).

Historically, Singapore's entrepot economy and its policymakers have been focused on supporting large international firms. Perhaps unsurprisingly, Singapore's high-technology start-up activity levels have been low (EDB, 1998; EDB, 2000). It is within this context that Singaporean policymakers have deployed industrial policies aimed at growing indigenous, technology SMEs. Policymakers' interest in supporting SMEs began in the 1980s, as the Lion City's reliance on MNCs was criticized as "quasi-industrialization" by influential Singaporean economists, such as Professor Lim Chong Yah (Han, *et al*, 2011: 140). In response to this critique, policymakers turned their attention to Singapore's SME environment, in addition to working to continue attracting MNCs. In explaining SMEs' need for government support, Singaporean policymakers have said its entrepreneurial ecosystem has been inhibited by its limited talent pool, regulatory environment, insufficient funding, and a weak entrepreneurial culture.<sup>91</sup> To address these weaknesses, agencies such as the National Science and Technology Board ("NSTB") and the National Research Foundation ("NRF")<sup>92</sup> have implemented policies focused on growing start-up activity and extending Singapore's financial services offerings. Policymakers sought out information on how to best drive SME activity in a "if you build it, they will come" manner (Author Interview, Singapore, 19 September 2012).

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<sup>91</sup> The four pillars for economic strategies that were identified by the Technopreneurship 21 Ministerial Committee were education, facilities, regulations and finance (Ho, *et al*, 2002: 336).

<sup>92</sup> Singapore's NRF was named and modelled after the US National Research Council (Author Interview, Singapore, 19 September 2012).



VC policy diffusion began in Singapore under the umbrella of supporting local SMEs and further promoting Singapore as a regional financial center. In this way, VC policies have been pursued as part of Singaporean policymakers' bid to have vibrant technopreneurship activity and innovation levels. As a result, Singapore's VC policy choices have taken shape as policymakers have believed that a domestic VC market would help address the "dearth of early stage funding" available to any would-be technopreneurs (Author Interview, Singapore, 12 September 2012). Building the local VC industry, then, has been conceptualized as part of national efforts to increase local technology-sector entrepreneurial (coined "technopreneurial") activity. The importance of a VC industry to technopreneurship and the Singaporean financial services sector has been repeatedly asserted by high-ranking policymakers. As an example, former chairman of the EDB (from 1975-1981), Ngiam Tong Dow, said that VC companies have a "crucial role to play" for SMEs and innovation to take off in Singapore (Zhang, 2011: 182).

The Singaporean VC policy choices consist of adaptations of all three VC policy diffusion items – the Silicon Valley regulatory environment, Taiwanese-like tax incentives and the Israeli FoVCF. The first FoVCF deployed was the mammoth 1999 USD 1 billion Technopreneurship Investment Fund ("TIF"). More recently, a second FoVCF, the Early Stage Venture Fund ("ESVF"), was created in 2008 to seed new Singapore-based VC managers (NRF, 2008). Singaporean VC tax policy has included tax exemption schemes for up to 10 years (with a potential exemption for another five years) as well as a tax credit for investors' losses in start-up investments. Finally, Singaporean policymakers also adopted the LP structure and have offered non-tax incentives for investors in VC funds. One of the notable non-financial incentives to promote investment in Singaporean VC funds has been the Global Investor Program ("GIP") whereby foreign investors can obtain Singaporean permanent residency ("PR") by investing over SGD2.5 million in approved Singaporean VC funds (EDB, 2012).

Why and how has the policy diffusion process resulted in these highly interventionist VC policy choices in Singapore? This chapter strives to answer this question by investigating the external and domestic sources of the Singaporean VC policy choices. To do so, the chapter is structured as follows. Section 7.2 identifies the specific elements of Singapore’s VC policy choices as well as characteristics of the Singaporean VC market. Section 7.3 examines the international factors that have affected the shape of VC policy diffusion in the Singaporean case. The external sources primarily include competitive pressures, learning, and the availability of multiple diffusion items of varying levels of specificity. Section 7.4 then turns to the domestic factors that have shaped Singaporean VC policymaking, particularly economic management norms, the formal institutions and economic structure. The Conclusion ties the findings of the international and domestic investigations together to ascertain how elements of the diffusion process have combined to shape Singapore’s VC policy choices.

## 7.2. Singapore’s VC Policy Choices and VC Market

Singapore’s VC policies have mirrored much of the industrial policy strategies its policymakers have deployed from the 1980s through to today: courting international market leaders, building domestic expertise, and striving to become an Asian regional hub. In this way, Singapore’s VC policies have included funding schemes, tax incentives, and a market-friendly regulatory framework focused on attracting international investment. The following table details the key developments of Singapore’s VC policies:

**Table 7.1:** Key Dates in Singapore’s VC Policy Choices

Year	Milestone
1985	EDB Investments, a USD 100 million government VC fund, was formed to make

	direct investments in high-growth start-ups
1996	Vertex Venture Holdings (subsidiary of Temasek, the Singaporean SWF) launches its Vertex International Fund as one of the ten original Israeli Yozma Funds
1999	NSTB, EDB and TIF Ventures co-invested with angels in the tech sector via the Business Angel Fund
1999	Technopreneurship Investment Fund (TIF), USD 1 billion FoVCF, launched in April
1999	Technopreneur Investment Incentive Scheme – loss insurance for investors in high-tech start-ups
2002	Broaden the scope of the TIF to attract all types of private equity fund managers (e.g. not just early-stage VC managers) to Singapore
2002	Endorsed the recommendation of the Company Legislation and Regulatory Framework Committee, which resulted in Singapore establishing the LP structure
2005	TIF was wound down due to scrutiny of its financial performance
2008	The NRF launched the Early Stage Venture Fund (ESVF), by seeding six local VC managers with SGD10 million each, matching the private investor monies they raised
2013	ESVF buy-back is opened up to international, not just Singapore-domiciled, VC managers

*Source:* EDB (2000: 59), ERC (2002: v-vii), NRF (2008), TechInAsia (2013)

As shown in the table above, the TIF had not been the first VC funding initiative set up by the Singaporean government. In 1985, the EDB had launched a USD 100 million VC fund to make direct investments in local SMEs and in 1990 it launched the first seed stage VC Fund (EDB, 2000: 58). Though not the first VC fund, the TIF has been a watershed in Singaporean policymakers' financial support for the VC industry as the first FoVCF, and also in terms of its size (USD 1 billion). Given that it was Singapore's first policy initiative that focused on the VC industry and not SMEs, the 1999 launch of the TIF is identified as the first VC policy to be deployed in Singapore.

The TIF came into being as Dr. Tony Tan<sup>93</sup> set up a ministerial committee to conceive of,

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<sup>93</sup> Dr. Tony Tan has been a high profile civil servant and now politician. Dr. Tan was elected President in 2011 and had previously held senior positions across government entities, including being the Chairman of the Government of

and then to oversee, the Technopreneurship-21 initiative (Ho, *et al*, 2002: 336-341).

Technopreneurship-21 aimed to replicate the “Silicon Valley and Taiwanese models,” meaning that policymakers strove to develop a robust ecosystem for technology-sector start-ups in Singapore, akin to those in Silicon Valley and Taiwan (Tan, 1999). The TIF role within the Technopreneurship 21 initiative had been “to develop the VC industry by investing in local and overseas funds, with the intent of accessing deal flows and attracting them and their investee companies to Singapore” (EDB, 2002: 50). To be sure, the TIF was created to attract foreign investors, as its objective was to:

make strategic investments in leading venture capital firms around the world, to promote the formation of indigenous fund management firms, encourage foreign venture capital firms to set up operations in Singapore, and in the process catalyze knowledge transfer and network development through overseas portfolio funds (Koh & Wong, 2005: 14).

The TIF had several government affiliations to achieve these aims. The TIF was co-managed by two different units – the NSTB and the Government of Singapore Investment Corporation (Chia, 2005: 27) – and was owned by EDB Investments Ltd.<sup>94</sup>

The TIF’s rapid distribution of capital in 1999 and 2000 conveyed a positive message about its potential. As evidence of the initial promise of the TIF, in 2000, a senior minister made the following comment about the TIF’s contribution to the Singaporean VC industry in its first year of operation:

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Singapore Investment Corporation (the Singaporean SWF), chairman of Singapore Press Holdings and the creator and head of the Technopreneurship 21 Committee and the NRF.

<sup>94</sup> The EDB Investments Ltd invests in high-growth companies domestically and abroad and invests across the VC, PE and corporate ventures channels. The EDBI co-managed VC funds include Cluster Development Fund, ED Ventures Pte Ltd, EDB Ventures 2, Pte Ltd, PLE Investments Pte Ltd, Mobile Commerce Venture Fund, BioMedical Sciences Investment Fund, Pharmbio Growth Fund Pte Ltd, Life Sciences Investment Pte Ltd, Singapore Bio-Innovations Pte Ltd and the TIF (Wang, 2002: 13).

More VC managers are coming to tap the huge pool of talent in the region. VC managers bring with them not only financial capability, but also management expertise and business network. The [US] \$1 Billion Technopreneurship Investment Fund (TIF) launched by NSTB a year ago has greatly increased the presence of VC managers in Singapore (Heerjee, 2000).

The 2002 Economic Review Committee (“ERC”) report echoed similarly positive comments, saying that the TIF had achieved early success in attracting VC firms and creating a technopreneurship community in Singapore (ERC, 2002: vi).

At the time of its launch, the goal of the TIF had been to attract world class VC talent to Singapore and to build a domestic VC market. In this way, the TIF’s managers were not only focused on the government’s financial return, e.g. getting its money back (Author Interview, Singapore, 12 September 2012). However, there was a change in leadership at the NSTB in 2004, and the new leadership “became intent on financial returns and was less patient in waiting for the long-term development of a VC industry” (Author Interview, Singapore, 20 September 2012). As a result of the new metrics, the TIF’s “first five years of operation had not been found to have delivered its new financially-focused key performance indicators, so the TIF was wound down by the EDB” in 2005 (Author Interview, Singapore, 12 September 2012).

The TIF has not been the last FoVCF initiative launched by the Singaporean government, despite the negative perception of its performance and its unwinding. In 2008, the NRF launched the ESVF to “catalyze the set-up of several early-stage venture capital funds” (NRF, 2008: 1). In this way, the ESVF was created to specifically address the “lack of funding available to Singaporean start-ups at the Series A and B Rounds” (Author Interview, Singapore, 13 September 2012). The ESVF scheme’s structure and terms are more similar to the Israeli Yozma FoVCF model than the TIF had been, as unlike the TIF, the ESVF money has gone to newly formed, local VC

managers.<sup>95</sup> In terms of the ESVF's participation requirements, the six selected VC managers<sup>96</sup> have been required to have matching private investment commitments of at least SGD10 million from private investors. In addition, the VC funds have been required to invest in local start-ups to ensure impact on the Singaporean start-up ecosystem.

For its repayment terms, the ESVF scheme then gives participating VC managers the option to buy out the government's investment within 5 years at the price of 1.25 times the NRF's original investment (similar, but indeed different, to the repayment terms offered by Israel's Yozma Fund) (NRF, 2008: 1). In September 2013, the ESVF terms were changed by the NRF to go back towards attracting international firms. The ESVF was changed to allow non-Singapore domiciled VC funds to be eligible. To this end, the NRF has said that "the goal of doing this is to attract more investment firms to set up in the country"(TechInAsia, 2013).

In addition to its FoVCFs, Singaporean policymakers have also offered several tax exemptions to VC managers and tax credits (on losses) to VC investors. This follows a tradition of Singaporean policymakers deploying industry-specific tax incentives, which they began with the 1959 Pioneer Industries Ordinance (Kwong *et al*, 2001: 27). In the 1998/1999 budget the Finance Minister confirmed that tax exemptions for VC funds in particular would be extended on a case-by-case basis for up to five years beyond the maximum of 10 years (MAS, 1998: 21). In addition, Singapore-domiciled VC managers' profits have been made specifically eligible for a 10 year tax break (e.g. the tax holiday for pioneer industries) via the Venture Capital Incentive (section 97) of the Economic Expansion Incentives (Relief from Income Tax) Act (Koh and Wong, 2005: 12; Dietrich, 2003: 50). The named inclusion of VC managers in the Relief from Income Tax Act came

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<sup>95</sup> Despite this domestic intention, Walden International, a well-established international VC manager, has received ESVF money for its Seed Ventures IV Pte Ltd (S4). The NRF selection of Walden's fund was positioned as giving money to a successful Singaporean VC (Walden's founder, Mr Tan Lip Bu, grew up in Singapore and attended Nanyang University) who had "pioneered many venture capital concepts in Asia" (NRF, 2008: 6).

<sup>96</sup> The six ESVF VC managers selected in July 2008 are: BioVeda Capital II, Nanostart Asia, Raffles Venture Partner, Tamarix Capital, Upstream-Expara; and Walden International (NRF, 2008: 2).

on the heels of an ERC report that outlined the case for VC-specific tax environment improvements, including the exemption of management fee income<sup>97</sup> from Singaporean tax, a streamline of PE/VC tax incentives into a single package and the removal of a minimum fund size to qualify for incentives (ERC, 2002).

Singaporean policymakers have also deployed tax incentives to help reduce VC investors' downside risk. In this way, the Standards, Productivity and Innovation Board has offered the Enterprise Investment Incentives Scheme for start-up investors, such as VC managers. This has allowed VC managers to deduct up to SGD 3 million in losses incurred against their taxable income (Teng, 2011: 35). In addition, the Technopreneurship Investment Incentive Scheme has offered an allowance for tax deductions (up to 100% of equity invested) on losses from selling qualifying shares or liquidating investments in start-ups (Dietrich, 2003: 50, Chia, 2005: 27). However, Singaporean VC investor tax credits have not offered a tax credit for investors in the VC asset class as the Taiwanese VC tax policy innovation had done. Instead, Singaporean VC investor credits are only available for losses incurred, not for equity investments in the asset class.

The centerpiece of the Silicon Valley regulatory model, the LP structure, has been adopted in Singapore. The LP structure's adoption was the result of the Technopreneurship 21 committee's findings that the regulatory environment for SME investments could be improved (Author Interview, Singapore, 12 September 2012) and the ERC report that recommended its use (ERC, 2002). Following the LP adoption in 2002, VC management companies in Singapore have been able to operate as LPs or bank associated VC funds (more typical of the Japanese model) (Wang, 2002: 2). Here I note that the LP structure was adopted well after Singaporean policymakers had initially learned about the Silicon Valley model; the source of this delay is examined in the

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<sup>97</sup> Performance fees were already exempt as they are capital gains (the VC managers' share of profits from portfolio company exits). Management fees are the revenues VC managers make for running their funds, regardless of performance. Because management fees are not capital gains, they had not previously been tax exempt.

following sections.

The other piece of the Silicon Valley regulatory framework, the ERISA reinterpretation, has not been deployed in Singapore. To this end, large, local institutional investors have not been explicitly allowed to invest in VC funds. Instead, Singaporean VC policymakers have deployed regulatory incentives to attract international retail investors to allocate to Singapore-based VC funds. This regulatory incentive came in the form of the MAS' GIP, which was launched in 2000 to increase the supply of international investment available for Singaporean VC funds. This has been done by offering permanent resident ("PR") status to foreigners who invest a minimum of SGD2.5 million in approved Singapore-based VC funds. The GIP has helped to raise capital for Singaporean VC funds, however, interviews with VC managers have suggested that the participants in the program are not necessarily good investors for the asset class.<sup>98</sup>

VC policymaking bodies have been created, and others have shifted focus, in order to make these VC policy choices. Committees and special foundations, such as the Technopreneurship 21 Ministerial Committee and the NRF, have been formed and led by high-ranking ministers who have been given the authority to plan, fund and implement VC policies. As background on the Technopreneurship 21 ministerial committee, in 1994, Dr. Tony Tan had been tasked with designing policies to further Singapore's knowledge-based economy. The culmination of his team's five years of research and deliberations was the creation of the 1999 Technopreneurship 21 initiative, in which the NSTB (and then the EDB) pledged to provide financial support, tax incentives and regulatory reforms for the VC industry (EDB, 2000; Author Interview, Singapore, 12 September 2012). The second VC policymaking committee, the NRF, was established in 2006 as a department under the Prime Minister's Office. The NRF was tasked with supporting Research,

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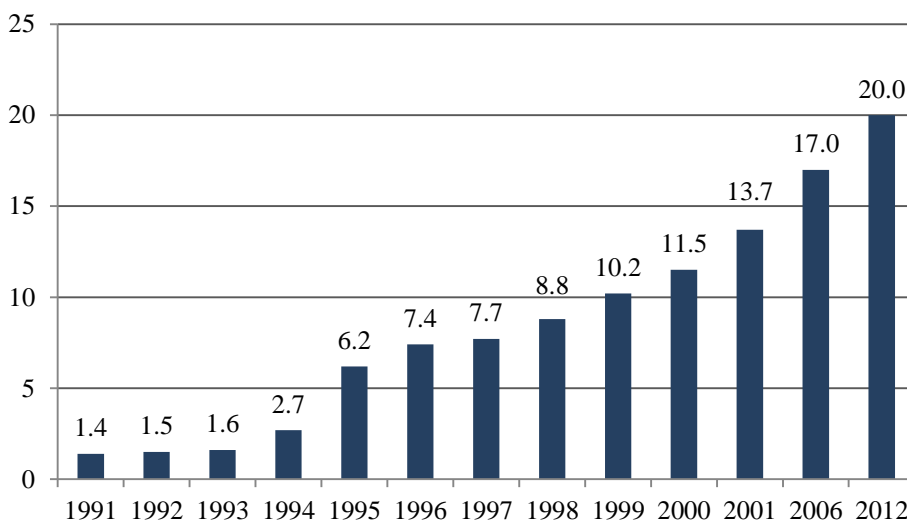
<sup>98</sup> To this end, VC managers have expressed sentiment that GIP program participants have been "risk-averse and uninterested in the underlying VC investments" and have "just wanted their capital back in five years' time" (Author Interviews, Singapore, 12 and 13 September 2012).



Innovation and Enterprise by setting a national innovation strategy and by allocating funds.

The Singaporean VC industry has become the third largest in Asia. The first VC management company in Singapore was formed in 1983 (the South East Asia Venture Investment) as a partnership between the EDB and an American VC management firm (Advent International) (Koh & Koh, 2002: 19). By 2005, there were more than 150 VC firms domiciled in Singapore (Koh & Wong, 2005: 11). In terms of their assets under management, Singaporean early-stage VC AuM has been estimated to be between USD 250 and 500 million as of 2012 (Author Interview, Singapore, 17 September 2012). But, when the Singaporean VC industry is defined to include later stage investments, the VC industry has USD 20 billion AuM. As Figure 7.1 below shows, the growth of Singaporean VC managers' AuM has been remarkably steady.

**Figure 7.1:** Singaporean VC Market AuM (USD billion)



Source: adapted from Wang (2002), Chan (2006), AVCJ (2002), EDB (2002) and Low (2012); Since 1994, the AVCJ's VC AuM figures have also included private equity, so these figures are higher than early-stage VC AuM alone.

Beyond the top-line AuM figures, the AVCJ has found that approximately 64% of funds raised by Singaporean VC managers had been invested in other Asian markets (Dietrich, 2003: 29). This high percentage of foreign investment reflects the propensity of Singapore-based VC managers

to invest in start-ups across Southeast Asia, China and India rather than in Singapore. In this respect, Singapore's VC industry has been entrepot in nature, similar to Hong Kong's, and unlike Taiwan's domestically-focused VC market.<sup>99</sup> The international character of the Singaporean VC industry can be explained by its policies to attract foreign VC investors, the small amounts that domestic asset managers invest in VC funds, and the small pools of Singaporean SMEs in which to invest. Finally, there are a number of VC managers investing in very early-stage start-ups and later, growth stage firms. However, there have historically been only a few VC managers in the Series A and B rounds (e.g. between 500k and 2 million) range (Author Interview, Singapore, 13 September 2012).

### 7.3. External Sources

Singaporean policymakers have believed that economic competitiveness, stemming from its ability to innovate and its position as a manufacturing and financial services entrepot, has been essential to the state's survival. Singapore has experienced specific competitive pressures vis-à-vis Taiwan as a regional technology competitor and Hong Kong as a financial center. These competitive pressures have driven policymakers to deploy policies designed to help Singapore better compete against these rivals (see, for example, the Financial Services Working Group report of 2002; Tan *et al*, 2004: 1-2). In this way, Singaporean policymaking elite have possessed "core beliefs" that they must support private sector actors in order to compete by maintaining its manufacturing prowess at affordable prices and its ability to "attract top talent" (King, 2006: 145; Han, *et al*, 2011).

In response to these broad competitive pressures, Singaporean policymakers have learned about, and then adapted, all three VC policy diffusion items – the Israeli, Silicon Valley and

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<sup>99</sup> In comparison, 74% of Taiwanese VC investments have historically gone to Taiwanese companies (Koh & Wong, 2005: 26).

Taiwanese VC policy items. In Singapore, learning has not been unique to the VC policy area as Singaporean policymakers have often been cited for their research of other countries' best practices when crafting industrial policies. There are numerous examples of Singaporean policymakers learning from foreign sources. A few of these examples are Singapore's deployment of adaptations of Israel's national military service and government incubator scheme for high-tech start-ups (Author Interview, Singapore, 19 September 2012). Other examples are how the Singaporean state has learned to measure its policies' performance from Shell Corporation (Han, *et al*, 2011), the government's 1997 commissioning of McKinsey & Co to review their financial services sector strategy and hiring of Arthur D. Little to assess their financial sector IT strategy (Lee, 1998). Given the pervasiveness of Singaporean policymakers' studying efforts, scholars have lamented that Singaporean policymaking has been powered by "a dedication to learning from international best practices and diligent implementation and documentation of plans and outputs" (Ohno, 2011). To this end, to facilitate their VC policy learning, policymakers have conducted "study trips," and have constructed panels of international experts for their input (Author Interview, Singapore, 13 September 2012).

In Singapore, learning about successful policies from abroad has been favored over learning through domestic policy experimentation. In this way, **Singaporean VC policymakers have not wanted to be "the first mouse to get the cheese because the first mouse dies"** (Author Interview, Singapore, 20 September 2012). Instead, Singaporean policymakers have preferred to be the second mouse to get the cheese (as the second mouse wins). Said another way, they have preferred to be the second country to deploy an already proven policy instead of developing an untested – and therefore conceivably risky – policy. To do this, policymakers have rigorously gathered information on foreign models and have then scrutinized how they could "adapt the policies to recreate the same set of circumstances in Singapore" (Author Interview, Singapore, 12 September 2012). Similarly, an interviewee lamented that policymakers ascertain "whether Singapore has the factors that

contributed to its success and how we can replicate them” (Author Interview, Singapore, 20 September 2012).

Singapore’s VC policy diffusion was initiated in the late 1990s. As a result of Singapore’s late policy diffusion, all three of the VC policy items were already in existence. This enabled Singaporean VC policymakers to learn about each of the existing items. The states that Singaporean policymakers say they have learned the most from are those who are most relevant to Singapore and those policy models with the most impressive track records. Thus, they have focused on policy tools that are relevant in light of their “small population and focus on strong economic performance and innovativeness” (Author Interview, Singapore, 12 September 2012). Taiwan and Israel have been studied by Singaporean policymakers given their similar small size and geopolitical challenges.<sup>100</sup> In addition to Singaporean policymakers’ perception of their proximity to these states, they have also been attracted to these items given their implementation successes. Singaporean policymakers studied Israel’s start-up cluster and VC industry success, and the role of government policy, particularly Yozma, in aiding the performance (Author Interview, Tel Aviv, 6 October 2013). In contrast, Singaporean policymakers’ studying of Silicon Valley has been more of a function of the cluster’s exceptional success and less of a feeling of affinity or proximity (Author Interviews, Singapore, 12 September 2012). Taken together, Singaporean policymakers have learned about all three VC policy items in order to ensure that Singapore is utilizing global, as well as proximate, best in breed tools.

A desire to replicate the Silicon Valley and Taiwanese innovation clusters had initially been the motivation for the learning that took place in the context of the Technopreneurship 21

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<sup>100</sup> Singaporean policymakers focus on Taiwan and Israel as proximate states for three reasons. One, they are both relatively small states, with populations of approximately 7 million (Israel) and 23 million (Taiwan) and small land masses (historically without hinterlands, though the Taiwan-Chinese economic relations have been improving so increasingly Taiwanese policymakers and private sector actors may see the PRC as its hinterland). In addition, Singaporean policymakers and politicians have spoken about the similarities to these two states in terms of security-laden issues with neighbors. Third, both states have similarly given direct funding to specific industries to aid their development.

committee's initiatives:

around the time of the creation of the Technopreneurship Committee in 1994 the feeling shifted to one of believing that SME activity, such as that in Taiwan or in Silicon Valley, was needed to transition Singapore to its next successful phase (Author Interview, Singapore, 12 September 2012).

This sentiment was reiterated by the head of the Technopreneurship 21 initiative when he said that they intended to “encourage entrepreneurs to commercialize technology to develop another Silicon Valley or Taiwan” (Tan, 1999: 12). After establishing its goal, the Technopreneurship 21 committee members made numerous study trips to countries and clusters deemed to have succeeded in this regard, including the “US (over 10 trips to Silicon Valley), Israel, Ireland, Scandinavian countries, Germany and Switzerland” (Author Interview, Singapore, 12 September 2012). According to K.C. Low, who was the head of funding programs for the Technopreneurship 21 committee and later the manager of the TIF, the aim of these study trips had been to “distil the essence of what the countries have done right, and then adapt it to the Singaporean context.” *In addition to these study trips, K.C. Low lived in Silicon Valley in 1996 and 1997 to “ensure he thoroughly understood the Silicon Valley model”* (Author Interview, Singapore, 12 September 2012; Italics added for emphasis).

Though Singaporean VC policymakers studied the Silicon Valley policy environment in the 1990s, Singapore did not adopt the LP regulation for its VC industry until recommended to do so several years later. My research revealed that the LP structure had not been adopted in the 1990s because Singaporean policymakers believed that they already offered private companies, including VC management firms, an attractive regulatory offering. More specifically, Singapore's the private company limited structure (which is notated as Pte Ltd) offers tax and limited liability treatments that are as attractive as the LP structure, if not more so. This is because the Pte Ltd is capital gains tax exempt, offers owners a separate entity so that liability for any debts or legal proceedings go in

the company's name alone, limits investors' liabilities, and allows the issuance of new shares to new shareholders (GuideMeSingapore, 2013).<sup>101</sup> Due to the Pte Ltd's offering's, the LP structure had not been deemed to be needed from an operational point of view. But, in 2002 the adoption of the LP structure came as an effort to be "obviously familiar to international, especially American investors, by having a VC fund structure that is the same in name and in function" as the LP structure popular in Silicon Valley (Author Interview, Singapore, 17 September 2012). In sum, the delay in adopting the LP structure had been a reflection of the fact that Singaporean policymakers felt that the Pte Ltd already offered their locally domiciled VC managers all the advantages of the LP structure. But ultimately, the LP structure was adopted to help attract international investors.

Singaporean policymakers' interest in the Taiwanese policy item had been initiated by networks, but not personal sector *guanxi*; personal connections across senior ministerial levels. More specifically, high-level conversations between Taiwan's then Minister without Portfolio K.T. Li and Singapore's then Prime Minister Lee Kuan Yew about supporting innovation clusters and VC industries helped prompt Singapore's interest in studying Taiwan's VC policy environment (Author Interview, Taipei, 5 January 2012). Following on from these high-level discussions, former Prime Minister Lee charged his Singaporean policymakers to closely study the Taiwanese programs. Shortly thereafter, they crafted the EDB VC fund (akin to Taiwan's National Development Fund) and ensured that VC managers had favorable tax treatment (Singapore offered VC managers tax exemption but they did not go as far as to offer a tax credit to VC investors as Taiwan had until much later). In 1999, however, as part of the Technopreneurship initiative that aimed to foster a local version of Taiwan, Singapore's policymakers deployed an adaptation of Taiwan's tax credit. Singapore gave tax credits for losses incurred on start-up investments (EDB,

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<sup>101</sup> The seven advantages of the Pte Ltd structure are as follows: (1) separate legal entity with its own legal identity, (2) limited liability entity, (3) perpetual succession – the company's persistence does not depend on the involvement of any of its members, (4) ease of raising capital – able to issue shares to new shareholders, (5) credible image, (6) easier transfer of ownership and (7) tax benefits and incentives including a low corporate tax rate (less than 9% for profits up to SGD 300,000 and up to 17% for profits over SGD 300,000), a capital gains tax exemption and dividends can be distributed to shareholders tax free (no double taxation at the entity and shareholder levels) (GuideMeSingapore, 2013).

2000) rather than a tax credit for the amount invested as Taiwan had done.

Beginning in the late 1990s, Singaporean policymakers specifically set out to learn about the Israeli VC policy item. Singaporean policymakers had become aware of the Israeli Yozma initiatives as a subsidiary of the Singaporean SWF Temasek (Vertex Venture Holdings) was one of the original LPs to participate in the Yozma Fund, as it launched Vertex International in 1996 (Avnimelech, 2009). In addition, around that same time, the Technopreneurship 21 committee policymakers conducted study trips to Israel to learn more about Yozma. As a result of these trips, and their subsequent communications with the Israeli Chief Scientist Office, the Technopreneurship Committee “learned from Israel how to bring the private sector in” so that the FoVCF initiative (the TIF) was “not just comprised of government money” (Author Interview, Singapore, 12 September 2012). More specifically, EDB and NRF policymakers have sent numerous delegations to meet with the Office of the Chief Scientist and the Yozma management team (Author Interview, Tel Aviv, 6 October 2013). **Singaporean VC policymakers study trips to Israel have been quite frequent; in some cases once a year and in other cases as frequent as every two months** (Author Interview, Singapore, 18 September 2012).

More recently, while the NRF was conducting their research prior to the launch of the National Innovation and Enterprise Framework for the Next Stage of Economic Growth in 2008, they also studied the Israeli FoVCF item. As part of these efforts, a delegation led by the then NRF chairman, Dr. Tony Tan, visited Israel in 2008 to better formulate Singapore’s second FoVCF, the ESVF. Dr. Tan shared what the delegation learned about the Israeli Yozma Fund and its impact on the Israeli VC industry:

In the early 1990s, the Office of the [Israeli] Chief Scientist also ensured that start-up companies have a fair chance of receiving venture capital funding at its early stage of growth. This was done by creating a number of early stage venture funds to invest in

Israeli start-ups. In addition to providing this much needed source of funding, this program ultimately resulted in the development of a healthy venture capital industry in Israel. *Israel's venture capital funds, unlike those in other countries, invest substantially in early stage Israeli start-ups* and are now a US\$1.4b industry (NRFb, 2008:2; Italics added for emphasis).

Dr. Tan's 2008 statement demonstrates that he and his fellow NRF policymakers had learned about the value that had been derived from the domestic focus of the Israeli FoVCF model.

The result of Singaporean policymakers' learning about the Israeli FoVCF policy item has been the launch of its two FoVCFs, the TIF and ESVF. Both of Singapore's FoVCFs have replicated several of the key attributes of Israel's Yozma fund. In a similar fashion to the Israeli Yozma Fund, Singapore's first FoVCF, the TIF, offered matching funds at very attractive repayment terms to VC managers. However, the Technopreneurship 21 committee purposefully adapted the TIF to be different than the Yozma model. First, Singaporean policymakers multiplied the size of the FoVCF so that the TIF was ten times larger (USD 1 billion) than Israel's Yozma Fund (USD 100 million). Second, the TIF gave 75% of its funding to international VC managers, whereas the Yozma Fund only invested in domestic VC managers. In this way, "*unlike the Israeli Yozma Fund that focused exclusively on supporting domestic VC managers, the larger TIF was designed to attract world class VC managers to Singapore*" (Author Interview, Singapore, 12 September 2012). To this end, the TIF invested only 25% of its resources<sup>102</sup> into local VC managers (Wilkin, 2004). The drivers of the TIF's adaptations of the Israeli FoVCF will be explored in the next section.

The ESVF, unlike the TIF, had initially been focused specifically on domestic VC managers, as the Yozma model had been. To this end, unlike the TIF's international focus, in the

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<sup>102</sup> The USD 1 billion TIF was divided into three sub-funds: USD 500 million went into a broad based fund, USD 250 million for a strategic fund and USD 250 million for an early stage fund (Dietrich, 2003: 51).



2008 launch of the ESVF, Singaporean VC policymakers reverted back to learning about the domestic focus of the Israeli FoVCF when designing the ESVF. The domestic focus had been the result of the TIF's winding down and poor performance, paired with policymakers' research on where local VC managers were "missing" in the early-stage financing landscape (Author Interview, Singapore, 12 September, 2012). However, in September 2013 the ESVF was shifted back towards attracting international VC managers. The Yozma policy item contains both domestic focus and international firm attraction elements – as money went (mostly) to domestic VC managers that raised matching funds from international investors. While the 2008 iteration of the ESVF focused on the allocation of money to closed-end Singaporean domiciled VC funds, the 2013 change shifted the ESVF back in line with domestic preferences for attracting international VC managers, rather than pairing international investors with fledgling local VC managers.

#### **7.4. Domestic Factors**

The first domestic factor examined in the Singaporean case is the impact of Singapore's economic structure, especially its low SME activity levels, on the timing of its VC policy diffusion. Historically, Singapore's economic structure has been centered on MNC production and employment. To this end, Singapore has not had the high-technology sector SME activity levels that clusters like Taiwan, Israel or Silicon Valley have had. Again, unlike Taiwan (and also Hong Kong) who had large inflows of Chinese entrepreneurs, Singapore "faced a severe dearth of industrial entrepreneurs" during its industrialization (Abeysinghe, 2007: 4). To compensate for the deficiency, Singapore's economic structure had been built around MNC manufacturing rather than SME activities until the 1980s. Even today, entrepreneurship levels remain low in Singapore, despite nearly thirty years of government efforts to entice further technopreneurship activity.

As evidence of Singapore's low SME activity levels, only 5% of new company registrations

in 2012 were categorized within the IT umbrella (GuideMeSingapore, 2013: 7). In addition, Singapore's total early-stage entrepreneur rate (of 6.6% in 2011) placed it at a very average 12<sup>th</sup> out of 24<sup>th</sup> place amongst comparable countries (NTU Ventures, 2011: 10). In recent years (e.g. since 2009) technopreneurial activity has been rising as the Department of Statistics reported that 56,778 new businesses were formed in 2012 alone (Qiuyi, 2013). But, in light of the low levels of SME activity at the time of Singapore's initial VC policy action, its VC policy diffusion has not been found to be in response to local start-ups' need for early-stage financing. Instead, a shift in Singaporean policymakers' economic management norms in favor of wanting more local SME activity led to the onset of VC policy diffusion (via bounded learning).

The Singaporean financial sector's bank or capital market focus is the other element of the economic structure that is examined here. Singapore's financial sector has only had a neutral impact on the timing of its VC policy diffusion. This is because Singapore's banking and capital market industries have both been vibrant, so credit-based financing has not overshadowed VC policy diffusion (as has been the situation in the next case, of Vietnam). As evidence of the relative balance of the banking and capital markets sectors in Singapore, the market capitalization of the Singapore Exchange, as of the end of 2012, was just over SGD 935 billion (equivalent to USD 760 billion)(Xinhuanet, 2013), Singapore's asset management industry has had around USD 865 billion AuM (Lindsay, 2010), and its banking and finance industry's assets/liabilities have hovered around SGD 1 trillion (MAS, 2013: 99).

Singaporean policymakers' economic management norms have had a marked impact on Singapore's VC policy choices. As background, Singaporean industrial policymaking has been characterized by its interventionist beliefs, its policymakers' high levels of expertise, its concentration of policymaking and budgetary power and its policymakers' "dogmatic" adherence to core economic management norms (Author Interview, Singapore, 11 September 2012). Singaporean

industrial policy has struck a delicate balance between directing resources and activity in nearly all segments of its economy while also simultaneously encouraging the private sector to operate freely. In this way, policymakers' broad economic management norms have driven them to design policies that stimulate private sector activity, not to replace or crowd out the private sector with public production or money.

Singaporean policymakers' pre-existing economic management norms have dictated that the government should encourage private sector activity via funding initiatives. Moreover, policymakers have believed that the state's funding has at times been a necessary catalyst for private investment (Author Interview, Singapore, 12 September 2012). These interventionist norms have been said to be the result of experience; the state's "financial support for industry has worked thus far," so policymakers "have continued to use similar strategies" as they design new industrial policies (Author Interview, Singapore, 20 September 2012). In addition, Singapore's VC policymakers have preferred to deploy funding solutions as "the inputs and outputs are easier to measure, as opposed to more qualitative efforts such as training" (Author Interview, Singapore, 20 September 2012).

In this vein, Singaporean policymakers' interventionist economic management norms drove them to adapt the neoliberal Silicon Valley policy environment to their local context. Here, the comments of the founder and former manager of the TIF, K.C. Low, offer a telling illustration of the impact of their interventionist norms on their adaptation of the Silicon Valley policy environment:

I spent two years based in Silicon Valley (1996-1997) to make sure I really understood how Silicon Valley works. When speaking with members of the Silicon Valley community they repeatedly say that they want the government out, and that Silicon Valley is a product of private effort, not government help. But, Singapore is

different, Silicon Valley evolved over a period of 30 to 40 years, and the US is a huge market, etc. *I knew that Singapore had to use different, more specific techniques* (Author Interview, Singapore, 12 September 2012; Italics added for emphasis).

Singaporean policymakers found the drivers of Silicon Valley's success to be broad, e.g. over the course of 40 years, and not LP structure or ERISA reinterpretation specific (Author Interview, Singapore, 12 September 2012). As a result of their findings that the Silicon Valley policy environment did not offer a blueprint that could be replicated, coupled with their interventionist inclination, they turned to studying other more specific items. Therefore, it has not been the case that Singaporean VC policymakers only learned about successful interventionist models (e.g. Yozma). Instead, they invested significantly into learning about Silicon Valley. With that said, even while they learned about the neoliberal environment in Silicon Valley they were thinking about how to adapt what they learned to Singapore's more interventionist context.

In line with their private sector financing norms, when policymakers decided to deploy VC policies, they took quickly, and repeatedly, to designing FoVCFs, namely the TIF and the ESVF. Their focus on FoVCFs came as policymakers' norms have dictated that they provide financing to the private sector, whether in the technology or finance sectors (Doh, 1996: 348). Their preference for large private sector financing efforts propelled Singapore's VC policy choice to center on FoVCF initiatives and for these FoVCFs to come with significant funding tools, to the tune of over USD 1.1 billion.

Despite MNCs' continued dominance of the Singaporean economic structure, its policymakers' company size preferences have shifted in favor of small firm support alongside attracting large firms. Beginning in the 1980s, Singaporean policymakers began to look beyond its low cost MNC-centric manufacturing, as they began to believe that "Singapore will need a culture

that encourages creativity and entrepreneurship, as well as an appetite for change and risk-taking” (Tan, 1999: 9). In line with this initial shift in company size preferences, though policymakers continued to deploy industrial policies aimed at enticing MNCs to set up local production hubs in Singapore, they also started to implement policies aimed at developing local SMEs’ competitiveness and entrepreneurial talent. These economic management norms regarding the need to promote SMEs first developed as a response to the 1985 recession (Doh, 1996: 350-351; Randhawa and Tan, 2009: 31).<sup>103</sup> At this time, there was the first widespread acknowledgement that Singapore’s reliance on MNCs, rather than local SMEs, may have come at a cost.<sup>104</sup> Following the recession, committees and ministries began expounding upon the “strategic” importance of local SMEs (see, as an example of the output of such committees, the SME Master Plan in 1989) (Committee on Singapore’s Competitiveness, 1998: 8) and emphasizing the need for entrepreneurship (Bruton *et al*, 2002: 200). In this way, policymakers’ norms shifted towards their wanting to support SMEs’ ability to innovate, address unemployment issues and develop a risk-taking culture. It was in this vein that they came to believe that a VC industry would support SMEs by closing the “financing gap” that local SMEs may face (Randhawa and Tan, 2009: 34-36).

Closely related to the company size preference, Singaporean policymakers have preferred efforts to support international, rather than local, firms. Policymakers’ preference for attracting international firms has manifested into the EDB’s MNC promotions, amongst other incentives packages. As a result, for Singaporean policymakers it was natural to adapt the Yozma model to have the TIF actively court “top-tier international venture capital firms to locate their regional

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<sup>103</sup> A caveat is in order here as Singaporean policymakers’ first foray into financing SMEs came nearly ten years before the 1985 recession, via the extension of credit (loans up to SGD 1 million) through the EDB and Development Bank of Singapore’s Small Industries Finance Scheme beginning in 1976 (Department of Trade, 1977; EDB, 1982: 34).

<sup>104</sup> The recession showed that Singaporean employment, for example, was highly susceptible to MNCs’ personnel decisions. This overreliance on MNCs for manufacturing employment was further demonstrated by a 1985 National Productivity Board report that had found that the employment share of SMEs in manufacturing had declined from 61% to 32% between 1986 and 1983 (Luk, 1985: 1). MNCs were conceived to help SMEs as early as the 1986 Economic Committee report that said that being a regional operational headquarters would help “open up greater entrepreneurial opportunities for Singaporeans” (EC, 1986: 7).

operations in Singapore” (Koh and Wong, 2005: 10). Thus, VC policymakers have worked to attract international VC managers to have regional headquarters in Singapore, as the EDB had done with MNCs over previous decades (Kenney *et al*, 2002: 119). To this end, the TIF had been adapted away from the Yozma model in line with policymakers’ economic management norms that favor the attraction of international firms. As evidence of this, the TIF manager said that:

Yozma was different than the TIF as it was more narrow in its focus. Yozma explicitly sought to build a domestic Israeli VC industry. The TIF had a broader mandate as it *sought to bring international VC managers into Singapore* and to establish local VC managers as well (Author Interview, Singapore, 12 September 2012; Italics added for emphasis).

Due to this intentional international adaption of the Yozma model, the lion’s share (75%) of TIF’s capital went to international (particularly American) VC managers.

The last economic management norm to be investigated is Singaporean policymakers’ preference for bank or capital markets. In this respect, policymakers have been mostly neutral to debt or equity instruments, or bank or capital market sectors. A reason for this neutrality is that Singaporean policymakers have not directed its banks to lend to fledgling firms, or would-be “national champions,” to the extent that some other East Asian policymakers (e.g. Korea and Japan) have done. Instead, Singaporean policymakers have focused on attracting multi-national banks and foreign asset managers who together offer a competitive suite of financial services in its bid to be a leading financial center (Tan *et al*, 2004: 4). Given that Singaporean policymakers are open to promoting all segments of the financial system, VC policymakers have been able to secure support for their policies. This has been because the attraction of top international VC managers to Singapore, as well as the development of local VC managers, would only further the competitiveness of Singapore’s financial sector offerings.

A more domestically focused FoVCF was launched after Singaporean policymakers gained the experience of implementing the TIF (and enduring its relatively poor performance in terms of building Singapore's local VC industry). The shift towards a domestic focus was commented on by the former manager of the TIF as he said that the "ESVF idea is a new version of an old idea – a new version of the TIF effectively – that is more focused on the domestic VC firms" (Author Interview, Singapore, 12 September 2012). The local focus is evidenced by the 2002 Financial Services Working Group ("FSWG") Report:

The government...can do more by complementing the current strategy of attracting large international fund management companies *with a strategy to develop indigenous start-ups and attracting small and medium-sized fund management companies* (ERC, 2002: v; Italics added for emphasis).

However, it had not been a shift of policymakers' norms towards local firm support that accounts for the ESVF's initial domestic focus.

Instead, the domestic focus of the ESVF was driven by policy learning (again) from Yozma, along with Singaporean policymakers' domestic policy learning via the TIF and the resultant normative shift towards supporting local firms. To design the ESVF, NRF policymakers went back to studying the drivers of the Yozma Fund's success, which helped motivate them to design a FoVCF more in line with the original Israeli model (Author Interview, Singapore, 19 September 2012). This return to the domestic focus of Yozma, however, is likely to not have happened if Singaporean VC industry activity had grown exponentially following the TIF's deployment. Said another way, policymakers' return to learning about the way to focus a FoVCF on domestic VC managers was facilitated by the poor performance of the TIF. This policy experience came along with the acknowledgement of low early-stage (A and B Round) funding levels, thus a pragmatic reason for supporting indigenous asset management firms. In addition, though Singaporean

policymakers had tried to focus on domestic VC managers for the ESVF, in 2013 they changed the requirements to open this FoVCF to international VC managers as well. In this way, Singaporean policymakers' preference for attracting international firms shapes subsequent policy adaptations.

Moving on to formal institutions, my research found that Singapore's politically-insulated regime, policymaking processes and concentration of budgetary power have enabled policymakers' allocation of budget to VC policy initiatives. More specifically, the concentration of budgetary power has enabled VC policymakers to act on their economic management norms in favor of financing strategically important industries. In this way, the Singaporean committees, agencies and ministries making the VC policy choices have been able to secure budget and distribute financing to support VC and technopreneurship with ease. This seamless access to budget has been especially prominent when a high-ranking policymaking champion (e.g. Dr. Tan) has been associated with the effort (Author Interview, Singapore, 20 September 2012).

As a result of the concentrated budgetary power, for the Technopreneurship 21 initiative, especially the TIF, "concern over securing budget did not factor" into the policy decisions (Author Interview, Singapore, 12 September 2012). Singaporean policymakers have not considered obtaining budget as a constraining factor in their policymaking process; if a policy initiative had been thought to be worthwhile, then the budget would have been swiftly obtained (Author Interview, Singapore, 18 September 2012). In this way, though bodies such as the Technopreneurship committee and the NRF have technically had to seek budgetary approval, until democratization advanced via the 2006 and 2011 elections (in which the PAP won a smaller majority of the vote than they usually secure) this had been a mere formality.<sup>105</sup> In light of this ease of budget access,

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<sup>105</sup> In light of the 2006 and 2011 election results (the worst in PAP history as they only obtained just over 66% and 60% of the vote, respectively) there has been discussion of greater scrutiny of government spending now and a need to ensure that initiatives reach more stakeholders now. This sentiment about the more politicized environment suggests interesting potential changes for Singapore's interventionist approach should future election results (the next election is 2016) be similarly competitive. This is purely speculative, but just a note that in a more politicized, or more democratic, environment, the Singaporean state may not be able to afford to direct large amounts of funding as it sees fit.



Singaporean policymakers have been able to adapt VC policy items, like Israel's USD 100 million Yozma fund, into even larger FoVCFs, as they did with the USD 1 billion TIF.<sup>106</sup> In addition, Singaporean policymakers have been the only case study examined that has deployed two FoVCFs. My finding is that the deployment of two FoVCFs has been aided by policymakers' ability to access funding with relative ease – which reinforces Singaporean policymakers' finance-laden economic management norms. As an illustration of VC policymakers' ability to quickly deploy funding initiatives because of their easy access to budget and insulation from public input, the ESVF had been launched (including the time it took to design the initiative, get it approved and get budget allocated) within seven months of the NRF's study trip to Israel.

As democratization had been static until recent elections, Singaporean policymakers had political insulation, which has also contributed to their ability to deploy interventionist VC policy initiatives. Here, I mean that policymakers have made the VC policy choices unilaterally, although the Singaporean VC policymaking process has included dialogues with the private sector. In this way, government consultation with the private sector has been said to merely be a “public relations exercise” (Author Interview, Singapore, 5 September 2012). The carefully elicited and managed involvement of the private sector in the policymaking process has aided the Singaporean policymaking machine's “ability to create and implement the policies it believes are best, without having to change course as a result of public input” (Author Interview, Singapore, 20 September 2012). Singaporean policymakers have gleaned feedback and industry insights from the private sector actors invited to participate in the industrial policymaking process. This has been because policymakers have believed that:

Market practitioners are in the best position to help regulators keep abreast of new developments in the industry. Candid, thoughtful feedback, including dissenting

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<sup>106</sup> The TIF is on par with the largest FoVCFs launched globally; the other largest FoVCFs have also been USD 1 billion, such as Russia also deployed a USD 1 billion FoVCF in June 2006 (see the [www.rusventure.ru](http://www.rusventure.ru) website for details on the Russian FoVCF).

views, is essential to help the regulatory authorities fine tune policies and avoid mistakes (Lee, 1998).

In this way, VC policymakers have elicited insights and opinions from “industry and academia, including BANSEA, SVCA and NUS Entrepreneurship Centre” (Wong, 2011:11). In sum, the existence of select private sector actors in councils and committees has helped give the impression of a democratic dialogue, while policymakers have retained their ability to deploy their preferred funding initiatives.

Finally, Singaporean VC policymakers’ subject-matter expertise has enabled them to learn about, rather than simply emulate, foreign models. Singaporean policymakers’ knowledge of policy items has been robust; and they possess significant expertise on the VC industry in particular. As a demonstration of their aptitude, Singaporean policymakers have been actively sharing details of their SME and innovation policy successes with fellow members of regional forums, such as the APEC SME Working Group (Author Interview, Singapore, 24 September 2012) and their industrial expertise is said to be well known even by their critics (Han, *et al*, 2011). Policymakers’ demonstrated ability to distill international best practices has helped them adapt VC policy items, such as Israel’s Yozma Fund, to the Singaporean context rather than just copy them.

## **7.5. Conclusion**

This chapter has examined the international and domestic sources of Singapore’s highly-interventionist VC policy choices. As a result of their highly-interventionist and internationally-focused economic management norms shaping their policy diffusion process, Singaporean policymakers deployed VC policies across all instruments (tax, funding and regulation), as they have drawn on, but adapted, the three VC policy items (Taiwan, Israel and Silicon Valley). More specifically, Singapore has launched two FoVCFs and has offered tax relief schemes for VC

managers and investors, adopted the LP structure and extended non-financial incentives for international VC investors.

The catalyst for Singapore's VC policy diffusion had been its policymakers' beliefs that Singapore needs to be economically competitive in order to survive. A local VC industry, which would aid its technopreneurship and the competitiveness of its financial center, could help drive its competitiveness. In this way, Singapore's VC policy diffusion had been motivated by a shift in economic management norms in favor of SMEs. VC policy diffusion in Singapore had not been the result of an increase in domestic SME activity levels. Instead, Singaporean policymakers have believed that they have needed to diversify the economy away from MNCs and limit a hollowing out in order to remain competitive. As a result, Singaporean policymakers began to believe in supporting domestic entrepreneurial activity alongside MNC promotion. In this way, Singaporean start-up activity levels did not push policymakers to learn about ways to provide better access to early-stage capital. Instead, policymakers' shifting economic management norms in favor of small, local firms helped stimulate VC policy diffusion.

As a result of competitive pressures and the related normative shift in favor of supporting local SMEs, the Singaporean policymaking apparatus initiated efforts to learn about, and adapt, successful and relevant VC policy items in the late 1990s. This led to policymakers conducting extensive research via study trips, particularly to learn about Israel's Yozma Fund as well as the policy environments that had driven the success of the Silicon Valley and Taiwan clusters. To be sure, Singaporean policymakers across the NSTB, EDB, Technopreneurship 21 Ministerial Committee and the NRF learned about all three VC policy items.

Though all three items have been studied, the Israeli VC policy item has been the one at the core of Singapore's VC policy efforts. Singaporean VC policymakers have collected information on

the Yozma Fund but then meticulously localized the FoVCF structure for Singapore. The localization, rather than duplication, of the Yozma item has been demonstrated by the changing of the scale and terms of the TIF (from Yozma's USD 100 million given to domestic VC managers to TIF's USD 1 billion in which 75% was given to foreign VC managers). In this way, Singaporean policymakers changed the focus of the Yozma FoVCF model as they adapted it to be a means of attracting international VC managers. Singapore's initial ESVF structure was more similar to the Yozma model in its aim and structure; however, its terms were also adjusted away from the Yozma model. The Yozma Fund had given its private investors the opportunity to buy out their investment at cost, plus a nominal interest rate and a 7% share in future portfolio company profits. The ESVF instead offered a straightforward buyout at 1.25 times the NRF's initial investment. Also different, in September 2013 the ESVF terms were changed to allow international, not just local, VC managers to participate.

In addition to learning about the Israeli FoVCF item, Singapore's VC policymakers also learned about the more diffuse, and neoliberal, Silicon Valley policy environment. In fact, the Silicon Valley VC industry has served as their inspiration of what they have wanted to replicate. But, due to Silicon Valley's low specificity and distance from the Singaporean economic and normative context, Singaporean policymakers have felt they needed to look to more proximate states for more relevant VC policy items. It is in this vein that Singaporean policymakers also sought out information on the Taiwanese and Israeli VC policy items.

Despite the different levels of specificity of the three policy items, Singaporean policymakers adapted the more specific policy items. In fact, it was only the Singaporean adoption of the Silicon Valley LP structure in 2002 was copied intact. This was done as a means to have the same regulatory structure as that of the US, not just in function (as the Pte Ltd had done) but also in name. In contrast to the level of specificity hypothesis, the more specific Yozma FoVCF and

Taiwanese tax credit VC policy items were both adapted while an element of the less specific item saw no adaptation. In this way, the specificity levels proved to be a weaker indicator of the degree of adaption than I expected them to be in the Singaporean case.

Singapore's highly interventionist VC policy choices – which allocated large sums of financing as well as sector-specific tax breaks and regulatory incentives to the VC industry – has been consistent with the high interventionist hypothesis for the Financier and Director typology. Singapore's VC policy choices have been markedly shaped by its policymakers' domestic economic management norms driving their bounded learning process. To this end, Singapore's highly interventionist VC policy choices have been driven by its policymakers' adherence to their “core economic management norms” that favor the financing of the private sector, supporting international firms (rather than local), and aiding larger, more established firms. The bank versus capital market support norms played a neutral role in the Singaporean VC policy choice as policymakers have been equally inclined to support banking and capital market segments of the financial services sector.

The interaction of economic management norms shaped which policy items were studied as well as how they were adapted. In this way, Singaporean policymakers' economic management norms shaped the policymaking process beginning with agenda setting through to evaluation, design and implementation. More specifically, Singaporean policymakers' private sector financing norms encouraged the use of FoVCFs. Then, in the local adaption of the first FoVCF, their preference for attracting international firms (rather than supporting local) manifested in the TIF's provision that 75% of its capital was allocated to international VC managers. It was not until the second installation of a FoVCF, the ESVF in 2008, that domestic VC managers became the focus. The domestically-focused ESVF was shaped by policymakers re-learning about the Israeli Yozma fund, and the domestic policy experience obtained from the (poor) performance of the TIF.

However, in keeping with their preference for attracting international firms, the ESVF has again become open to international VC managers, as the TIF had been.

Singapore's domestic policymaking process was found to have reinforced its policymakers' interventionist economic management norms by concentrating budgetary and policymaking power. The concentration of budgetary power has ensured that VC policies have been created and implemented quickly, with large sums of money (in excess of USD 1 billion) attached. In this way, the industrial policymaking process has reinforced Singaporean policymakers' norms that dictate that they should provide financing to the private sector. My research also found that the swift and budget-laden initiatives have been facilitated by the government's insulation from public input, except for solicited expert opinions, into VC policymaking.

Looking forward, my interviewees expressed sentiment that if Singapore continues to have a more politicized environment, as has begun to occur as the result of recent election results, then Singaporean policymakers' ability to swiftly deploy FoVCFs may be eroded. But, for the history of VC policy thus far, Singaporean committees and ministries responsible for VC policy have been endowed with large budgets and impervious to public scrutiny.

In sum, Singapore's domestic policymaking realm has adapted the VC policy items. Learning about the best policy options has been believed to be an essential piece of the Singaporean success story, as policies that drive economic competitiveness are thought to be critical to Singapore's very survival. But, best in breed VC policy items have not been duplicated in Singapore. Instead, its policymakers' economic management norms favoring financing and a policymaking process that adorns easy access to budgets has facilitated its international and interventionist adaptations. Furthermore, Singaporean policymakers' desire to act as a financial center has motivated the international focus of the TIF (and the recent change to the ESVF), the

adoption of the LP structure, the deployment of the GIP and also the deployment of tax exemptions. Through the role of their local context in the VC policy diffusion process, Singaporean policymakers have adapted VC policy items to be different internationally focused with large budget and different than those we have examined in Hong Kong and Taiwan.

## 8. Vietnam: Command Economy

### 8.1. Introduction

“Official development assistance has funded Vietnam’s striking achievements in the last two decades, but with its middle-income status now, the country needs ODA mainly for the solutions it brings with it, not the money itself.”

– *Victoria Kwakwa, World Bank Country Director for Vietnam, Hanoi,*

*17 October 2013*

Over the last twenty years, Vietnam’s economic trajectory has followed an unequivocally positive trend. Vietnam’s growth rate averaged more than 7 per cent annually between 1990 and 2010, placing it in the same league as China and India as one of the world’s exceptional growth stories. This growth has come as the Socialist Republic has balanced economic liberalization with the maintenance of central planning and capital controls in what the CPV calls a “Socialist market economy.” Despite some hiccups in growth following the global financial crisis, analysts are equally optimistic about Vietnam’s economic future. To this end, in 2010 the Economist Intelligence Unit ranked Vietnam as the world’s number two emerging market for investment opportunities, second only to China. The continued excitement about investing in Vietnam comes as its private sector grows, its middle class develops, FDI volumes increase, and the competitiveness of its technology sector advances (Nguyen, 2007).

Though Vietnam retains its agrarian prowess as the world’s second largest exporter of rice and coffee, its ICT sector has been attracting international attention. In this vein, ICT parks, including the high-technology cluster in the coastal city of DaNang, have been touted as Vietnam’s



local Silicon Valley. DaNang's Software Park, which has begun development in 2013, is the nation's second centralized IT zone (VietNam News, 2013). These high-technology parks have succeeded in attracting FDI. To this end, Vietnam's ICT-sector FDI has grown over the last decade, as more than a dozen MNCs, including Samsung, Nokia, and Hewlett Packard, have opened factories in Vietnam to manufacture mobile phones, computer components, and other technology goods (Hung, 2011). The existence of these technology sector MNCs in Vietnam has helped develop local high-technology talent and has helped spawn IT start-ups (Author Interview, Ho Chi Minh City, 24 August, 2012). In addition to their significance to the Vietnamese economy, the MNC facilities in Vietnam are significant centers for the MNCs; Intel Corporation's largest plant globally – which opened in 2010 – is a USD 1 billion facility near Ho Chi Minh City.

In stark contrast to this technology sector growth and the broader exuberance for the Vietnamese market's potential, Vietnam has one of the smallest VC markets in Asia on an absolute and relative basis. While financialization has accompanied, or even propelled, the East Asian success stories (including the other case studies examined in the thesis), financing for fast growing, high-technology SMEs remains underdeveloped in Vietnam (OECD, 2011: 7). Fast-paced economic growth, inward FDI flows, and growing technology industries, such as Vietnam's, typically coincide with dynamic VC markets. China, as an example, has seen exponential growth in its VC market since 2000, with China-focused VC managers raising USD 10 billion in the first half of 2011 alone (AVCJ, 2011).

In light of its phenomenal economic growth and the development of its technology sector, it is worth asking why the constitution of a VC market in Vietnam has lagged its peers. The slow growth of Vietnam's VC market has been explained as resulting from the state's historic control of the banking industry, restrictions on foreign investment, regulations limiting the industries in which private companies can compete, insufficient private company reporting requirements and the lack of

a regulatory VC framework (Groh *et al.*, 2011). Until the establishment of Vietnam's first stock exchange in 2000, the lack of IPO exit opportunities had also been blamed for Vietnam's undersized VC market (Sack and McKenzie, 1998; Zavatta, 2008). Also, until five years ago, the lack of domestic technology SMEs had been named as a culprit for the underdevelopment of Vietnam's VC industry (Author Interview, Ho Chi Minh City, 22 August 2012). But, there has been an increase in the number of high-tech SMEs seeking VC funding in Vietnam. In fact, by 2011 there were at least a dozen technology start-ups that had secured equity investments from VC firms (Fannin, 2011). Another explanation for Vietnam's small VC industry has been that the Vietnamese government has not incentivized VC market activity as some Southeast Asian peers have. To this end, the few VC managers operating in Vietnam lament that the fledgling market has grown "despite the regulatory environment, not because of it" (Author Interview, Hong Kong, 20 December 2011).

Given Vietnam's Socialist market orientation, level of development and bank-centric financial system, its policymakers' failure to support the VC industry may not be altogether puzzling. As expected, Vietnamese policymakers did not discuss VC markets during the 1990s. But, within the last decade their technology-sector and SME-focused policymakers have begun supporting SME and hi-tech industry financing. Such SME financing discussions first appeared in Vietnam's public policy language in 2003 as Prime Minister Decision 36/2003/QD-TTg prioritized the promotion of foreign investment in Vietnamese enterprises. Then, in 2006 the Ministry of Science and Technology (MoST) announced plans for a USD 28 million Venture Capital Fund that would disburse loans to Vietnamese high-technology SMEs (Intellasia, 2006; Zavatta, 2008). Building on this momentum, the World Bank-organized multi-actor Consultative Group<sup>107</sup> (CG)'s 2010 mid-year meeting concluded that a more developed capital market was needed for Vietnam's continued technology sector growth (Ministry of Finance, 2010).

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<sup>107</sup> The World Bank Vietnam CG brings together representatives from the government, bilateral and multilateral donors, Vietnam Business Forum, international and local NGOs to discuss economic policy.

Policy efforts to enhance the capital available for Vietnamese SMEs further materialized in October 2011. This happened as the Ministry for Planning & Investment (MPI)'s Agency for SME Development (ASMED) submitted a proposal to the Prime Minister to create the SME Development Fund (Talk Vietnam, 2012). The Fund was approved in April 2013 with a budget of 2 trillion đồng (equivalent to approximately USD 96 million) (Prime Minister Decision 601/QĐ-TTg, 2013). Also, Vietnam's 2011-2015 Five Year Plan for SME Development has named financing its top priority. But, as this chapter will examine, while VC has entered into Vietnamese policymakers' awareness, they have discussed VC in terms of credit (not equity) financing directly to SMEs.

This chapter explores how and why Vietnam's late VC policies have been transformed to focus on direct SME loans rather than the equity-based VC policy items. To do so, this chapter proceeds as follows. Section 8.2 provides an overview of VC policy in Vietnam and the Vietnamese VC market. The third and fourth sections, respectively, detail the international factors and domestic context, including the specificity of the VC policy item(s), mechanisms, economic management norms, policymaking process, and economic structure characteristics, which have impacted Vietnam's VC policy choices. Section 8.5 analyzes the body of evidence to determine which elements have most impacted Vietnamese policymakers' VC policy choices.

## **8.2. Vietnam's VC Policy Choices and VC Market**

Vietnam's late VC policy diffusion, and the historically modest size of Vietnam's VC market, has not simply been the result of the difference between Vietnam's level of economic development and the other, more economically developed cases (Hong Kong, Taiwan and Singapore). Amongst Vietnam's Southeast Asian peers, Malaysia had been an early standout in VC, as its VC managers had nearly USD 1 billion in AuM by 2003 (AVCJ, 2005). Part of Malaysia's success in developing

its VC market has been attributed to policies that established a regulatory framework and provided public funding for the asset class. For example, the Malaysia Venture Capital Management Berhad (MAVCAP), a government FoVCF, was established in 2001 by the Ministry of Finance to support both the Malaysian ICT sector and the domestic VC industry (MAVCAP, 2012).

Indonesia, though a slow starter in VC fundraising, has recently received significant attention in the last five years as “the next China” in light of its demographic and economic trends (AVCJ, 2011: 5). VC managers’ excitement for Indonesian VC investment comes after the Indonesian government began supporting VC domestically. Their support has come through regulations defining what a VC firm is and how it is overseen via Presidential Decree No. 61 (Business Review, 2010) and the Minister of Finance issued Regulation No. 18/PMK.010/2012 regarding Venture Capital Companies (ABNR Law, 2012). Malaysia and Indonesia are just two examples of how Southeast Asian states, though not Vietnam, have supported VC markets via adaptations and combinations of the VC policy items specified in Chapters 1 and 2 – equity-based VC-specific regulations, tax treatment and FoVCFs.

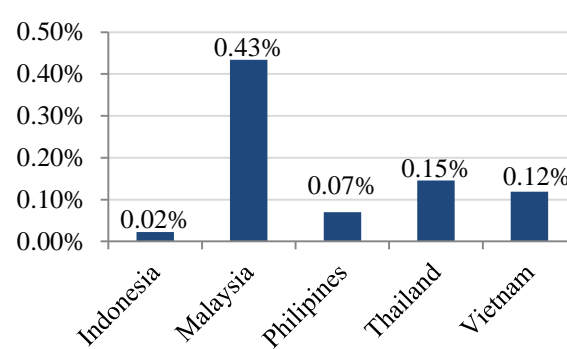
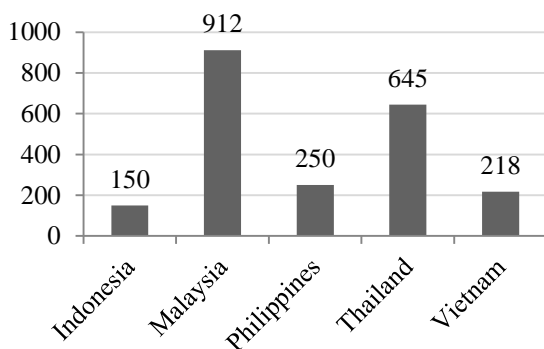
Figures 8.1 and 8.2 illustrate the VC money flows into Southeast Asian VC funds through 2003. In doing so, it highlights the relatively modest amount of VC activity in the Vietnamese economy:

**Figure 8.1: Vietnam and Peers VC market**

**Figure 8.2: Vietnam and Peers VC market AuM**

*AuM (in USD million):*

*(as per cent of GDP):*



*Source:* AVCJ (2005); Note regarding Figure 8.2 calculations: In 2003 GDP for each country was as follows: Indonesia's USD 666 billion, Malaysia's USD 210 billion, Philippines USD 356 billion, Thailand 429 billion, Vietnam's USD 183 billion. GDP figures were used to calculate VC as a percent of national GDP for each country.

Though Vietnam's VC market was first established in the 1990s, at the onset of the Asian financial crisis most of the eight VC firms operating in Vietnam at that time left (Zavatta, 2008). A few years later, a new batch of VC firms started operating in the early 2000s. Yet, the numbers of VC managers and their investment levels have remained modest. Vietnam's VC market has oscillated between AuM of approximately USD 450 million and about USD 150 million in 2003 (AVCJ, 2005; Alt Assets, 2011). As of 2013, there are four PE/VC firms operating in Vietnam with approximately USD 450 million under management; they are IDG Ventures Vietnam, DFJ VinaVentures, Dragon Capital, and Mekong Capital.

The modest growth of Vietnam's VC market AuM has been driven by an improvement in fundraising activity around 2006. In 2007, IDG Ventures Vietnam launched their USD 120 million IT-focused fund and in late 2006 DFJ Vina Capital launched VinaVentures with USD 50 million AuM.<sup>108</sup> The increase in VC fund launches in Vietnam has come as investors' hope for Vietnam's IT industry has grown. As an illustration, in their Vietnam technology-focused VC fund launch statement, VinaCapital said they "will invest in Vietnamese companies to accelerate technology adoption locally and to foster development of innovative technologies with potential for global distribution" (VinaCapital, 2006).

In terms of VC policy efforts thus far, national funds and SME financing schemes have been initiated by three entities: the MoST (the 2006 VCF), the Science, Technology and Environment Committee (via their 2007, USD 30 million fund for high-technology SMEs (Zavatta, 2008)) and

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<sup>108</sup> The rest of the AuM comes from Mekong Capital launched its USD 50 million Mekong Enterprise Fund II and Dragon Capital's USD 250 million Vietnam Growth Fund (a closed-end fund). It should be noted that the VinaVentures and IDG funds are the most VC funds in their investment approach; they invest in early-stage, high-growth (oftentimes technology) businesses, whereas Mekong and Dragon invest in a broader array of more established companies in various sectors.

the MPI (the 2013 SME Development Fund). However, *these funds have been designed as loans to SMEs directly, not as FoVCFs*. As evidence, Resolution No. 22/NQ-CP on May 5, 2010, which details plans for implementing Government Decree No. 56/2009/ ND-CP to support the development of SMEs, makes no mention of “equity.” Instead, an entire section (II) of the Resolution is dedicated to the “accessibility of credit capital sources” as well as the importance of securing donor funding. In this way, the resolution dictates the following priorities for the MPI in implementing SME financing support:

negotiating, receiving or arranging official development assistance sources to provide technical assistance and enhance capabilities for *credit institutions to expand their credit to small-or-medium-sized enterprises....and submitting to the Prime Minister a report on the application of credit mechanisms and policies....and proposing measures to boost the development of products and services suitable to small- and medium-sized enterprises, such as factoring and financing leasing* (Socialist Republic of Vietnam, 2010; Italics added for emphasis).

The ASMED’s SME Development Fund, which had been motivated by this Resolution and received approval in April 2013, carries on the tradition of focusing on credit solutions. According to Prime Minister Decision 601/QĐ-TTg (dated 17 April 2013), the SME Development Fund will offer “preferential interest rate loans at an interest rate 90% cheaper than financial markets” rather than equity investments in SMEs (Author Email Exchange with ASMED manager, 20 May 2013).

In terms of regulations and taxation for the VC industry, Vietnam has not adopted a legal structure explicitly for VC fund managers, nor has the government offered any VC-specific tax treatments. Rather than VC industry regulations, licenses for VC managers to operate have come via one-off deals with government ministers, as in the case of IDG Ventures Vietnam. In exchange for their license, IDG Ventures Vietnam agreed with the MoST minister to:

help to market and promote the Hoa Lac Hi-Tech Park outside Vietnam and provide advice and support to the Ministry as it plans construction and operation of a High-Tech Conference and Exposition Centre in Hoa Lac Hi-Tech Park (IDG Ventures Vietnam, 2007).

The IDG agreement exemplifies the inconsistent nature of the regulatory environment for the VC market in Vietnam. This has been the approach rather than their transparent offering of VC industry-wide regulatory frameworks or incentives. In addition, WTO rules have been unevenly interpreted by different national agencies and regional authorities. This has also contributed to the unpredictable environment for VC managers investing in, and exiting from, Vietnamese start-ups (Author Interview, Ho Chi Minh City, 22 August, 2012; Do, 2008). On the taxation front, VC profits continue to be taxed at the general corporate tax rate of 25 per cent – though the VC funds operating in Vietnam are domiciled offshore (typically Singapore or the Cayman Islands) so the Vietnamese tax rate does not directly affect them.<sup>109</sup>

In sum, VC has entered into policymakers’ agendas in Vietnam, particularly those responsible for SME support policies. However, VC policy measures akin to the global trend of offering regulatory, tax or FoVCF tools for a local equity-based VC market remain demonstrably elusive. The following table summarizes Vietnam’s VC policy-related initiatives thus far:

**Table 8.1:** Key Dates in Vietnam’s VC Policy Choices

Year	Milestone
2003	Formation of the Enterprise Development Agency (now ASMED), the MPI agency focused on SME-related policymaking
2003	MoST approved the National Fund for Science and Technology
2006	SME financing named as a “main task” in Prime Minister Decision No. 236/2006/QĐ-TTg

<sup>109</sup> These high tax rates do shape VC managers’ business decision as to whether to be domiciled domestically or off-shore; by being off-shore domiciled the VC managers are treated as foreign investors rather than local, which accentuates the problems of limited investments and exit activities.

2007	Science, Technology and Environment Committee discussion of a USD 30 million fund for high-technology
2008	MoST National Fund for Science and Technology launched
2010	WB-organized Consultative Group prioritized capital market development
2011	ASMED submitted a proposal to the Prime Minister for a SME Development Fund
2013	Prime Minister Decision (601/QĐ-TTg - 17 April 2013) approved the SME Development Fund; Funding of 2 trillion Đong to distribute via preferentially priced loans for Vietnamese SMEs

In addition to the VC policy efforts specified above, a VC market’s ability to operate is heavily impacted by the existence of high-growth SMEs. In this way, the laws guiding SME operations effectively act as a pre-requisite for VC markets, and thus VC policies. On this front in Vietnam, there has been some positive movement in the policy landscape. The 1986 *Doi Moi* (Vietnamese for “renovation”) reforms and the 2001 and 2005 Enterprise Laws improved the capacity for SMEs to legally operate in Vietnam as they outlined, and expanded, the ways in which private companies are allowed to operate in Vietnam. However, despite ASMED policy efforts and 2007 WTO membership requirements, limitations on foreign ownership of local companies remain (Deringer, 2007; Do, 2008).

Government treatment of SMEs still lags behind the positive treatment of SOEs and MNCs. To this end, Vietnam’s entrepreneurs have shared sentiment that:

“the government isn't doing enough to assist [SMEs]. It may pull out all the stops for the likes of Intel, but officials have not created policies found in places like Singapore, China and Taiwan to attract tech start-ups. In Vietnam, start-up founders talk of descending into seven levels of bureaucratic hell just to get a work permit” (Boudreau, 2008).

For entrepreneurs, the regulatory environment still limits their opportunities. So, while Vietnam is



no longer the true Command Economy it was prior to 1986, its SMEs still do not have full freedom to operate and fundraise. As a result, VC managers' ability to invest and divest has been limited.

### **8.3. External Sources**

Vietnam has had the Silicon Valley idea diffused to policymakers in the MoST, ASMED and Ministry of Information and Communications. As evidence, Vietnamese policymakers have said they want local Silicon Valleys, so Vietnamese national and regional governments have been deploying policies to develop IT clusters (see VietNam News, 2013). Vietnamese policymakers acquire information on the Silicon Valley model as they have attended donor forums, such as the World Bank's Global Forums on Science, Technology and Innovation in 2007 and 2009, as well as the Global Innovation Summit in 2012. These forums, particularly the 2012 Summit held in Silicon Valley, have focused explicitly on teaching policymakers how to promote innovation ecosystems akin to "Silicon Valley at home" (InnoSummit, 2012). However, even in these interactions, my empirical research did not find evidence of Vietnamese policymakers acquiring information on specific aspects of the VC policy items (the LP structure, tax incentives or a FoVCF). In this respect, Vietnamese policymakers have not yet even had the opportunity to transform or reject specific VC policy items. They have just been made generally aware of the Silicon Valley idea and the benefits of such an innovative cluster to the Vietnamese economy.

The main driver of the credit focus of VC policies thus far has come from Vietnam's donor community giving SME loans and other credit-based advice. To be sure, the Socialist Republic's vibrant donor community, which includes more than 50 IOs and foreign agencies, has promulgated credit-focused financing advice to the Vietnamese government. This advice carries weight in Vietnam, as the Socialist Republic continues to be one of the world's largest recipients of donor aid (Thoburn, 2009) with donor aid accounting for one third of the CPV's public budget (Aid

Effectiveness, 2012). These influential donors have not transmitted the specific VC policy items. Rather, donors reinforce policymakers' habit of using donor monies to provide loans to private sector firms. As a result of the donors' focus on loans rather than equity, Vietnam's VC policy starting point has not been an imitation of Silicon Valley's equity-based regulatory environment.

Further, rather than coerce, or aid the emulation or learning of, equity-based VC policies, Vietnam's donors have discouraged Vietnamese policymakers from enacting, or researching, equity-based policies. The external actors who have been most active in directing Vietnamese policymakers towards credit-based SME financing initiatives have been Japanese technical experts, the World Bank, the UN, the ADB, and APEC. To be sure, these actors have "not encouraged private equity market development" (Author Interviews, Hanoi, 21 August 2012). As an illustration of how these donors have directed Vietnamese policymakers away from the VC policy items, the UN, in a 2007 report on SME financing in Vietnam, recommended that the state not intervene. To this end, the report proposed:

that there is relatively little that ASMED can (or should) usefully do, at least in a direct fashion, to improve SMEs' access to finance (Freeman and Le, 2007: 7).

This type of advice has been given to Vietnam as its donors believe that the Socialist Republic is "not developed enough for sophisticated capital markets such as VC" (Author Interview, Singapore, 24 September 2012). Finally, even when VC has been mentioned by its donors, they have not suggested any specific best practices. To this end, a recent APEC report commented that "as Vietnam is a late-comer, it needs to thoroughly analyze the policies applied by other countries in order to be able to compete with them in attracting venture capital" (Chen, 2010).

Though donors have continued to focus on loan-based methods with Vietnamese policymakers, donors' equity-financing expertise has been shared with Vietnam's private sector

actors. To this end, private sector development partnerships in Vietnam have provided capital and equity-financing advice. As an example, the World Bank Group's IFC had been a seed investor for the Ho Chi Minh City-based VC manager Mekong Capital when it launched in 2001. The IFC's Mekong Private Sector Development Facility invested in Mekong's VC fund as it aimed to "create sustainable, for-profit businesses in Vietnam" (Author Interview, Ho Chi Minh City, 22 August 2012). The other World Bank private sector partner, InfoDev, published a report on the opportunities and challenges associated with financing high-tech SMEs in Vietnam (Zavatta, 2008). The report suggested that greater support for equity financing would be beneficial for the market. Acting on their findings, InfoDev has funded private SME accelerators, including the Start Network and TOPICA in Ho Chi Minh City (Author Interview, Ho Chi Minh City, 23 August 2012; InfoDev, 2012). Thus, the only equity-financing advice into Vietnam has come from donors working "around the state" (Carroll, 2012) – and instead directly with the private sector – rather than with the state.

IO rules such as that of WTO membership requirements have not coerced VC policy diffusion to Vietnam. Vietnam's 2007 WTO accession was hoped to improve the legal environment for VC investment activity, but has thus far it has had a limited impact on VC policy diffusion. On the eve of Vietnam's WTO accession, in 2007, UNIDO released a report on SME financing in Vietnam. The UNIDO report found that VC funds' inability to invest more than 30% of an unlisted private company's equity (and 49% of a public company's ownership) had been a challenge for VC investors (Freeman and Le, 2007). WTO accession was hoped to overcome this restriction because the Socialist Republic's WTO Schedule of Specific Commitments in Services named the technology sector as a sector where foreigners can buy up to 100 per cent of company equity (WTO, 2006). Given the centrality of technology-focused SMEs to VC investors, the WTO rule that would give foreign investors full access to Vietnamese technology firms seemed promising. But, SMEs operating outside of the specific sectors, or even those operating in sectors identified by the

WTO agreement, including technology, have in practice not necessarily been open to foreign investment (Author Interview, Ho Chi Minh City, 24 August 2012).

The incomplete adherence to the 2007 WTO commitments stems from Vietnam's domestic regulations (e.g. Decree 139/2007/ND-CP) and policy environment that have continued to redefine what has been included in the WTO commitments. National and provincial ministers (mainly from the Department of Planning and Investments) interpret WTO guidelines to include, or not include, sectors in different ways. In this way, the current application of the WTO sector regulations has been said to be unclear and inconsistent across provinces and over time (Author Interview, Ho Chi Minh City, 22 August, 2012). As a result, foreign investors' access to ownership in unlisted Vietnamese companies remains limited, even in "committed" sectors (Tran, 2012). Vietnamese entrepreneurs and VC managers have remarked that the broad implementation of WTO commitments has been lacking due to the inconsistent and unclear nature of government decrees (Author Interviews, Ho Chi Minh City, 22, 23 and 24 August, 2012).

The 2014 phase of adherence to WTO commitments is, however, expected to better open foreign investment beyond the 30% equity cap across more sectors (Author Interview, Ho Chi Minh City, 22 August 2012). Further, it is hoped that future investors' access will not be subject to the provincial DPIs' differing interpretations of Decrees and WTO commitments when the new phase begins (Canadian Trade Commissioner, 2011). This is hoped to change via the WTO roadmap in 2014 as even companies operating outside specific sectors will be open to foreign investment (Author Interview, Ho Chi Minh City, 24 August, 2012). Thus, while WTO rules have not yet driven, let alone coerced, regulatory changes for the VC investment arena in Vietnam, they may have a greater impact following the next implementation phase.

There has been a *guanxi* bridge between the US (California's Silicon Valley in particular)

and Vietnam that has brought VC industry information and VC-style investing to Vietnam. Returning Vietnamese, through the knowledge and networks they have gained while studying and working in the United States, have contributed to the constitution of Vietnam's VC market. In addition, foreign nationals have been early movers in the VC industry in Vietnam (Zavatta, 2008). Even today, of the four VC managers operating in Vietnam, at least half of them have spent time working and studying in the United States and founders of two of the firms are foreign nationals. IDG Ventures' Managing Director, Henry Nguyen, has spent significant time in the United States. Henry was an Associate at Goldman Sachs in New York, completed his BA at Harvard University and earned his MD and MBA from Northwestern University. In addition, Mekong Capital's founder and Managing Director, Chris Freund, is from California. Also, the Managing Director of DFJ VinaCapital Partners' VC investment portfolio, Than Trong Phuc, spent over twenty years in Silicon Valley. Phuc joined Intel in Santa Clara, CA in 1986 and relocated to Vietnam by leading Intel Vietnam beginning in 1999. Finally, most of Dragon Capital's senior management team are foreigners with investment experience in emerging Asia or Vietnamese with academic, and professional, experience in the United States.

Vietnamese policymakers have taken capital market policy inspiration, as well as advice, from other states. At the dawn of Vietnam's economic reforms, its policymakers started paying attention to their "economically successful Asian neighbors." CPV policymakers were particularly interested in their coupling of capitalist economic management with single-party leadership (Turley, 1993: 3-4). In this vein, the Vietnamese Foreign Ministry and diplomatic missions "collect economic and technical information" on other states, especially East Asian neighbors (Vu, 2003: 48). They then share the information with national economic ministries and regional authorities. As an example of Vietnamese policymakers' interest in learning from its East Asian neighbors, Prime Minister's Decision No. 151 established the State Capital Investment Corporation (SCIC) to manage the capital from SOE equitizations in 2005, naming Singapore's Temasek Holdings as the

model (World Bank, 2006: 20). In addition, the Japanese keiretsu – the term given to Japanese companies with shared ownership and related business lines - helped inspire Vietnamese SOEs' conglomerate structures in the 1990s (Perkins and Vu, 2009: 32). Despite this demonstrated interest in learning from East Asian peers' policies, Vietnamese policymakers have not pulled in equity-based VC policy information from these proximate states. Why?

A primary reason has been that Japan has been identified as the country most central to Vietnamese SME policymakers' learning. This centrality was said to be at least partially because Japan is the most proactive in sending “experts to provide technical assistance to the ASMED team” (Author Interview, Hanoi, 21 August 2012). The Japanese experts sent to provide technical assistance and funding to Vietnam's VC-relevant policymakers, such as ASMED and MoST, are highly regarded by Vietnamese policymakers. These Japanese experts have contributed to Vietnamese policymakers overlooking equity-based VC policy items, since the advice given by these Japanese experts on SME support has been “focused on credit-based solutions” (Author Interview, Hanoi, 21 August 2012). The Japanese bias towards loan instruments in Vietnam is akin to its treatment of VC as loans, rather than equity investments, in its market at home.<sup>110</sup> The reliance of would-be VC policymakers' on credit-focused policy advice from Japanese SME financing policy experts helps explain why equity-based VC policy items have not been diffused to Vietnamese policymakers.

#### **8.4. Domestic Factors**

Domestic factors have also contributed to the heterodox, credit-focused shape of VC policy diffusion in Vietnam. Like some of its Asian neighbors, the Vietnamese state has controlled a

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<sup>110</sup> Japan, even more so than other Asian states that use loans rather than only equity instruments as VC, was slow to adopt an internationally compatible VC regulatory structure and government funding (Kenney *et al*, 2002). The Japanese state only improved its regulatory environment for equity investors in an effort to aid SME growth and innovation via equity investments in the 2000s. Thus, Japan itself has been a late adopter of equity-based VC policies.

deliberate market transition. As mentioned earlier in the chapter, starting with the *doi moi* reforms in 1986, a new constitution in the 1990s, and Enterprise Laws in the 2000s, the Vietnamese state has increasingly offered more space for private firms to operate (Forsberg and Kokko, 2007: 1; JICA, 2003: 4). In this way, the Vietnamese state's role has slowly shifted from a financier with central authority over credit allocation decisions via the state-owned banks (World Bank, 2002; Perkins and Vu, 2009) to a market facilitator that empowers FDI through the creation of initiatives such as enterprise zones (Painter, 2005; Thoburn, 2009).

Domestic economic characteristics have had an impact on Vietnamese policymakers' choices. In this way, even the *doi moi* reforms are said to not have brought on by a great ideological shift or the pending collapse of the Soviet Union. Instead, *doi moi* had been the government's response to a severe domestic economic recession (Phan, 2003: 24) and the playing out of rival state-business interests (Gainsborough, 2002). Similarly, the implementation of liberalization policies has not merely been the result of compliance with donor requests. Instead, it has been argued that privatization represents a new form of interventionism that allows the state to extract value from firms such as its equitized SOEs (Gainsborough, 2009; Painter and Yeo, 2011). Also, Vietnamese policymakers, though "dependent on capital inflows to feed growth" have not been "a mendicant" before its donors (Painter, 2005: 277). In sum, policy decisions have been (at least partly) made according to the cadence of the CPV's assessment of domestic economic needs rather than the cajoling of donor conditionality, including that of the IMF<sup>111</sup> or World Bank.

The functionalist argument for Vietnam is that VC policy diffusion has not been relevant to Vietnam due to the historically low level of high-technology SME activity and the bank-centric nature of its financial system. However, rising technology-focused SME activity levels have

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<sup>111</sup> The donor community in Vietnam does not include the IMF for much of the period analyzed in this chapter. The IMF discontinued its financing programs to Vietnam as conditionality regarding transparency into government spending was not granted. Insights into the end of IMF financing in Vietnam based upon interview with VC manager in Ho Chi Minh City 22 August 2012. This lack of transparency was also found by Transparency International in its low ranking of Vietnam (Perkins and Vu, 2009).

recently increased the relevance of VC policies to Vietnamese policymakers. To this end, SMEs have, since 2004, grown from accounting for 38% of GDP to more than 41%. At the same time, public sector activity has declined from 39% to 35% (Business-In-Asia, 2011). Though these have been incremental shifts, here we see the economic contribution of SMEs beginning to outweigh that of SOEs. In addition, the absolute number of SMEs has grown exponentially in recent years. In 2000, just over 14,000 new SMEs were registered, whereas 103,170 were formed in 2010 (Business-In-Asia, 2011).

In addition to the ten-fold increase in SME activity over the last decade, the ICT industry has taken off in Vietnam. Beginning around 2004, Vietnam emerged with mobile gaming and search start-ups that have drawn investment from foreign MNCs and VC managers for their cloning of successful business models (Fannin, 2011: 13). Also, as mentioned in the opening paragraphs of this chapter, several technology MNCs, including Intel and Samsung, have established operations in Vietnam. As a result of technology prowess and start-up activity levels advancing, policymakers such as the ASMED manager interviewed on 21 August in Hanoi, have acknowledged SMEs' need for better access to financing. In this way, the rise of ICT entrepreneurship in Vietnam has contributed to the nascent VC policy interest in the last decade.

The other economic characteristic investigated is the impact of the bank or capital market balance of Vietnam's financial system. Here, I found that the credit-centric nature of the Vietnamese financial sector has contributed to the State's reluctance towards equity-based financing. Vietnam's finance sector remains overwhelmingly bank, not capital market, based. As recently as 2002, financial services in Vietnam were dominated by the four State-Owned Commercial Banks, as they accounted for approximately 70 per cent of the total assets in the system (World Bank, 2002). The banks had complete control over the allocation of capital - which largely went to SOEs - thus depriving private companies' access to financing to grow their businesses.



But, around ten years ago the Vietnamese state started to liberalize the banking sector. Though Vietnamese banks are no longer solely facilitators of state credit decisions, Vietnamese businesses have considered suffering from inadequate access to capital as capital markets remain underdeveloped and banks continue to dominate the lending landscape. SMEs still struggle to obtain capital from banks. To this end, the official WTO accession report stated that “only 32.4 per cent of SME’s have qualified for formal bank loans” (Ministry of Industry and Trade, 2007: 220). Even though there has been acknowledgement that bank-provided credit is not sufficient for SMEs, capital market development has been slow (Author Interview, Hanoi, 21 August 2012).

Though Vietnamese policymakers have demonstrated their awareness of the need for alternative financing for SMEs, including VC markets, their private sector financing norms and bank versus capital markets preferences have dictated that they do not consider equity-based investments. This has even been the case during deliberations for the recently approved SME Development Fund (Author Interviews, Hanoi, 21 August 2012). ASMED policymakers’ private sector financing norms have prioritized securing donor-funded credit-based financing solutions. Formal institutions such as Resolution 56 reinforce these norms, as the MPI (of which ASMED is a part) is centrally responsible for managing relationships with Vietnam’s donors.<sup>112</sup> As such, their “securing of large funding initiatives,” such as the SME Development Fund, helps them “to demonstrate success” (Author Interview, Hanoi, 21 August 2012). Said another way, Vietnamese private sector financing norms have prioritized the securing of further donor money for SME initiatives, rather than study equity-based VC policies deployed elsewhere. This has effectively led to a form of “technocratic alignment” as donors and Vietnamese policymakers have both preferred loan-based initiatives (see Meseguer, 2009: 25 for more on technocratic alignment).

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<sup>112</sup> The MPI’s focus on coordinating and securing donor funding within the SME Resolution is consistent with its central role in the CPV’s relations with donors as well as the aid disbursement and reporting process (Painter, 2005: 275).

Related to policymakers' private sector financing bias for using loan instruments, Vietnamese entrepreneurs have also preferred bank loans as the primary way to raise money. In this way, amongst Vietnamese policymakers and entrepreneurs alike there has been a preference for debt, as well as mistrust for equity investments. As an illustration of the distrust for equity financing, an early-stage equity investor shared an anecdote. In the story, a Vietnamese entrepreneur who took the check he received from an equity investor and bought a brand new USD 200,000 BMW (Author Interview, Ho Chi Minh City, 24 August 2012). To be sure, instead of using the money for his start-up, he bought a car. He did this because an equity investment, as understood by that entrepreneur, was "money for nothing." An equity investment was seen as free money since he did not have to make payments on a loan and had no collateral (other than his newly formed company) that could be called upon. A similar sentiment was expressed when the image of the successful Vietnamese entrepreneur was detailed as someone who had "raised money from an investor, rather than an entrepreneur who successfully exited via an IPO or trade sale" (Author Interview, Ho Chi Minh City, 23 August 2012). The persistence of the Vietnamese predisposition towards credit-lending, and newness (and distrust) to the concept of equity-based financing in Vietnam, has meant that policymakers and their constituents have not sought out equity solutions.

The other economic management norms – the local or international firm preference and large versus small firm preference – have both been touched upon in preceding paragraphs. Here, I quickly address each of these economic management norms in turn. The local versus international firm preference has been mixed. In this way, SME policymaking bodies, especially ASMED, have designed initial VC policies for the benefit of domestic SMEs. Given that nascent VC policies have not been explicitly designed for the purposes of the VC industry's benefit, this norm has not yet impacted VC policies specifically. Similarly, the large or small firm preference has only affected VC policies in a related sense. Vietnamese policymakers' preference has historically (and remains)

for supporting large, state-run firms (e.g. SOEs and now “equitized” firms). This has been translated into the late adoption of SME focused policy initiatives in Vietnam. However, given that VC policies have been credit-focused initiatives for SMEs directly (largely run by ASMED) the large-over-small firm preference has not shaped VC policies’ design directly.

Domestic actors, particularly Vietnam’s existing VC managers, have not helped diffuse VC policy information from abroad to its policymakers. Vietnam-based VC managers have instead preferred to stay “off the radar” of the CPV and away from the unruly “red tape” (Author Interviews, Ho Chi Minh City, 22 and 24 August, 2012). The sentiment that government involvement is to be avoided rather than sought out is consistent with other scholars’ findings that operating within reach of the Vietnamese state “was not just unpredictable” but “frequently predatory” (Gainsborough, 2009: 268). In this way, VC managers have said that they would not benefit from further government involvement in their industry and so they have not attempted to initiate VC policy action (Author Interviews, Ho Chi Minh City, 22 and 24 August, 2012).

Instead, one VC manager even lamented that he felt that the “informal advantages” they had from operating in a non-transparent market were substantial (Author Interview, Ho Chi Minh City, 22 August, 2012). In addition, VC managers have said that they believe that (corrupt) state actors would only get involved when they want to extract payments.<sup>113</sup> Several of the VC managers I interviewed shared the experience of the high-growth company VNG (formerly VinaGame) as an example of a successful business that lost its government sponsor or got too successful for the government to not want to partake in their profits. Here, VC managers have said that they believe that VNG’s public listing has been precluded by government enquiries into their business (Author

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<sup>113</sup> This article would be remiss if it did not mention that one of the VC managers, Henry Nguyen of IDG Ventures, is the son-in-law of Prime Minister Nguyen Tan Dung (Fannin, 2011: 67). Mr. Nguyen, despite his academic accolades in the United States and his technical background, may represent the type of private sector actor able to succeed in Vietnam as a result of close personal relations with state officials. Sentiment amongst private participants in the Vietnamese market and academics alike is that such effective “sponsorships” from well-placed CPV members are essential to their “competitive advantage” (Author Interviews, Ho Chi Minh City, 23 and 24 August 2012; Painter, 2005: 269).

Interview, Ho Chi Minh City, 24 August 2012). This anecdote illustrates VC managers' preference for the Vietnamese VC industry to stay off the CPV's policy agenda and why they have not demanded VC policy action.

Vietnam's policymaking process has also contributed to the slow development of its VC policy diffusion. Vietnam's policymaking institutions have been described as "decentralized, fragmented and sometimes incoherent" (Painter, 2005: 267) with ministerial coordination, capacity and information problems (see OECD, 2011: 10; Vu, 2003). As a result, Vietnam's policymakers have struggled to convert ideas for complex policy areas into implemented policies (Ohno, 2009). Scholars such as Martin Gainsborough have found that policy implementation in areas such as SOE equitization have been "slow and incremental" (2002: 390). The VC industry's oversight has similarly been decentralized and uncoordinated. The VC market has been overseen at the national level, from a regulatory perspective, by the MoST. However, funding and policy coordination for SMEs, including SME financing, has been managed by the MPI's ASMED while budget for initiatives comes from the State Bank, the Ministry of Finance and numerous donors (Author Interview, Hanoi, 21 August 2012). The inefficient nature of policymaking helps explain why VC policy action, such as the SME Development Fund, had only been approved in April 2013, even though the ASMED team submitted the draft for the Prime Minister Office's review in 2011.

The other formal institution contributing to Vietnam's VC policy inaction has been the limited resources that Vietnamese policymakers have been able to leverage to study equity-based VC policy options. To illustrate, ASMED managers have described "Google Scholar" as "a key source of information." Furthermore, ASMED policymakers have explained that their research has also relied on the proactive information brought to them from Japanese experts and the semi-annual APEC SME working group meetings (Author Interviews, Hanoi, 21 August 2012). Though the APEC forum was mentioned as a critical resource by ASMED managers, APEC SME workshop

participants described the Vietnamese representatives' involvement as "limited and passive" given their "inability to communicate effectively" (Author Interview, Singapore, 24 September, 2012). Thus, the extent to which the Vietnamese ASMED delegates actively engage and learn from forums such as the APEC meetings is questionable. Instead, the limited resources available to the ASMED team have undermined their ability to obtain high levels of technical expertise. Their limited technical capacity has furthered their reliance on Japanese, and other donor, expertise, which has been credit-focused.

## **8.5. Conclusion**

The functionalist hypothesis for Vietnam is that its modest high-technology SME activity levels and banking-centric financial system, would lead its policymakers to delay or reject VC policy diffusion. As a result, Vietnam was expected to reject VC policy diffusion, or be a late adopter. This hypothesis has been found to have largely been true, at least until recently. Vietnam's high-technology SME activity levels have grown in the new millennia, particularly since 2004. In line with this growth in high-technology start-up activity, there has been increasing interest in, and policy action related to, improving SME's access to capital. Acting on this interest, in recent years, Vietnamese policymakers have begun deploying policies aimed at improving SME financing options. However, the policies discussed and implemented thus far have significantly differed from the equity-based VC policy diffusion items detailed in this thesis. In light of these developments, the finding is that the recent rise in SME activity levels has contributed to Vietnam's late interest in credit-based SME financing policies.

But, what explains Vietnam's credit-based SME financing policy choices – instead of the equity-based VC policy items – to date? My research found that it has not been the existence of multiple VC policy items, given Vietnam's 'late adopter' timing that facilitated their synthesis of another VC

policy strategy. Instead, *this late adopter has created a unique credit-centric form of VC policies in line with its donors' advice and its domestic economic management norms*. Externally, it has been the lack of specific policy information being transmitted and its donors' bias for loan instruments that has shaped their policy choices. Domestically, it has been Vietnamese policymakers' credit-focused private sector financing norms and policymaking incentives that prioritize the security of donor loans that have steered policymakers towards SME loans.

Externally, only the generic Silicon Valley idea has reached Vietnam's policymakers. The analytical framework expects transformation and variance to be more likely in cases like this, where the low specificity diffusion item is transmitted. But, in the Vietnamese case, the role of the diffusion item specificity has not been that straight forward. This is because though the general desire to create local Silicon Valley clusters has diffused, awareness of Silicon Valley's VC policy environment has not yet diffused. In this way, while Vietnamese policymakers have had a desire to create local Silicon Valleys, I did not find evidence of learning about specific policy items that could help them recreate Silicon Valley's policy environment (as had been the case in other states).

However, international donors were found to have a marked impact on Vietnamese SME policymakers' agenda setting and policy choice set through their funding and technical assistance. Here, though Vietnam's donor community has discussed VC with Vietnamese policymakers, they have not recommended, let alone pushed, equity-focused VC policies for Vietnam. In addition, WTO membership rules have not forced open investment access for the foreign-domiciled VC funds operating in Vietnam. Also, donors, through their policy advice (e.g. the UNIDO report) and forums (e.g. the World Bank CG), have not encouraged the state to deploy equity-based financing for SMEs. Instead, the Japanese, who were cited as the most present and trusted of foreign advisors, have distilled information on loan-based initiatives.

The only donors who have supported equity-based VC-type investments have gone around the state. In this way, private sector development partners (the IFC and InfoDev) have made equity investments directly in private Vietnamese VC managers and SME accelerators. Also, external private actors have also brought in knowledge of VC markets, particularly returning Vietnamese. However, they have preferred to operate in Vietnam's opaque regulatory environment rather than transmit VC policy information. Across all of these external inputs, policy blueprints for supporting an equity-based VC industry have not been diffused to the Socialist Republic's policymakers. This has left ample space for Vietnamese policymakers to deploy the credit-focused instruments dictated by their donors in an effort to develop Vietnam's local Silicon Valleys.

Domestically, policymakers' pre-existing economic management and private sector financing norms have both favored credit-based solutions. Vietnam's formal institutions have reinforced these biases towards credit instruments as policymakers have been incentivized to maximize donor funding. These factors have both contributed to Vietnam's policies aimed at developing a local Silicon Valley taking the form of loan-based, donor-funded schemes. These factors have dovetailed with policymakers' limited resources and technical capacity for proactively learning about complex, niche capital markets, such as VC. The limited resources available for facilitating policy learning have reinforced MPI policymakers' reliance on donors, particularly the Japanese, to help them formulate SME financing policies.

Taken in sum, both external and domestic factors have played a role in directing Vietnamese policymakers away from equity-based VC policies despite their desire to create local Silicon Valleys. Historically, the low levels of technology SME activity and the bank dominated financial sector delayed VC policy diffusion. However, the recent growth of high-tech SME activity has prompted policy action. Yet, though interest in replicating Silicon Valley has taken root, Vietnamese policymakers' normative bias towards credit-based schemes, their limited

policymaking expertise, as well as donors allocations towards the use of loans, have come together to adapt Vietnam's variant of VC policy towards SME-direct loans. Effectively, neither external nor domestic factors aided the diffusion of the LP structure, tax incentive or FoVCF to Vietnamese policymakers. As a result, Vietnam's VC policy choices have been uniquely credit-focused, and thus different from the VC policy choices in the other case studies.

This chapter concludes the analytically-guided case study investigations. Beginning with the examination of Hong Kong, the spectrum of economic management norms have been assessed for their impact on different VC policy choices across East Asia. In addition, each case study tested state-of-the-art diffusion literature's theories about aspects of the diffusion process (multiple diffusion items, varying levels of specificity and the different diffusion mechanisms) that drive variety, rather than convergence. Each case study analysis also examined the effects that economic structures had on the timing of policy diffusion, and the impact of formal institutions on the policy adaptations. The conclusions of each chapter discussed the findings of each case. To build out the broader findings of this research project, the next chapter, Analysis, draws together the implications of the VC policy diffusion investigations.



## 9. Analysis

### 9.1. Introduction

As a reminder of how the four preceding cases fit into the global trend of VC policy diffusion, VC policies have spread to more than 41 countries. Despite policymakers' shared objective of replicating local versions of Silicon Valley, there is notable variance in the VC policy choices taken across states. This thesis seeks to explain why these varied choices, rather than convergence on the neoliberal Silicon Valley policy environment, characterize the VC policy diffusion trend. To this end, this chapter analyzes the drivers of the VC policy choices taken across Taiwan, Hong Kong, Singapore and Vietnam.

VC policy choices globally, and in East Asia in particular, are not consistent with the neoliberal environment that fostered the growth of the Silicon Valley VC industry. True, elements of the Silicon Valley diffusion item, namely the market-enabling LP regulatory structure, have diffused to several, though not all, states relatively intact. However, the transmission of the LP structure is one of the only VC policy elements deployed internationally that does fit with the Silicon Valley model. Numerous states restrict VC fundraising and exit options as they have not deployed an ERISA-like reinterpretation, which was a core component of the enabling Silicon Valley regulatory environment. In this way, rather than competing to have the most international investor friendly regulations, like the open context that the 1979 ERISA reinterpretation facilitated for Silicon Valley fundraising, many VC policymakers do not lift restrictive legal and regulatory structures. What's more, a myriad of tax credits and FoVCFs were deployed – and these policy tools are not present in the source Silicon Valley model.

To better unpack the implications of these findings, this chapter offers an analysis as follows. The next section presents the case studies' key findings and then assesses the match between the hypotheses and the East Asian VC policy choices. Sections 9.3 and 9.4, respectively, then examine findings about the diffusion literature's hypotheses and hypotheses about economic management norms as sources of VC policy choices. This is first done in terms of how VC policies were adapted from the source item(s), due to the diffusion mechanism(s), and the multiple diffusion items of varying levels of specificity. The analysis then turns to how domestic factors, particularly economic management norms, contribute to VC policy choices. Then, drawing the two spheres together, Section 9.5 discusses the critical finding that domestic economic management norms were central in states' unique bounded learning processes, and therefore economic management norms are the glue that binds the domestic context with the diffusion process. The Conclusion, Section 9.6, outlines VC policy diffusion thesis' contributions to broader IPE debates.

## **9.2. Case Study Findings**

As previously mentioned, there has not been a single duplication of the hands-off Silicon Valley VC policy environment, even by the neoliberal Nightwatch-man proxy state of Hong Kong. Moreover, none of the states examined in the thesis adopted a near perfect replica of any of the Silicon Valley, Taiwanese or Israeli VC policy choices. Instead, in each of the four cases, adaptation from the source items occurred, and in most cases, hybridization of more than one item occurred. What's more, in one case, credit-based policies were created, rather than policymakers adapting the equity-based VC policy items. Thus, the case study analyses revealed how VC policy diffusion drives limited, rather than complete, convergence on the Silicon Valley model.

In each case, a greater extent of adaption, and more interventionist direction of adaption,

occurred than what was expected by the diffusion mechanism hypothesis. High degrees of convergence on VC policy items (especially the Silicon Valley policy environment) were expected in cases of emulation, competition and coercion. In contrast, learning was expected to lead to adaptation of the VC policy items as policymakers adjust the VC policy items in line with their normative biases. As expected, bounded learning produced marked adaptation in all three cases where it was present (Taiwan, Hong Kong and Singapore). Evidence of the competition mechanism was also found to have motivated VC policy diffusion in the same three cases. However, in contrast to the expected impact of competition, competition was not found to have driven any neoliberal policy choices. **Instead of driving replication of the Silicon Valley policy environment, competitive pressures were found to motivate policymakers to learn about interventionist policy items.** Also, in the one case where coercion was at work (Vietnam), there was not convergence on the Silicon Valley policy environment. Rather than international donors coercing Silicon Valley-like VC policy regulations, my research found that Vietnam's donors focused their advice and funding on loan-based tools.

The failure of the diffusion mechanisms to explain the diffusion outcome is because, ultimately, the timing and form of VC policy choices were determined by domestic factors. More specifically, economic management norms were found to drive the adaptation of the policy item(s) to fit policymakers' local normative contexts in each case. What's more, the SME activity levels were found to be a blunt predictor for the timing of VC policy diffusion. In this way, domestic factors were central to VC policy choices regardless of the primary diffusion mechanisms. The centrality of domestic factors in VC policy choices supports the claims of IR scholars, such as Lenschow *et al* (2005) and Painter and Yeo (2011), about the need for domestic level analyses in diffusion research. In doing so, my findings support the assertion that policymakers have retained "room to move" (phrase borrowed from Layna Mosley's (2000) research) due to their different domestic contexts.

As will be further discussed in Section 9.4, I found that policymaking processes (formal institutions) reinforce policymakers' various economic management norms. More specifically, formal institutions related to the distribution of budgetary power, degree of democratization and regime type reinforced private sector financing norms. To this end, in states where policymakers' norms preferred the use of financing to support the private sector, policymakers who have had easy access to budget whereas policymakers have had to seek external approval for funding are in normative environments that do not favor direct private sector financing.

As a result of these inputs, the VC policy choices took different shapes in all four case studies. The four East Asian capitalism typologies' economic management norms, particularly preferences related to interventionist orientation, private sector financing and the support of local versus international firms, were found to drive VC policy choices as expected. To this end, policymakers inclined to fund private sector activity, especially in Singapore, amplified the size of funding in the FoVCF item. In addition, their preference for attracting international firms was responsible for the Yozma model's adaptation towards allocating FoVCF monies to international VC managers. As another illustration, Taiwanese policymakers, whose private sector financing norms preferred not to allocate money to firms, gave 20% tax credits after learning of the Silicon Valley policy environment. Taiwanese policymakers' preference for supporting local firms helped shape these tax credits only being offered for local investments, and to the paper company structure's use. While the choices of the four cases generally fit their level of interventionism hypotheses, as Table 9.1 highlights, each state chose VC policy elements that the analytical framework did not fully expect:

**Table 9.1: VC Policy Choices**

VC Policy Choices	Hong Kong	Taiwan	Singapore	Vietnam
<b>FoVCF</b>	ARF II gave four private VC managers less than USD 100 million AuM to manage in 1998	A 2012 bilateral FoVCF with New Zealand <sup>114</sup>	Technopreneurship Investment Fund in 1999 with USD 1 billion AuM and the ESVF in 2008 with USD 100 million	--- <sup>115</sup>
<b>Tax</b>	General low corporate tax rate of 15%; VC-specific tax exemption in 2005	20% tax credit initiated in 1983; extended to corporations in 1991; discontinued in 1999	0% tax for pioneer industries; in 2002, VC-specific tax exemptions and tax credit for start-up investment losses	No VC-specific tax rate
<b>Regulation: Legal Structure</b>	Long-established LP structure; No VC-specific structure (China enacted VC regulations in 2005)	Paper companies; have not adopted the LP structure	Private Company Limited (Pte Ltd); LP structure adopted in 2002	No VC specific regulatory structure; VC managers are offshore domiciled vehicles
<b>Regulation: Incentives &amp; Restrictions</b>	Pension funds are not allowed to invest in non-publicly traded assets, including VC	Investor type maximums, some institutional investors not allowed; investors make investment and exit decisions	GIP offers Singaporean Permanent Residency to foreign VC investors (above a certain threshold)	Company investment and sale restrictions including foreign ownership requirements and IPO restrictions
<b>Timing</b>	Majority (late 1990s)	Innovator (early 1980s)	Majority (late 1990s)	Laggard (mid 2000s)

The following paragraphs expound upon the VC policy summaries in Table 9.1.

<sup>114</sup> Beginning in 1985 Taiwanese policymakers launched a VC fund, the National Development Fund, which gave less than USD 100m via matching funds. Beginning in the 2000s the Development Fund also began acting as a quasi-FoVCF as it did co-investments with VC managers.

<sup>115</sup> The Vietnamese government has launched a National Science Fund and the SME Development Fund, which was approved in 2013, but they have been structured as loans to SMEs, not as FoVCFs.

Beginning in the late 1990s, Hong Kong's innovation and technology policymakers began seeking out information on VC policy items. Policymakers' efforts to learn about VC policies came as a response to competitive pressures on Hong Kong's financial services centric economy (vis-à-vis Singapore and China's capitals). In response to competitive pressures, a local VC industry was conceptualized to be a means of supporting domestic technology-sector SME activities, to diversify the economy, further its innovativeness and extend the comprehensive nature of the financial services sector. The Hong Kong policymakers' interest in the technology sector came as they started to believe that more technology SMEs would help them to diversify away from financial services and reverse the city-state's manufacturing hollowing out. As a result, Hong Kong policymakers underwent a normative shift towards supporting small, local technology firms. These new, more interventionist and domestic SME-focused economic management norms replaced policymakers' once palpable normative opposition to intervention of any type. As Douglas Fuller (2010) similarly found, when it came to their want to support innovation, Hong Kong policymakers changed their beliefs as their laissez faire approach had reached its limit.

In response to these competitive pressures, Hong Kong policymakers learned about the Silicon Valley, Israel and Taiwan VC policy items. But, it was not only what they learned from abroad that drove their VC policy choices. Instead, I found that it was their domestic SME financing policy experiences (especially the first ARF in 1993) that drove Hong Kong's VC policy choices. Domestic policy learning and a marked normative shift in favor of government intervention combined to produce VC policy choices that were more interventionist than what was hypothesized for "the most free economy in the world." To this end, the Nightwatch-man proxy of Hong Kong's VC policy efforts included a FoVCF, a VC-specific tax exemption and the use of the long-established LP structure, but not the adoption of ERISA-like regulations. This has meant that Hong Kong did not replicate the Silicon Valley policy environment, as it was expected to do.

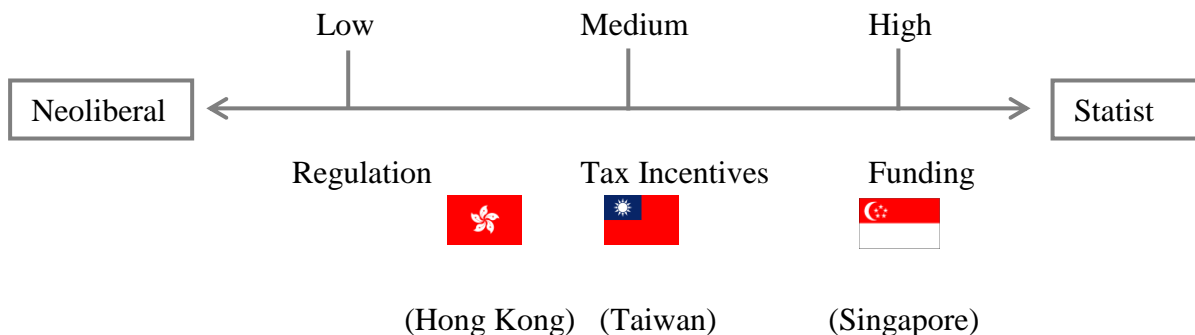
However, the interventionist nature of Hong Kong's VC policies should not be overstated. Hong Kong policymakers have not given a tax credit for investing in a VC fund. In addition, Hong Kong's FoVCF was structured as an outsourcing model so the state did not have to pick winners. Given that Hong Kong's FoVCF was a means for the government to avoid having to pick winners, and given that they only offered a tax exemption, and not tax credits, their VC policy choice was still adapted to be less heavy-handed than the other East Asian cases. As such, Hong Kong's flag in Figure 9.1 is positioned further right on the interventionist continuum than it was expected, but not at the interventionist end of the spectrum.

Taiwan's policymakers also learned about VC policy in response to competitive pressures to attract international capital (especially after Taiwan's UN de-recognition). It was in this context that Taiwan's VC policy diffusion began in 1981, by way of a study trip to the US Silicon Valley, Boston's Route 128 and Japan. Following their studies, Taiwanese policymakers, led by Minister without Portfolio K.T. Li, launched a 20% tax credit for local VC investors in 1983. To be sure, after learning about Silicon Valley, Taiwanese policymakers chose not to replicate the Silicon Valley policy environment. They deployed tax credits rather than deploying the LP structure or allowing institutional investors to allocate to the VC industry.

Overall, the Taiwanese VC policy choice has been tax centric, as the tax incentive was the primary VC policy instrument for 25+ years, regulatory tools were not used to entice investment activity and its FoVCF deployment only came in 2012 as a bilateral initiative with New Zealand. Taiwan's 20% tax credit is considered a VC policy innovation, as Silicon Valley had not offered any VC-specific tax treatment. But, the tax credit was not a new instrument for Taiwanese policymakers whose economic management norms dictated their preference for using tax credits (to the tune of 20%) to encourage private sector investment. In Figure 9.1 below, Taiwan's flag is placed squarely on the 'medium' position on the continuum, given the centrality of tax incentives to

its VC policy choices.

**Figure 9.1: VC Policy Choices on a Neoliberal to Statist Continuum**<sup>116</sup>



While Taiwan’s tax-centric VC policy choice is in line with the Private Sector Promoter hypothesis, Taiwan’s VC regulatory policies are not consistent with what we would expect to have been deployed in response to competitive pressures. Rather than adopting the LP structure, and enabling international investors to invest in the VC asset class, as the American ERISA reinterpretation did in 1979, Taiwan’s VC regulatory structure restricts its VC managers’ fundraising and exit opportunities. Also, Taiwanese policymakers did not deploy a legal structure that would attract international investors as the LP structure does. Instead, their paper company structure has limited VC managers’ ability to make investment decisions as they must involve their investors in all investment and exit decisions – and this has kept international investors at bay. The explanation for Taiwan’s heterodox VC regulatory environment was found to lie in Taiwan’s prioritization of the local environment, particularly local investors’ preference for greater control over investment decisions, the local tax environment and the local VC market consisting of local, corporate VC managers. As this suggests, a dynamic feedback loop reinforces the local focus of Taiwanese VC policy – via its VC industry’s local, corporate nature.

The local composition of the Taiwanese VC industry was caused by its initial tax credit policies,

<sup>116</sup> Vietnam not included on continuum because, as of yet, they have not deployed any equity-based VC policy efforts. Vietnam’s Silicon Valley-themed policy learning and action has instead focused on credit solutions for SMEs.



and then later on, the corporate nature of Taiwan's VC industry impacted policymakers' VC policy choices. In Taiwan, unlike the other case studies where the VC market has been seen as an extension of its financial center's *entrepôt* status (Hong Kong and Singapore), or an effort to lure a new form of FDI or donor aid (Vietnam), the Taiwanese VC regulatory platform was not designed to attract international capital. Instead, Taiwanese policymakers deployed regulations and tax credits so that local VC managers could finance their local high-technology SMEs. In this way, unlike in Hong Kong and Singapore, in Taiwan, the VC industry was strictly seen as a means to support the competitiveness of its local high-technology SMEs.

The Singaporean flag is placed on the Figure 9.1 continuum in a manner consistent with its *Financier and Director* hypothesis: highly statist. This high-interventionism categorization is made because Singapore deployed versions of all three VC policy items – LP structure, tax credits and two FoVCFs. Moreover, Singapore's VC policy center of gravity has been on its FoVCF initiatives, as it has harnessed the FoVCF structure twice in an attempt to attract international VC managers (the 1999 TIF) and to develop domestic VC managers (the 2008 ESVF). Singaporean policymakers learned about VC policy items from Israel, Silicon Valley and Taiwan. To this end, Singaporean policymakers learned about the Israeli Yozma Fund model for its FoVCFs, but also deployed an adaptation of the Taiwanese tax credit, in addition to adopting Silicon Valley's LP regulatory structure. The catalyst for VC policy diffusion for Singaporean VC policymakers, similar to Hong Kong and Taiwan, was competitive pressures. In Singapore's case, the competition it felt was *vis-à-vis* Hong Kong and China in their bid to be the premier financial center in East Asia.

Singaporean VC policymakers' study trips, particularly to Silicon Valley and Israel, aided the diffusion of these VC policy items. In fact, to ensure that a key VC policymaker (the creator and manager of the TIF) fully understood the Silicon Valley VC policy environment, he lived in Silicon Valley for two years (1996-1997). He then returned home to Singapore with the goal of deploying

adaptations of what he learned. Information on the Israeli Yozma Fund was similarly acquired via study trips, as well as ongoing dialogues – driven by visits as frequently as every two months – between Singaporean VC policymakers and their Israeli Office of Chief Scientist counterparts. After first learning about the Israeli Yozma model, Singapore’s VC policymakers ratcheted up the size (from Yozma’s USD 100 million to their TIF’s USD 1 billion). Singaporean VC policymakers also changed the terms from investing in promising domestic VC managers towards soliciting top international VC managers by allocating 75% of the TIF to foreign VC managers. Then Singaporean policymakers studied the Yozma model again in 2008 as they sought to deploy a more domestically focused FoVCF, the ESVF. The aim was for the ESVF to be more akin to the domestic focus of the Israeli model, due to the discouraging results of the TIF. However, by September 2013, Singaporean policymakers changed the ESVF’s requirements such that international VC managers are able to participate.

In Vietnam, Silicon Valley VC policy diffusion remains incomplete as its policymakers only know of the Silicon Valley concept, and not the elements of the Silicon Valley, nor Israeli or Taiwanese, policy environments. So, as of yet, Vietnam remains off the VC policy choice continuum in Figure 9.1. The Command Economy hypothesis for Vietnam is that it would be a rejecter of VC policy adoption. However, due to the incomplete nature of VC policy diffusion to Vietnam, they have not yet had the chance to reject, accept or adapt any of the VC policy items. In recent years, Vietnamese policymakers have expressed their interest in VC policy as a means of creating a local Silicon Valley in Vietnam. Initial discussions of the Vietnamese state supporting early-stage financing markets have come as part of the MPI’s prioritization of SME financing in its current five year plan. Yet, World Bank Consultative Group meetings and the MPI’s SME financing initiatives have not committed to supporting equity-based, early-stage financing.

Despite these initial expressions of interest in VC policy, Vietnamese SME policymakers,

and their donors, adapted the means of establishing a local Silicon Valley to being focused on credit-based solutions. This credit-focused adaptation of VC in Vietnam comes from two forces; one, as its donors use and recommend loans and two, as Vietnamese policymakers prefer credit instruments. Further, this credit-centric cycle has been repeated as neither donors or policymakers have sought to learn about specific VC policy items. In this way, only the vague Silicon Valley idea has diffused, and so nascent VC policy efforts in Vietnam are only actually VC in name. In practice, Vietnamese policymakers have continued to deploy the credit solutions dictated by their donors. By virtue of the role of donor terms and financing on policy choices thus far, the diffusion mechanism at work in Vietnam thus far has been the coercion mechanism. However, Vietnamese policymakers' bias towards credit-based solutions reinforces the donors' pressure towards loans.

Another factor discovered in the case study research is the way that East Asian policymakers are impacted by Japan as policy items diffuse from the West. More specifically, Japanese leadership and colonial legacies have impacted the adaptation of Silicon Valley policy concepts as they diffuse across East Asia. My findings across two cases were that the Japanese influence came due to its status as the leading industrialized economy in the region, the success of Japanese industrial policy efforts and the close relationships that policymakers maintain with Japanese policymakers. Japan is, in Weyland terminology, the “available” local model and it is used to localize Western models.

In the first case of Japanese influence, the paper company structure in Taiwan was designed in a similar (but not the exact same) way to the company structure in Japan. Taiwanese policymakers were empowered to use a heterodox paper company structure because of their study efforts of the Japanese VC policy environment. But, the broader context that motivated Taiwanese policymakers to study Japan in the first place came from their reverence for Japanese industrial policymaking and cultural affinity due to the colonial legacy. In this way, Taiwanese policymakers study the policies of a state that they revere or have some affinity for (e.g. Japan), rather than conducting a fully

rational analysis of all the policy options available.

The second case that was heavily influenced by Japan is Vietnam. In Vietnam, policymakers have not purposefully sought out Japanese policy information in the same way that Taiwanese policymakers did. Instead, in Vietnam the prominent Japanese influence came from the proactive efforts made by Japanese experts and donor agencies in designing, training and funding Vietnamese SME and capital markets development initiatives. Given the preference that these Japanese experts have for bank lending, and therefore credit instruments, they contribute to Vietnamese nascent VC policies' credit focus.

In sum, the case studies' VC policy choices have been affected by policymakers' economic management norms as well as the existence of multiple diffusion items and Silicon Valley's low level of specificity. These factors have shaped the case studies' diffusion processes, including which external items VC policymakers studied through to how to adapt VC policy items. Economic management norms, ranging from neoliberal to interventionist, to SME, MNC or SOE supporting, to bank or capital market focused, centrally drove the unique bounded learning processes. In this way, policymakers' domestic economic management norms controlled which VC policy items were studied, how they were valued and the manner in which those VC policy items were adapted to the local contexts. In policy process terms, local economic management norms were found to shape the full policy cycle, beginning with agenda setting through to policy evaluation, design and, ultimately, implementation. What's more, the resultant VC policies broadly fit the typologies expectations – though some elements were not hypothesized to occur, notably Hong Kong's FoVCF and Taiwan's heterodox regulatory context.

### 9.3. Diffusion Literature's Hypotheses Results

This section more thoroughly discusses the ways in which the existence of multiple diffusion items, diffusion items' varying levels of specificity and the diffusion mechanisms impacted the case studies' VC policy choices. The majority of this section assesses the ability of diffusion literature's hypotheses to explain the direction of VC policy adaptation in each case. To get started, Table 9.2 identifies each case's primary diffusion item(s) and diffusion mechanisms:

**Table 9.2: Diffusion Literature's Hypotheses**

	Hong Kong	Taiwan	Singapore	Vietnam
Number of Diffusion Items Studied	Three	One <sup>117</sup>	Three	One
Specificity of Primary Diffusion Item	Low	Low	High	Low
Diffusion Mechanisms	Competition / Bounded Learning	Competition / Bounded Learning	Competition / Bounded Learning	Coercion

The existence of more than one VC policy diffusion item (as seen in Table 9.2, multiple diffusion items were found in half the cases) contributed to the hybrid choices and therefore the low degree of convergence on the Silicon Valley policy environment. In the VC policy diffusion arena, there were not competing models as in the genetically-modified organism case as explored by Falkner and Gupta (2009). Instead, there have been iterations of policy innovations that have aimed

<sup>117</sup> For most of the Taiwanese VC policy diffusion history the Silicon Valley model was the primary diffusion item studied. Only in the context of creating the New Zealand bilateral FoVCF, which launched in 2012, was the Israeli Yozma fund diffused and studied. Studying of the Israeli FoVCF model seems to have only begun in late 2010 or in early 2011.

at replicating the Silicon Valley VC industry that effectively expanded the menu of possible VC policy choices. If Silicon Valley had been the only model, and the Israeli and Taiwanese VC policy innovations were not available, then perhaps there would have been more convergence on the Silicon Valley policy environment, rather than different adaptations and combinations, of multiple diffusion items. Said another way, since there have been different adaptations of one, two or three VC policy items in each case, there has been less convergence on one single model, particularly the source Silicon Valley policy environment, across adopters.

The diffusion literature's specificity hypothesis was that VC policy items that are more specific, e.g. a blueprint, would lead to choices characterized by higher degrees of convergence. In contrast, vague VC policy items, e.g. a more general policy principle, would lead to lower degrees of convergence. As a result, in VC policy diffusion, the highly specific Israeli and Taiwanese VC policy innovations were expected to lead to more convergence on their precise forms while the vague Silicon Valley policy environment was expected to lead to less convergence. **The levels of specificity were not found to impact VC policy choices as hypothesized.** This is because the highly specific FoVCF model was not transmitted intact into any of the East Asian environments, and neither was Taiwan's 20% tax credit. Instead, it has been only one piece of the less specific Silicon Valley policy environment (the LP structure) that was adopted in one of the cases (Singapore) without any changes.

With this said, when examining the policy choices of cases where versions of the FoVCF or tax credit were deployed, the "core" of the items were translated. In cases where the Silicon Valley policy environment was diffused, the overall policy choices did not keep the core elements of the regulatory environment intact. The core of the Silicon Valley policy item often did not get deployed (LP structure only used in half of cases, and the ERISA-like legislation not adopted in any of the cases). Empirical research revealed that the vague nature of the Silicon Valley item led VC

policymakers to study the other items (e.g. Israel and Taiwan). In this way, interviewees commented that if the Silicon Valley VC policy item would have been more of a blueprint, then they would not have studied the other policy items as much.

Moving on, the VC policy diffusion mechanism hypotheses were articulated as follows: emulation, coercion and competition were all expected to lead to high degrees of convergence, especially on the internationally revered Silicon Valley policy environment. Bounded learning, in contrast, was hypothesized to lead to less convergence as each state's different economic management norms would result in distinct adaptations of policy items.

The hypothesis for competition to drive a neoliberal choice stems from the globalization thesis' contention that competitive pressures produce low tax, regulatory-friendly environments. In the VC policy arena, this meant that competition was expected to drive VC policy choices that closely resemble the neoliberal Silicon Valley VC regulatory environment and horizontally low tax rates. But, competition, even in the case of neoliberal Hong Kong, did not result in VC policies that mirror the Silicon Valley policy environment. Instead, the competition mechanism was found to drive Hong Kong policymakers to pursue a FoVCF and a VC-specific tax exemption. In this way, rather than a race to the bottom, competitive pressures were actually found to have motivated the interventionist adaptation of the Silicon Valley policy environment. Competitive pressures on Taiwanese and Singaporean VC policymakers led to the pursuit of interventionist strategies. In the three cases where competitive pressures were at work (Hong Kong, Taiwan and Singapore), VC policymakers did not believe that a replication of the neoliberal Silicon Valley policy environment alone would be sufficient in helping them achieve their goals of building a local Silicon Valley.

A horizontal reduction in corporate or capital gains tax rates is the expected textbook outcome of competitive pressures. However, my research found that VC policymakers did not

universally lower their tax rates via the same strategy. Instead, they went a step beyond a low tax environment as numerous VC policymakers (including those in Taiwan and Singapore) gave VC-sector specific tax credits to VC investors. The deployment of sector-specific tax credits is not consistent with Silicon Valley's horizontally competitive, or neoliberal, market facilitation strategy. Tax credits (of the Taiwanese innovation's variety) constitute an interventionist form of industrial policy (because tax credits involve the concession of tax revenues, and therefore indirect funding).

As a result, VC-specific tax credits do not reflect a simple triumph of competitive forces over policymakers' ability to choose. This is because policymakers have been able to choose to exempt tax payments, or to reward investors with credits for placing capital in the assets class (as the Taiwanese tax credit innovation did beginning in 1983). They have also been able to offer different kinds of tax credits – credits in line with the money allocation to VC investments, or tax credits on losses that investors suffer from their start-up investments. In addition, policymakers have been able to choose different tax rates for VC managers' profits – zero, capital gains tax level or corporate tax rates. However, policymakers' ability to choose their policy should not be overstated; these various choices all represent different forms of downward pressure on policymakers' ability to tax the VC industry. As a result, VC policymakers are choosing amongst various ways to concede their tax proceeds, whether reducing tax rates for VC managers or giving tax credits to VC investors.

More generally, my finding is that policymakers responding to competitive pressures felt the need to learn about sector-specific incentives to build local VC markets. The interventionist adaptations in response to competitive pressures both undermine and reinforce the globalization thesis. These findings undermine the globalization thesis by suggesting that the role of the state actually increases in line with heightened competitive pressures. In this way, instead of a "retreat of the state" (Strange, 1996), in the VC policy arena, learning enables a transformation towards the



“competition state” (Cerny, 2007). This transformation stems from the state having an enhanced role as an economic actor rather than just getting out of the way of market actors. On the other hand, as discussed in the preceding paragraph, policymakers have felt they need to deploy policies and resources to please private investors. VC policymakers, succumbing to globalization pressures, felt compelled to study different ways in which they could directly transfer resources to the industry via FoVCFs and tax credits.

The 1990s has been heralded as a time of globalization, a supposed ‘retreat of the state’ (Strange, 1996) and a rising belief in pro-market forces as promulgated by the Washington Consensus. But, it was in this very context that interventionist VC policy choices, stemming from a neoliberal source model, proliferated. Even in this least likely context, competition was found to drive learning about various interventionist VC policy choices, rather than convergence on the neoliberal Silicon Valley policy environment. The case study investigations found that this was the result because, above all, it was the impact of policymakers’ economic management norms, especially the private sector financing and local versus international preferences, that determined policymakers’ bounded learning processes.

Learning was expected to lead to adaptation as policymakers studied policy items in line with their normative preferences and then translated the preferred elements to fit their local context. The case studies with learning as their primary diffusion mechanism (in response to competitive pressures) are Singapore, Hong Kong and Taiwan. In these cases, VC policymakers were found to rely on cognitive biases when studying and designing policy options for their local environments. In so doing, they did not pursue fully rational measures of policy optimization based upon perfect information about how the policy design worked. This is just what Meseguer (2009: 19) expected, that the consequence of bounded learning is that policymakers choose “divergent policies.” In line with this rationale, the bounded learning that powered 75% of the VC policy diffusion cases drove

policymakers to come to different conclusions about the best way to implement the VC policy items. This then facilitated each state's VC policymakers to uniquely adapt VC policy items in line with their local normative context.

In light of the sparse occurrence of coercion and emulation, it is difficult to generalize about the impact of the coercion and emulation mechanisms in VC policy diffusion. This was not a clear case of emulation (despite all the rhetoric about wanting to replicate Silicon Valley), and only one case of coercion: Vietnam. Despite international donors' coercion in the Vietnamese case, policymakers have not copied VC policy measures from either the US, Taiwan or Israel. Instead, Vietnam's initial attempts to support SME financing reflect donors' preferences for credit-based projects (e.g. the SME Development Fund that was approved in April 2013). The Vietnamese finding demonstrates that coercion does not drive a copy of any VC policy items if the actors applying the coercive pressure are not advocating the use of the diffusion items. Instead, in this case, coercion appears to have led to even further variation across adopters as policy diffusion was in line with donor, and local policymaker, preferences.

Together, diffusion scholarship's hypotheses for the sources of variation were found to contribute to the limited convergence that characterizes VC policy diffusion. The existence of multiple VC policy diffusion items did contribute to adaption and hybridization of VC policy instruments not included in the original model – the Silicon Valley policy environment. In terms of the role of the mechanisms, the finding was that the competition mechanism has acted as a motivating force in three cases; acting as a catalyst for learning. Then, the bounded learning processes drove policymakers towards varied, interventionist VC policy choices in line with their economic management norms. Only in one case were coercive forces found to have been present. Contrary to the hypothesis that coercion would drive high degrees of convergence, these coercive pressures led to Vietnamese policymakers following the credit-based terms outlined by their donors

rather than the equity-focused Silicon Valley VC policy environment.

#### 9.4. My Analytical Framework Hypotheses Results

My analytical framework expected economic management norms to explain the unique adaptations of VC policy items in each East Asian context. I expected VC policy adaption and timing to be generally in line with each state’s normative environment and economic structure, respectively. This section examines the impact of each of the normative and economic factors on the VC policy choices to determine the accuracy of my hypotheses. To get started, Table 9.3 details the domestic factors found to be responsible for the shape of the East Asian VC policy choices:

**Table 9.3: My Hypotheses Results**

	Hong Kong	Taiwan	Singapore	Vietnam
Primary Domestic Factors	Shifting pre-existing economic management norms in favor of intervention and small, local firms. Increased public scrutiny of spending undermined FoVCF usage	SME-dominant economic structure and pre-existing economic management norms and private sector financing norms favoring tax credit policy formula & small, local firm support preferences drove paper company structure and tax credit	Economic management norms favoring funding and attracting international firms and drove TIF shape and LP adoption. Normative shift towards SME support aided initial VC policy diffusion and ESVF shape	Growth of SMEs in the economy, and shifting economic management norms towards SME support aided initial VC policy diffusion. Credit-centric financial system and norms adapted towards credit

My framework articulated that economic structures, specifically high-technology SME activity levels and bank versus capital market balance, would determine the timing of VC policy diffusion. In each case, the level of SME activity impacted the general timing of VC policy diffusion, as the state with high initial SME activity levels (Taiwan) acted the earliest, in response to SMEs' funding needs. However, in states with low initial SME activity levels, though they acted later, it was not always a rise of SME activity levels that instigated VC policy diffusion. Rather, policymakers' normative shifts towards favoring small, local high-technology firms helped facilitate VC policy diffusion in two cases (Hong Kong and Singapore). In their cases, I found that policymakers' company size preference shifts motivated VC policy diffusion, rather than policymakers responding to SMEs' actual need for capital. In Vietnam, though VC policy has yet to substantively diffuse, Vietnamese policymakers' interest in early-stage funding was motivated by its growing SME activity levels. As such, though Vietnam remains a VC policy diffusion rejecter, their SME activity levels sparked VC policy interest more akin to the earliest adopter, Taiwan. In contrast, in the majority adopter states of Hong Kong and Singapore it was normative shifts, not increases in SME activity levels, that catalyzed VC policy diffusion.

The financial sector's bank or capital market focus was not found to affect the timing of VC policy diffusion to the same extent that SME activity levels did. This was found to be the result of East Asia's increasingly balanced and comprehensive financial sectors. In Hong Kong and Singapore, bank and capital market activities have both been vibrant, with the two sectors even having similar values (in terms of assets and equity value) in Singapore. In addition, in these entrepot states, the VC industry is positioned as another financial services offering, rather than exclusively bank or capital market related. As a result, the neutral bank and capital market character of the financial sectors did not speed up, nor slow down, VC policy diffusion in the Hong Kong and Singapore cases.

In Taiwan, though banks dominated the financial sector's provision of financing to SMEs through the 1990s, the bank dominance did not preclude policymakers learning about equity-based financing policies. Instead, the lack of bank financing for SMEs was so stark that it created an opportunity for policymakers to seek out alternative solutions for SMEs' financing needs. In the Vietnamese case, however, I found that the bank dominant nature of the financial sector has slowed the timing of VC policy diffusion. The bank dominance of the financial sector, coupled with Vietnamese donors and policymakers' preference for debt instruments (over equity tools), drove the credit-based SME policies thus far. In this way, it has not been the financial sector's bank over capital markets nature alone that shaped the loan adaptation of VC policies in Vietnam. Therefore, the amount of high-technology SMEs or the bank-capital market balance has not alone accounted for the timing of VC policy diffusion.

I now turn to the impact of the five economic management norms. The interventionist orientation norms were found to have had a large impact on VC policies. Interventionist orientations determined the possible VC policy choice set. For example, in the 1980s and 1990s, Singaporean policymakers (especially the EDB) deployed large funding initiatives to attract international firms to support domestic ICT and SME activity. When VC policy information diffused to Singapore, policymakers sought out to learn about the Israeli FoVCF model as this finance-laden tool was attractive given their preference for private sector financing. Similarly, Taiwanese policymakers, led by their economic management norms that favored the use of tax credits, created a 20% tax credit for VC investors rather than replicating elements of the Silicon Valley regulatory environment. Hong Kong's policymakers initially focused on their enabling regulatory environment. But, when the "limits of laissez-faire" were reached (Fuller, 2010), they started to embrace the notion of intervening to enhance local innovation and start-up activity. For Hong Kong, the eroding of its leaders once iron clad neoliberal stance paved the way for its policymakers to learn about industrial policy tools such as sector-specific tax exemptions. Vietnam

experienced a shift in favor of increasing the white space available to private firms; this change paved the way for industrial policies to even be considered by Vietnamese policymakers.

The second economic management norms, private sector financing norms, shape how policymakers deploy funding, especially FoVCFs. The four cases reflected a low to high spectrum in terms of private sector financing norms: Hong Kong was low, Taiwan moderate, Singapore high, and Vietnamese policymakers' private sector financing norms were low. The private sector financing norms had two primary impacts on VC policy choices. Financing norms impacted the size and terms of the case studies' FoVCFs. Here, Hong Kong and Singapore serve as extreme examples of the phenomenon. In Hong Kong, government funding to private sector firms was not in their policymakers' lexicon until the 1990s, and even then, caution came with the allocation of funding to private sector firms. In line with their private sector financing norms, the Hong Kong VC funding scheme did not initially take the shape of a FoVCF. Instead, Hong Kong policymakers tried to manage a modest amount of VC money itself via the ARF beginning in 1994. However, after a few years managing the fund, policymakers felt that they were lacking the necessary expertise for managing a VC fund. Due to their domestic policy experience, only then did the 1998 ARF take the shape of a blue chip VC managed-focused FoVCF. It was in this context that the ITC policymakers hired four private VC managers to invest the ARF II money on their behalf. In this way, as the Hong Kong FoVCF was a means of outsourcing SME investments rather than a VC industry jumpstart effort. As evidence, the ARF II paid a 3 to 4% management fee to the ARF II VC managers as well as a share of the profits – in other countries, the FoVCF terms have focused on returns from portfolio company exits, not from management fees.

The opposite case, in terms of private sector financing norms, is that of Singaporean policymakers, who have a history of allocating large sums of money to private firms. In line with their private sector financing norms, Singaporean policymakers increased the size of the FoVCF

(from Israel's USD 100 million to the TIF's USD 1 billion). Also, as funding came more naturally to Singaporean policymakers, they launched the TIF shortly after learning about the interventionist Yozma model, whereas Hong Kong policymakers only came to implement the FoVCF structure after years of a poor experience with direct VC fund management. In addition, despite the TIF's poor performance, the financing happy Singaporeans were able to launch a second FoVCF (the ESVF), whereas the Hong Kong policymakers have not.

Before moving on to the next economic management norm, I would like to acknowledge the limitation of the different private sector financing norms to explain FoVCF adoption patterns. Despite their different terms, three case studies *did* deploy varied adaptations of FoVCFs. In this way, FoVCFs were pursued even in two cases (Hong Kong and Taiwan) where private sector financing norms did not favor such initiatives. I found that the deployment of FoVCFs in Hong Kong and Taiwan came from three sources: an updating of their private sector financing norms over the period, (negative) domestic policy experience and learning about the highly successful Israeli FoVCF model. These changes and experiences overpowered the impact of initial private sector financing norms such that even states expected to not deploy a FoVCF, such as Hong Kong, ended up doing so.

Third, policymakers' local versus international firm preferences were found to impact the design of VC policy choices in Hong Kong, Taiwan and Singapore. Policymakers' inclination towards supporting local, or attracting international, firms affected VC regulations, non-financial incentives and the terms of FoVCFs. As an illustration, Hong Kong's entrepot preferences motivated its policymakers to ensure an internationally consistent regulatory environment, particularly the availability of the LP structure for its VC managers and an attractive tax environment. In Taiwan, policymakers' focus on local enabled the persistence of their heterodox paper company structure, which endows local investors with the control they wanted to have over

investment decisions. Finally, in Singapore, policymakers have been focused on attracting international capital and international VC talent. Due to this international preference, Singaporean policymakers' first adaptation of the Yozma model (the TIF) allocated 75% of its funding to international VC managers who set up operations in Singapore. In addition, Singapore created the GIP to attract international investors for their VC managers, adopted the internationally attractive LP structure in 2002, and adjusted the terms of its second FoVCF (the ESVF, which was originally designed to support local VC managers) to allow international participation as of September 2013.

The fourth economic management norm examined in this thesis is policymakers' large or small company preferences. Both small and large firm preferences were found to propel VC policy diffusion. This is because supporting SMEs was found to (eventually) be popular in all four cases; SME activity has been increasingly linked to innovation and competitiveness. To this end, even in cases where there had been clear MNC preferences, notably in Hong Kong and Singapore, there has been a normative shift in favor of supporting domestic SMEs as a way of promoting innovation in response to manufacturing hollowing out and diversifying away from a reliance on MNCs. Similarly, in Vietnam, there has been a normative shift in favor of supporting SMEs alongside SOEs and equitized firms as the white space for private sector activity continues to grow. In Taiwan, the small firm support norm had been established by the KMT regime by the 1970s, as the martial law regime strove to limit the potential rival power of large private firms in comparison to state power. As a result of its early interest in SME promotion, Taiwan was the first state to study the Silicon Valley VC policy model. The other states have initiated their VC policy learning efforts in line with their SME-interested normative shifts. Thus, East Asian policymakers were found to either prefer small firm support from the outset or experience a normative shift in favor of greater SME support – this preference affected the timing, not the form, of VC policies.



The fifth economic management norm investigated is the bank versus capital markets preference. In the financial system where the state has most closely used public banks to direct credit, Vietnam, the preference for banks, and credit instruments, over capital markets, and equity tools, was found to have delayed and adapted VC policy diffusion. In Vietnam, Silicon Valley replication policy efforts have been transformed into SME financing efforts via credit-based initiatives. As a result, Vietnamese policymakers have not pursued a FoVCF and instead continue to deploy loan-based initiatives as their solution to SME financing needs. In the entrepot financial systems of Hong Kong and Singapore, however, policymakers were found to not have a preference for supporting banks or capital markets. Instead, they have generally strived to support the comprehensiveness of their financial systems in a bid to be leading regional, and international, financial centers. In this way, Hong Kong and Singaporean policymakers deployed VC policies as an extension of their existing financial services offerings, not because VC was part of the banking or capital markets sectors.<sup>118</sup> Finally, in Taiwan, though the state had historically directed credit decisions, I found that Taiwanese policymakers have not had a strong preference for banks over capital markets. This has been because Taiwanese policymakers have, above all, aimed to encourage domestic high-technology SME activity. As a result, as Taiwanese policymakers became aware that domestic banks were allocating insufficient capital to SMEs, they embraced equity-based VC markets as an alternative way to aid the growth of their start-ups.

The below table distils the core impact of each of the five economic management norms on the four East Asian VC policies.

**Table 9.4: Impact of Five Economic Management Norms on VC Policy Diffusion**

	Hong Kong	Taiwan	Singapore	Vietnam
1)	Reluctant to	Use of a time-	Studying and	Focus on

<sup>118</sup> Their interest in VC policy also stemmed from the normative shift towards SME promotion as a response to manufacturing hollowing out and overreliance on MNCs.

<b>Interventionist Orientation</b>	fund private firms	tested 20% tax credit	adapting FoVCF	SMEs came late (in last decade)
<b>2) Private Sector Financing</b>	Late FoVCF adaption, and its outsourcing structure	Tax credits use rather than funding	Two FoVCFs of large size	No funding to VC managers
<b>3) Small versus Large Firm</b>	Shift towards small firms catalyzed diffusion	Early VC policy diffusion	Shift towards small firms catalyzed diffusion	Shift prompted initial SME financing interest
<b>4) Local versus International Firm</b>	Internationally friendly tax and regulations	Locally attractive legal structure and regulations	International attraction via FoVCFs, GIP and regulations	—
<b>5) Bank versus capital markets</b>	Neutral	Neutral	Neutral	Bank-centric loans to SMEs, not equity to VC managers

Finally, I present the findings for the impact of the formal institutions in the four East Asian case studies. The ease with which policymakers could secure sign-off and budget for policies was found to have a particularly strong impact on the deployment, size and terms of FoVCFs. In cases where policymaking processes endowed budgetary authority to the policymaking bodies, as in the case of Singapore, the policymaking process enabled policymakers' quick and large use of funding. As a result, when Singapore's Technopreneurship 21 committee decided to create a FoVCF in 1999, and then the NRF chose to deploy a second FoVCF in 2008, they were both able to deploy sizeable FoVCFs as soon as ready. Policymakers in the Singaporean context did not have to wait for an external party to decide how or when they could deploy money. In contrast, Hong Kong's distribution of budgetary power endowed the Legislative Council with sign off on all budgetary requests. This was found to limit VC policymakers' ability to direct financing to private firms. To this end, even when the ARF became a FoVCF in 1998, the LegCo's budgetary review in 2004 led to the ARF II being wound down.

Democratization and regime types are the other formal institutions that were examined in the case studies. Here, my findings are that democratization limits the longevity of resource allocation to specific sectors – particularly tax incentives and FoVCFs. As an illustration, though Taiwan’s martial law ended in 1987, as soon as the first non-KMT political party took power in 1999 their policymakers chose to discontinue the VC industry tax credit. In Hong Kong, as politicization and the power of the legislative branch grew in the early 2000s, Hong Kong’s VC policymakers, who had warmed to more interventionist approaches, started to come under public pressure for their financing of private sector initiatives. This increase in public scrutiny caused its VC policymakers to wind down the ARF II and they have not been able to launch another FoVCF since.

Looking ahead, increased public scrutiny due to democratization was expressed as an inhibitor of financing private sector activity in Singapore, though this sentiment has not manifested into less available financing as of yet. It is of course difficult, and problematic, to try to predict the future. But, I feel compelled to relay sentiment that several interviewees expressed, that further democratization in East Asia, and in Singapore in particular, may result in trimming back the use of interventionist VC policy items. I say this knowing that many of the 41 international states that have launched FoVCFs are democratic. As a result, democracy and FoVCFs are clearly not incompatible. Thus, I do not argue that democracy limits policymakers’ ability to utilize private sector financing tools. Rather, I posit that a sudden increase in public scrutiny due to democratization undermines policymakers’ ability to transfer resources to private sector firms. Increased politicization and public scrutiny already led to the discontinuation of interventionist VC policy instruments in Hong Kong and Taiwan in the 2000s. A similar trend is expected in Singapore as the PAP loses its stronghold on political leadership.

Finally, over the course of my fieldwork it became apparent that policymakers’ level of

technical knowledge of the capital markets sector, enabled, and hindered, learning about VC policy items. Singapore serves as the extreme example of how high levels of expertise – and significant research resources – expedited the VC policy learning process. In the case of the ESVF as an illustration, Singaporean VC policymakers visited Israel in January 2008 to re-learn about the Israeli FoVCF model. Then, speaking to their efficiency, the ESVF initiative was launched in July of the same year. Vietnam, on the other hand, has been restricted to implementing what their donors dictate due to its VC policymakers' low technical capacity.<sup>119</sup> To this end, Vietnamese policymakers rely on policy advice – and funding – from their donors, while technocratic Singaporean policymakers proactively and meticulously study option items – and then quickly launch local adaptations.

## **9.5. The Central Role of Economic Management Norms in Diffusion**

My research revealed that there is a dynamic relationship between the international and domestic spheres in policy diffusion, and it is fuelled by the central role of economic management norms in shaping unique bounded learning processes. This pivotal result demonstrates that a single level framework would have not been able to fully account for the sources of VC policy variance. An international diffusion framework would not have been able to explain the occurrence of different VC policy choices in the three states where competition and learning were the diffusion mechanisms. The finding that the same mechanisms (competition and learning) drove VC policy diffusion in three cases (Hong Kong, Taiwan and Singapore) would have meant that the three cases deployed the same policy choice. Of course, it was not the case that diffusion scholars' hypotheses could explain the unique VC policy choice in any of the three cases. Instead, domestic economic management norms, by steering the bounded learning process, were the primary shapers

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<sup>119</sup> Vietnamese policymakers also need to comply with their donor programs constitute 30% of the Vietnamese state budget. So, even if Vietnamese policymakers had deep expertise on the VC industry, they would still need to comply with donor priorities and programs because they rely so heavily on donor aid. However, if the policymakers had greater expertise then perhaps they could better persuade donors to pursue other strategies.

of VC policy diffusion.

Similarly, a domestic-level institutional framework would have missed the starting points from which VC policy diffusion began in each case. In the Taiwanese case, for instance, an investigation that did not acknowledge the role of policymakers' learning from Silicon Valley may have assumed that Taiwanese policymakers created their VC tax credit as an extension of their technology sector policies. But, as my empirical research found, the idea of supporting a local VC industry did not come from domestic origins. Instead, the VC policy idea was diffused to Taiwanese policymakers by learning from Silicon Valley-based sources. Furthermore, a domestic framework would struggle to explain the widespread adoption of the FoVCF. This inability of domestic frameworks to explain policy adoption patterns is precisely the strength of diffusion frameworks, and the reason why domestic norm-focused diffusion tools were employed in this thesis.

Economic management norms, not the varying levels of specificity or multiple diffusion items, drove the diversity amongst convergence outcome. My empirical research found that the vague Silicon Valley idea led to policymakers seeking information about other (more specific or relevant) VC policy items. This happened as East Asian policymakers came to the conclusion that Silicon Valley's success was not the result of a specific policy set. They found that Silicon Valley was the unique product of forty years of a cluster developing. After coming to this conclusion, they then sought out information about more specific VC policy items and considered how they could design policies that would better with their local context. Therefore, Silicon Valley's low level of specificity did not directly lead to variation; it led policymakers to further studying, evaluating and designing VC policies in line with their economic management norms.

In some cases, the low specificity of the Silicon Valley policy environment led policymakers to learn about existing VC policy items (e.g. Singapore's learning about the Israeli Yozma fund) and

in other cases, it led policymakers to look inward (e.g. Taiwan's use of their tried and true tax credit). In this way, it was not just Silicon Valley's low level of specificity that led to less convergence. There was another step in the process: the low level of specificity of the Silicon Valley policy environment spawned VC policymakers' further learning (either from foreign or domestic sources) of other policy items. They then evaluated and adapted what they learned in line with their economic management norms. As a result, it has been the bounded learning process, in accordance with three of the economic management norms (pre-existing economic management norms, private sector financing and international versus local firm preference), not the vague Silicon Valley policy environment itself, which has driven the East Asian states' unique – and therefore varied – VC policy choices.

The impact of domestic economic management norms was found to be so strong that, counter to diffusion literature's hypothesis about highly specific models leading to greater degrees of convergence, even when policymakers learned about highly specific VC policy items, like Israel's Yozma fund, they did not create a duplicate version. Instead, even as East Asian policymakers learned about the highly specific FoVCF instrument, policymakers adapted the Yozma model in line with their economic management norms. As such, the highly specific Yozma model was adapted in three cases (Hong Kong's ARF, Taiwan's bilateral fund with New Zealand, and Singapore's TIF and ESVF). The three different adaptations of the Yozma Fund is testament to the fact that just because a diffusion item has a high level of specificity, it is not beyond transformation in line with key economic management norms. In Hong Kong, this meant that its FoVCF (ARF II) was adapted into a way for policymakers to avoid having to pick start-up winners. In Singapore this translated into their first FoVCF (TIF) being ten times the size of the Yozma model and allocating to international, rather than domestic, participants. This illustrates how the adaptation of even highly specific policy items has been determined by economic management norms.

Economic management norms, particularly the interventionist orientation, determined which type of international intermediaries (particularly *guanxi*) VC policy information was diffused through. This manifested into neoliberal states' VC policy diffusion coming from private intermediaries whereas the more interventionist states' policymakers dealt primarily with public actors in the international arena. This bifurcation reflects the broader differences in the roles of private sector participants in policymaking in both of these contexts. To be sure, in cases where the state has not determined private sector production and has not led industrialization policies, private sector actors – via *guanxi* within and across borders and sectors - were more involved in the policy diffusion process. In this way, private actors in Silicon Valley were the main conduits of VC policy diffusion to Hong Kong and Taiwan. The converse was found in more statist systems, wherein the state leads the policymaking process by dealing with public, or official, international actors. Thus, in both Vietnam and Singapore, policymakers mostly dealt with official actors (at IOs or states).

In the neoliberal states, *guanxi* based in Silicon Valley, or connected with ICT and VC sector players in the other model states, primarily shaped the agenda setting portion of the VC policymaking process. These *guanxi* brought the idea of VC and knowledge on how other states have supported it to local policymakers in Hong Kong and Taiwan (and have started to do so in Vietnam). Taiwan serves as an especially interesting case in terms of the role of *guanxi*, because senior policymakers, such as K.T. Li, were connected and informed by *guanxi*. In Taiwan, close relations with industry participants are valued and prioritized by industrial policymakers. In Hong Kong, the state even went as far as to hire policymakers that possessed Silicon Valley knowledge and *guanxi*, demonstrating the value they place on leveraging private sector insights and connections. *Guanxi's* centrality in Taiwan and Hong Kong, in particular, is consistent with other business system accounts that highlight “the importance of highly personal, particularistic and diffuse ties” in these two states (Whitley, 1992: 11).

State-led environments have not relied on, or purposefully involved, *guanxi* in VC policymaking. In state-led Singapore, policymakers relied more on direct experience and policy information acquisition than on *guanxi*. The clearest example of this is how one of the top VC policymakers in Singapore spent two years living in Silicon Valley to ensure that he personally understands the model. In Vietnam, there has been a mixed role for *guanxi*. Vietnamese policymakers have not prioritized relationships with private sector *guanxi*. They have, instead, achieved much of their policy learning through connections with other types of contacts – donors. The *guanxi* that have brought VC information into Vietnam thus far have been returning nationals and foreign nationals setting up VC firms in Vietnam. The major caveat to this Vietnamese case, of course, is the relationship between one of the four VC managers (the Managing Director of IDG – Henry Nguyen) and the Prime Minister (the IDG head is the Prime Minister’s son-in-law). This *guanxi* was not found to have specifically formed VC policy action, but may be one of the contributors to the rising awareness about the VC industry amongst Vietnamese policymakers.

Finally, I found that it has been either a competitive or coercive force that first catalyzed VC policy diffusion in each case. In this way, the coercion and competition mechanisms were only found to have initiated VC policy diffusion processes. Following this prompt, bounded learning was triggered in three out of four cases as domestic VC policymakers sought out information on VC policy items. In this way, externally-generated competition and coercion forces served as catalysts for economic management norms to determine which VC policy items were studied (e.g. Weyland’s availability heuristic), how the elements were evaluated (the diffusion items’ “representativeness”) and how they were adapted (the extent to which movement away from the “anchor” occurred), during bounded learning processes. VC policies have not simply diffused into a receiving space or a “black box”; instead, VC policymakers’ normative contexts drove VC policymaking processes.



## 9.6. Conclusion

This chapter examined the findings of the East Asian VC policy diffusion investigations. The diffusion scholarship's hypotheses were examined for the impact of diffusion mechanisms and multiple policy items of varying levels of specificity on policy choices. The results of these factors' impacts on the VC policy choices were then compared to their expected impacts. The existence of three VC policy items (Silicon Valley, Taiwan and Israel) was found to be a contributor to the limited degrees of convergence on the Silicon Valley policy environment. The varying levels of specificity, however, did not lead to a clear pattern, or to the hypothesized impact. In this way, the number of diffusion items had more of an impact than the varying levels of specificity. The last of the diffusion literature's hypotheses, about the diffusion mechanisms, expected less adaptation from the Silicon Valley policy environment than what occurred. Even the diffusion mechanisms that were expected to drive convergence, such as coercion and competition, propelled adaptation.

The chapter analyzed the comparative domestic contexts, particularly economic management norms, formal institutions and economic structures, to determine how the hypotheses compared to my findings. Domestic factors were found to be central drivers of the persistence of variety. Hence the title of the thesis begins with "All Politics is Local," which is a return to Tip O'Neill's (1994) use of the term. This is in contrast with Dan Drezner's (2007) book *All Politics is Global*, because my central finding is that each state's policymakers adapted VC policies in line with their own, unique domestic contexts. To this end, international power structures, or the restrictive pressure that market forces are said to have over policymakers' choice sets, were not found to rule over domestic input into VC policy choices.

Three of the five economic management norms –interventionist orientations, private sector financing and local versus international firm preferences – had the greatest weight on the VC policy

choices. Interventionist orientations were instrumental to shaping VC policy choices by shaping what was studied and then how policy items were translated locally. Private sector financing norms were found to be central to shaping VC policy choices, especially the use, size, and terms of FoVCFs. The international versus local company preference adapted VC policy items, both in terms of the deployment (or not) of internationally consistent regulations and in adapting FoVCFs (or not) to allocate to international VC managers. These three norms helped shape different adaptations of the policy items. But, over time there have been normative shifts such that policymakers' economic management norms regarding large and small firm support, and bank versus capital markets, converged. Though initial company size preferences varied across the cases, company size preferences were found to have converged on norms that "supporting SMEs is good." This shift has actually been partly driven by policymakers learning about the Silicon Valley cluster. The bank versus capital market preference became more balanced over time, and so did not matter to the extent as I hypothesized, except in the case of Vietnam where policymakers' preferences remain bank centric.

The functionalist hypotheses – that high-technology SME activity levels and bank versus capital market balance would explain the timing of VC policy efforts – were only found to be a blunt predictor of the timing (e.g. diffusion adopter category). They have not been found to be capable of explaining the precise timing of VC policy diffusion. This has been because SME activity levels only drove the initiation of VC policy diffusion in the Taiwanese and Vietnamese cases. In the other two cases, they were found to be less instrumental in Singapore and Hong Kong as shifting economic norms encouraged VC policies in an effort to develop high-technology SME activity. Similarly, only in the Vietnamese case did the bank-centric nature of the financial system slow VC policy diffusion. It was found to have a neutral or positive impact in the other cases, either reflecting a relative balance of banks and capital markets (Singapore and Hong Kong) or banks having too much control over credit to SMEs (Taiwan).

Looking ahead, chapter 10 concludes the thesis by applying the analytical developments and empirical findings to larger IPE debates. The findings are discussed within the context of my analytical contribution to the policy diffusion and East Asian comparative capitalisms research agendas. The chapter also discusses the ability of the analytical framework to guide investigations of other policy diffusion trends. In addition, the next chapter discusses the empirical findings' contribution to academic and practitioners' knowledge of VC policies. The concluding chapter also outlines areas for further research.

## 10. Conclusion

### 10.1. Introduction

As mentioned in the opening chapter, this thesis was motivated by theoretical and empirical gaps in IPE research. More specifically, this thesis responds to a mutual neglect within IPE scholarship. The mutual neglect stems from the separation of international and domestic contexts in diffusion frameworks. As a result of this gap, diffusion frameworks have struggled to analytically account for the only limited degrees of convergence that have occurred as the result of diffusion processes. This thesis has made progress in bridging this gap by bringing together tools from policy diffusion and comparative capitalism to investigate the drivers of convergent, yet varying, policy choices. In doing so, the thesis has made theory-based and empirical contributions to the IPE field by uncovering the primary role of domestic economic management norms in diffusion processes.

The major theory-based contribution of the thesis is its furthering of existing diffusion frameworks to account for variance amidst convergence. To do this, the analytical framework developed here delineated comparative capitalism typologies to account for the range of economic management norms across East Asia. In doing so, the thesis brought domestic factors into the center of international policy diffusion analyses. A second contribution is the framework's further conceptualization and testing of how multiple diffusion items and their varying levels of specificity contribute to limited degrees of convergence. The third theory-based contribution is the thesis' input into the "states versus markets" debate, particularly its evidence of why competition does not result in universal convergence.

Empirically, this thesis provided original investigations into sources of VC policy diffusion, as VC policy had not been previously examined by IPE scholars. To contribute to the analysis of this under-researched policy area, I delineated the VC policy elements (regulations, taxation and FoVCFs) and conceptualized the multiple VC policy items (Silicon Valley, Taiwan and Israel). I also explored the sources of VC policy choices in four in-depth cases (Hong Kong, Taiwan, Singapore and Vietnam) and compiled an original dataset of the VC policies deployed by 46 states. For East Asia specifically, my empirical research also contributes to our knowledge of the role of *guanxi* and Japan's leadership role on industrial policymaking in East Asia.

To more fully develop how my theory and empirical work contributes to IPE scholarship, the chapter is organized as follows. Section 10.2 discusses the thesis' theoretical contributions and Section 10.3 highlights its empirical contributions. Then Section 10.4 outlines areas for future research as it relates to how the domestic norm-focused analytical framework can be leveraged to investigate other policy areas as well as how further research to be carried out on the VC policy area. Finally, the brief Conclusion section brings the thesis to a close.

## **10.2. Theoretical Contributions**

The theoretical contributions of this thesis to IPE literature come from its ability to account for limited degrees of convergence. This was primarily achieved by delineating and testing the role of economic management norms in determining policymakers' unique bounded learning processes. To do this, I invoked comparative capitalism tools to formalize expectations about the impact of the different East Asian economic management norms on their policy choices. In addition, the thesis tested state-of-the-art diffusion scholarship's hypotheses about the role of diffusion mechanisms, multiple policy items and varying levels of specificity in driving adaptation in the diffusion process.

My primary contribution was furthering our understanding of why and how bounded learning is expected to drive different adaptations of policy items in each state. I demonstrated how boundedly rational policymakers each come to their own, different conclusions following their study and localization efforts. My conceptualization of how bounded learning drives variety rather than conformity builds on the work of Kurt Weyland (2006), particularly his delineation of how cognitive biases drive different policy choices across states.<sup>120</sup> Adapting the tools developed by Weyland, I investigated the impact of five specific economic management norms in framing how policy information was sought out, evaluated and adapted in the bounded learning process.

My case study investigations generally reinforced the bounded rationality hypothesis as they found that bounded learning drove adaptation in line with policymakers' economic management normative contexts. Three economic management norms in particular – (1) interventionist orientations, (2) private sector financing and (3) the support of local versus international firms – were found to have shaped policy evaluation and design to fit with domestic contexts. Based upon these three economic management norms, each East Asian state's policymakers came to different conclusions about which VC policies to study, how to value them and then they chose to formulate their own unique VC policies. As discussed in Chapter 9, two of the economic management norms – small versus large company preferences and bank versus capital market preferences – were found to not have a distinct impact in each state. This was the result of shifts towards small firm and capital market support across much of East Asia.

However, as discussed in Chapter 9, it was not only bounded learning that led to variation, but also coercion (in the Vietnamese case). Coercion resulted in a unique VC policy choice as the credit-focused policies dictated by the more powerful actors (donors) were not the VC policy items.

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<sup>120</sup> See Chapter 3 for a more detailed discussion of Weyland's three cognitive heuristics (anchoring, representativeness and availability) and Chapter 4 for an explanation of how my framework takes his cognitive heuristic tools in a more domestically-rooted, policy area-specific direction.

Competitive pressures were found to be a catalyst for VC policy learning efforts, but only a trigger, not a final driver of the policy choices. As a result, even diffusion mechanisms that were expected to lead to convergence on the neoliberal agenda (coercion and competition) were found to facilitate adaptation. This finding supports the thesis' overall hypothesis that diffusion drives variance, not complete convergence. But, it means that more work remains before we are able to formulate generalizable hypotheses about the precise degrees of convergence that the four mechanisms drive.

This thesis contributes to diffusion scholarship's understanding of how diffusion mechanisms are not simultaneous, mutually exclusive or equal in impact. In this respect, I extend the work of diffusion scholars who have acknowledged this interrelated nature of diffusion mechanisms (see Kogut and Macpherson, 2008) and the potential for the co-occurrence of emulation and learning (Meseguer, 2009). Diffusion mechanisms' interrelated nature has come as competition to attract international investment has not in and of itself been a diffusion mechanism that explains policy choices. Similarly, coercion to comply with IO stipulations has not resulted in copying of existing policy items. Instead, coercive and competitive forces were discussed for how they brought new policy items onto the policymaking agenda. Then, either (bounded) learning or emulation of policy items occurred. In this way, even in the face of external pressures (e.g. competition or coercion), I have conceptualized how policymakers retain agency as it is the domestically-led learning mechanism produces the precise shape of their policy choice.

Through my delineation of economic management norms within East Asia, I provide more nuanced conceptualizations of East Asian policymaking environments. My contribution here comes as comparative capitalism research, particularly VoC, has been criticized for its failure to offer Asia-relevant typologies beyond a singular "Asian model."<sup>121</sup> Going beyond the Korean or Japanese

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<sup>121</sup> While my East Asian typologies are a contribution to the comparative capitalism research area, I am not claiming to be the first to offer East Asian capitalist typologies. Helpful contributions have already come from Whitley (1999) and

type, my typologies help to rectify comparative capitalisms' failure to sufficiently delineate the variety of other government-market relations in Asia. My typologies add more precision to how IPE research conceptualizes the variety, rather than singularity, of East Asian policymakers' economic management norms.

I conceptualized four types of East Asian states that differ in their economic management norms: the Nightwatch-man state, the Private Sector Promoter, the Financier and Director and Command Economy. My typologies delineate East Asian policymakers varying private sector financing norms, small versus large and local versus international company preferences, bank versus capital market preferences and interventionist orientations. My East Asian typologies better acknowledge and differentiate the range of *different economic management norms guiding policymaking in East Asia, particularly as they relate to small firms and capital markets*. As there has been an overgeneralization that East Asian state-firm relations revolve around banks and large firms, East Asian policymakers' approach to SMEs and capital markets have been understudied. Giving more attention to capital markets and SMEs' policies is timely as East Asia has seen a rise in high-technology entrepreneurial activity and capital market growth.

Another theory-based contribution is my testing of state-of-the-art diffusion literature's expectations for how the existence of multiple policy items and levels of specificity contribute to limited convergence. My findings support Falkner & Gupta's (2009) argument that only limited degrees of convergence are likely when multiple policy models exist. With multiple (but not competing) successful policy items, I found that policymakers are empowered to choose and adapt elements from each policy item. Knowing that there was not only one specific policy formula that works, policymakers are then empowered to combine and adapt their own versions of the policy items. However, I found that the level of specificity of the diffusion item does not necessarily drive

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Walter and Zhang (2012) that go beyond Amable's (2003) singular Asian model. However, these existing typologies were not focused on the institutional and economic features relevant to this empirical area.



more or less convergence, as expected by Hall (1993), Lenschow *et al* (2005), and Weyland (2006). A vague source policy was found to contribute to policymakers seeking additional, more specific policy items, but in contrast to the expectation, both vague and specific policy items were adapted.

In addition, this project contributes to the “states versus markets” debate. The occurrence of varying, interventionist VC policy choices as the result of the neoliberal Silicon Valley VC policy environment’s diffusion stands in contrast to the globalization thesis’ hypothesis. The globalization thesis would expect that, in light of rising capital mobility and therefore competition for capital, there is less scope for states to intervene in private sector activity. To this end, the only tools available to policymakers would be lower tax rates and more market friendly regulations. But, a smaller role for the state, in which the state would simply create a favorable environment for markets to operate (which is what the Silicon Valley model consists of), has not been the result of VC policy diffusion. *Instead of a neoliberal race to the bottom, states raced to intervene by giving VC-sector specific tax credits, to funding VC markets via FoVCFs, and giving money and residency to international VC managers for setting up operations locally.* In this respect, competitive pressures did not undermine the state’s ability to direct economic activity. On the contrary, the need to attract funding seems to have transformed, or even expanded, the set of tools available to policymakers wanting to build local VC markets.

But, does the interventionist adaptation of the Silicon Valley VC policy environment really represent greater state power vis-à-vis the market? While policymakers were found to have capacity to choose from a number of interventionist tools, the ability to choose amongst these tools does not necessarily mean that there has been an expansion of the state’s power vis-à-vis the market. I say this because states have been largely only endowed with the ability to deploy policies that please international capital holders, not to increase tax rates or impose more stringent regulations. To illustrate this point, none of the states examined in this thesis have increased the rate of tax they

charge for VC managers' profits or operating revenues.

With this said, in some cases, specifically Taiwan and Vietnam, policymakers have not lifted limits on the universe of eligible investors the VC asset class. In all states, policymakers were found to have resisted pressures to open VC investment regulations so that all investor types can allocate to VC funds as the ERISA reinterpretation had done for Silicon Valley in 1979. In addition, not all states have deployed the LP structure that is popular amongst international investors. However, even in these cases where some non-market friendly regulations have persisted, there have been efforts to appease local capital holders (e.g. Taiwan's paper company structure gives investment decision-making power to investors, not VC managers) and start-up investment and exit environments have been increasingly opened (e.g. Vietnam's increasing scope for private companies to operate). Therefore, overall policymakers' VC policy tool set has consisted of pro-market, not restrictive or redistributive, policies. In this way, there have been constraints on the interventionist VC policy choice sets as policymakers have mostly been limited to policies that give (or concede) money or greater openness to VC markets. Policymakers have gained in their ability to choose unique policies amongst a new, but restricted, universe of pro-market choices. As a result, my research found support for the argument that there has been a transformation of the state towards more of an economic actor (here an investor in the VC market), rather than an expanse or reduction in power.

Finally, my fieldwork found that the level of interventionist policies has already been, and will increasingly be, undermined by processes of democratization in East Asia. In this way, in three cases, increased public scrutiny or political posturing has hampered or threatened the ability of policymakers to sustain their interventionist policy initiatives.<sup>122</sup> These findings indicate that the

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<sup>122</sup>This happened in both Hong Kong and Singapore, where policymakers were forced to wind down their FoVCFs in the mid-2000s. The winding down of both of their FoVCFs has been due to legislative branch budgetary power and public scrutiny, respectively. The discontinuation of tax credits in the Taiwanese case was found to have been caused by

state's ability to allocate capital for sector-specific industrial policies, such as VC policy, has been undermined by increasing democratic input. Democratization, therefore, was found to impact the sustainability of interventionist industrial policies. However, FoVCFs and tax credits continue to be deployed and sustained in democratic states (e.g. the UK, Australia and the US). As such, I argue that the downward pressure on interventionist policies in this policy area is more due to *the democratization process*, than a steady democratic state. In this way, it does not appear to be a broader reflection of the impact of democracy on states' abilities to deploy interventionist industrial policies. In steady-state democracies, it seems that their policymakers are not restricted as they have learned how to stand up to public scrutiny. As such, the democratization process may inhibit the sustainability of policymakers' interventionist policies.

### 10.3. Empirical Contributions

In light of IPE literature's lacuna on VC policy coverage, this thesis has empirically contributed to IPE scholarship by bringing in the VC policy area. This gap in literature had been surprising given the large sums of funding given to VC markets (e.g. Singapore's and Russia's USD 1 billion FoVCFs), the centrality of VC financing to national innovation systems (including Taiwan's semiconductor industry) and the widespread occurrence of the Silicon Valley aspiration. The thesis first addressed this VC policy gap by identifying and categorizing the three primary VC policy elements: regulation, taxation and funding. The VC policy items were then conceptualized on an interventionist continuum ranging from low (neoliberal) to high (statist). In this conceptualization, regulatory policies constitute the "low" end, tax measures are at the "middle" of the spectrum, and FoVCFs are labeled as the "high" form of intervention. Establishing the interventionist nature of the VC policy elements helps to measure and compare each state's VC policy choices, and their

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the change in government from the KMT to the DPP in 2000. As a reminder, Taiwan's policy change came the first time any opposition party won office since Taiwan's democratization in 1987. With the change in government came a change in political ideology away from private sector support. The Taiwanese DPP, once elected in 2000, brought with them new economic management norms that dictated that specific industry policies were unnecessary. As a result, all industry-specific tax credits, including the VC investor tax credit, were severed.

adaptations away from the Silicon Valley policy environment.

My empirical work also contributed by detailing and categorizing the vague Silicon Valley policy environment and the subsequent, and more specific, Taiwanese and Israeli VC policy innovations. In this way, I detailed how Silicon Valley was the first VC policy item as it served as the target that policymakers aspired to replicate. In the course of my fieldwork, I found that policymakers also studied the VC policy innovations of other relevant, successful adopters: Taiwan's 1983 tax credit and Israeli's 1993 FoVCF. IPE, and broader academic research, had not previously identified the VC policy items in comparative terms.<sup>123</sup> My conceptualizations of the VC policy items as the initial Silicon Valley source and the two subsequent policy innovations will contribute to future research projects that analyze the diffusion of VC policies globally.

To the best of my knowledge, prior to my thesis, such an extensive dataset of VC policy choices had not yet been compiled. My original dataset details 46 countries' VC policy efforts through 2012. The large-N dataset was essential to conceptualizing the VC policy diffusion story – as through the compilation of the large-N dataset, I discovered that 41 countries adopted VC policies at different times using markedly different, and notably interventionist, policy tools. In addition to the value the large-N dataset contributed to framing this research project, it is a contribution to scholarly knowledge of VC policies as it is the first research project that details VC funding, taxation and regulatory policies in so many different states. In this way, my examination and categorization of VC policies across geographic regions offers a unique global snapshot of VC policy specifics, trends and differences.

Another empirical contribution stems from my study's investigations of the sources of VC

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<sup>123</sup> This statement comes with a caveat that the Silicon Valley VC policy model and the Israeli FoVCF had been discussed in Josh Lerner (2009)'s *Boulevard of Broken Dreams*. Further, the Israeli Yozma model has been detailed and compared to Taiwan and the US in research projects conducted by Gil Avnimelech and Morris Teubal. However, these analyses were not done in the same sequential way, and therefore did not put the source model and innovations together as they have been organized in this thesis.

policies in East Asia. Prior to this thesis' research, there had only been a handful of studies that detailed some VC policy choices in some of these cases (e.g. Hong Kong, Taiwan and Singapore's VC policies through 2003 had only been covered in the Dietrich (2003) and Kenney *et al* (2002) studies). Furthermore, these existing East Asian VC policy studies did not explore the *sources* of the VC policy choices. Instead, they had summarized the VC policy efforts of each state through the early 2000s. In addition, Vietnam's nascent VC policy discussions had not previously been covered in academic research.

My empirical research revealed the roles of *guanxi* throughout East Asia when how Western models are diffused. The networks of industry professionals and policymakers that formed the different case studies' *guanxi* were found to have transmitted and framed VC policy information differently. *Guanxi* mattered most in the more neoliberal states (Hong Kong and Taiwan), whereas public officials controlled much of the VC policy diffusion in bureaucratic Singapore. In Vietnam, *guanxi* – with returning nationals and foreign nationals – brought VC industry activity to Vietnam. However, official relations with donors have been the primary conduits by which VC policy information has been transmitted to Vietnamese policymakers.

Finally, I found that the Japanese state plays a large role in contextualizing policies for East Asian states. In this way, Japan served as a local, peer model for East Asian policymakers as they work to understand and localize the Western policies they learn about. This was vividly illustrated in the Taiwanese case, as policymakers motivated to replicate the Silicon Valley model conducted a study trip to Japan at the same time, to learn more about the Japanese tax and regulatory environment (which they had inherited through their Japanese colonial legacy). Singapore, in its bid to be international investor friendly, offered a Japan-like company structure in addition to its local private company structure. In Vietnam, Japanese technical experts and donor funding had a marked impact on shaping the knowledge of Vietnam's SME policymakers and their conceptualization of

SME financing. Moreover, the Japanese preference for credit instruments, and the deployment of SME funding in loan structures, propelled Vietnam's local Silicon Valley aspirations to take the form of SME loans rather than equity investments.

#### **10.4. Future Research**

In the future, this thesis' analytical framework can be applied to investigate the diffusion of other industrial policy areas as well as the drivers of VC policy choices in other regional clusters. Applying this domestic norm-focused framework to other industrial policy areas, or VC policies in other geographic areas, would help refine the framework's ability to account for the drivers of diversity amongst convergence. In addition, by applying this framework to other policy areas, IPE scholars may uncover greater variance in diffusion outcomes than what internationally-focused, large-N frameworks have found to simply be convergence. Furthermore, applying this framework to other empirical areas will enable examinations of the domestic context in shaping policy diffusion, rather than seeing the domestic realm as only a binary receiver or rejecter of diffusion. To this end, empirical studies that leverage my domestic norm-focused diffusion framework can further sharpen IPE scholars' understanding of the localization that occurs in the policy diffusion process.

The empirical research carried out in this thesis detailed the drivers of VC policy choices, but did not connect the various VC policy formulae to differences in VC market performance. Said another way, the focus here has been on *explaining VC policy choices, not policy outputs* (e.g. why VC activity has been more robust in Taiwan than in Singapore). Future empirical research on the VC policy area is needed to examine the impact of specific VC policy choices on domestic VC markets' performance. Such research would focus on whether tax credits, regulatory frameworks or FoVCFs drive higher levels of VC fundraising, deal flow, etc. The results of such a study would be helpful in providing policymakers with more information about the outputs of their VC policy

choices. To date, assessments of the direct impact of VC policies on VC market activities have not been carried out across a broad range of states (with the notable exception of Josh Lerner's (2009) narrative about what can be learned from failed policy attempts at supporting VC markets).

Finally, my next research project will delve more deeply into the impact of democratization on industrial policymaking in East Asia. This work will be an extension of my finding that democratization was an inhibitor to the use and sustainability of the FoVCF and tax elements. As politicization and democratization grew in Taiwan, Hong Kong and Singapore, policymakers had to discontinue tax credits and FoVCFs, respectively. Further examination of the precise mechanism by which democratic trends undermined the use of interventionist industrial policy can provide valuable insights into the future of the developmental state as well as the particular forms of state-industry relations in East Asia. My further investigation of the impact of democratization will be relevant for scholars working on industrial policy issues, regardless of the region.

## **10.5. Conclusion**

To conclude, this thesis extends existing IPE research programs to explain diversity amongst convergent trends in a previously unexamined empirical area. It uncovered why what should be a textbook case of universal convergence had a surprise ending. In doing so, this thesis speaks to a broader IPE audience as my theoretical tools help account for how and why diffusion leads to varying degrees of convergence, even when competition and learning transmitted a clear source model. Scholars interested in advancing arguments about domestic agents being more than a mere receiver of diffusion may build upon my conceptualization of the impact of policymakers' economic management norms in the bounded learning process. My work can be applied to reveal how, even in the face of competitive pressures and the widespread studying of a successful strategy, as policies diffuse, "*all politics is local.*"

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# Annex I: Excerpt from Large-N VC Policy Dataset

A	B	C	D	E	F	G
	Americas, Middle East & Africa					
	Argentina	Brazil	Canada	Chile	Mexico	Saudi Arabia
<b>Tax &amp; Legal Structures</b>						
<b>Liability Structure</b>	The lack of a specific regulatory framework for PE/VC is still a major constraint in Argentina. The Funds Law makes general provisions for funds of various types. An offshore fund wishing to register as a limited partnership must identify its partners. Argentina remains a complex, high-tax environment for PE/VC. The general corporate tax rate is 25%. Other taxes include a Not SME or tech specific; the Buenos Aires Stock Exchange (BCSA; Spanish: Bolsa de Comercio de Buenos Aires).	Brazil has two main fund frameworks: fundos mutuos de investimento em empresas emergentes (FIEEs), created for VC activity and fundos de investimento. While Brazil's local pension funds have been instrumental to the growth of the local industry, their role in the government's 2011 decision to reduce a financial transactions tax (IOF) specifically for private equity investments was a pleasant surprise. BM & Bovespa	Limited Partnership	Chile continues to lead the regional rankings for the sixth year. The government is proactively promoting the development of an entrepreneurial community with Pension funds and insurance companies still face some restrictions in PE/VC investing. The A capital markets reform package (Law 20,190 or MK2), implemented in June 2007, in Chile created a series of	FICAPs. Most of the larger funds remain offshore as limited partnerships in Canada. The specialised trust vehicle created in 2006 (Fideicomisos de Inversión de Regulatorios) in Mexico also showed increased awareness of the asset class as they continue to modify. While Mexico's tax system offers some advantages for certain aspects of PE/VC investing, a 2007 tax reform reduced the tax burden on Mexican Stock Exchange (BMV).	Underdeveloped legal framework to support VC/PE activity
<b>Government Constraints</b>			Canada also has a fairly unique form of venture capital partnership in its Labour in 2009; the federal government overhauled Section 116 of the tax code that had historically reduced the attractiveness of		No specific constraints for VC, but seems that there are constraints re: foreign ownership of other types. Dividends paid to non-residents are subject to a 15 per cent withholding tax. Management fees and royalties (rentas) are subject to a 10% withholding tax. Tadawul (Arabic: البورصة السعودية) is the only stock exchange in Saudi Arabia. Other foreign invested undertakings are allowed a five-year tax holiday. Eligibility for a tax holiday requires a minimum of 25 per cent equity participation by a Saudi national.	
<b>Tax Treatment</b>			Toronto Stock Exchange and NASDAQ	Chile Electronic Stock Exchange	BOLSA (Spanish: Bolsa Mexicana de Valores, BMV) is Mexico's only stock exchange. MIF (2011) said Mexico needs to improve tax framework for VC; Investments in PE/VC funds remain ineligible for tax incentives and exemptions available for investments in listed firms	
<b>Technology Stock Exchange</b>						
<b>Tax Incentives / Credits</b>	MIF (2011) said Argentina needs to improve tax framework for VC	The government defined PE/VC as a separate asset class and reduced the IOF tax to 2% from 6% on related transactions; An important law (Law 11.312/06) reduced to zero income tax on	20% tax credit to investors in venture capital funds, but capped at a small amount of money. The basic incentive available to any Canadian corporation performing R&D is a refundable tax credit	Tax credits and financial incentives enacted through CORFO to attract entrepreneurs to Chile		
<b>Govt FoVC Initiative</b>						
<b>Govt Fund of VC Fund Program?</b>	Yes, the IDB Multilateral Investment Fund invested in VC markets across Latin America	Yes, government started offering seed capital to VC funds in 2007 - <a href="http://latintrade.com/2010/05/brazil-vc-seed-capital-to-venture-funds/">http://latintrade.com/2010/05/brazil-vc-seed-capital-to-venture-funds/</a>	Yes, provincial level, with BC, Alberta, Quebec and Ontario all having government FoVCs	Yes, the IDB Multilateral Investment Fund invested in VC markets across Latin America	Yes, the IDB Multilateral Investment Fund invested in VC markets across Latin America	No
<b>Name of VC FoF program</b>	Multilateral Investment Fund (MIF)	Finep and MIF	BC Renaissance Fund, Alberta Enterprise Corporation, Alberta IAVC Capacity Builder, BDC Fund of Funds	Multilateral Investment Fund (MIF)	Multilateral Investment Fund (MIF)	N/A
<b>\$ in Fund of VC Fund</b>	USD 2.2 bn AuM	USD 158 M (Finep)	About \$500 million across the regional funds	USD 2.2 bn AuM	USD 2.2 bn AuM	N/A
<b>Date of FoF establishment and details of operations</b>	Established in 1993 as part of the Inter-American Development Bank (IDB) Group, the Multilateral Investment Fund (MIF) was Government not organizing as a VC entities and investing, it seems. Argentina noted as one of the world VC environments by the	1993 for MIF, then for Brazil's administration of its VC seeding platform it was 2007 (Finep)	Canadian Labor Fund Program established funds in the 1980s and 1990s	Established in 1993 as part of the Inter-American Development Bank (IDB) Group, the Multilateral Investment Fund (MIF) was created. Government not organizing as a VC entities and investing, it seems. Argentina noted as one of the world VC environments by the LAUCA in	Established in 1993 as part of the Inter-American Development Bank (IDB) Group, the Multilateral Investment Fund (MIF) was created. Doesn't appear that the Mexican government has run a VC fund, but the government did start to support VC in 2009 /2010	N/A
<b>Government VCs</b>		Yes, government managed seed funds where they co-invested alongside VCs since 2005.	Yes, Ontario and Alberta both have direct VC investment vehicles			In 2006, the Saudi Arabian General Investment Authority (SAGIA), Venture Capital Bank and Global Finance Market (GFM) launched a

## Annex II: Large-N Dataset Summary for FoVCFs

#	Country	Name	Year of Establishment	AuM	Region / Cluster
1	United States	Massachusetts Technology Development Corporation (MTDC)	1978	USD 2 M initially	Americas
2	Taiwan (Republic of China)	National Development Fund	1985	up to USD 100 M	Asia
3	France	Fondinvest Capital and CDC Enterprise	1988	EUR 624 M	Europe
4	Denmark	Vækstfonden	1992	DKK 3.8 billion	Europe
5	Ireland	Enterprise Ireland	1993	EUR 250 M	Europe
6	Israel	Yozma	1993	USD 100 M	Europe
7	Argentina	Multi-lateral Investment Fund (Inter-American Development Bank)	1993	USD 2.2 bn	Latin America
8	Chile	Multi-lateral Investment Fund (Inter-American Development Bank)	1993	USD 2.2 bn	Latin America
9	Mexico	Multi-lateral Investment Fund (Inter-American Development Bank)	1993	USD 2.2 bn	Latin America
10	Canada	BC Renaissance Fund, Alberta Enterprise Corporation, Alberta IAVC Capacity Builder, BDC Fund of Funds	1994	~CAD 25 B	North America
11	Finland	FII; FoF Growth	1995	EUR 685M	Europe
12	Sweden	The Sixth AP Fund	1996	SEK 10 B	Europe
13	Australia	Innovation Investment Fund	1998	AUD 20M each	Asia
14	Korea	Small and Medium Business Fund	1998	N/A	Asia
15	Singapore	Technopreneurship Investment Fund (TIF)	1999	USD 1 billion	Asia
16	Hong Kong	ARF II (Privately managed)	1999	less than USD 100 M	Asia
17	United Kingdom	UK High Tech Fund	2000	GBP 1 B	Europe
18	Belgium	Participatiemaatschappij Vlaanderen NV	2001	900+ million	Europe
19	Greece	TANEO	2001	EUR 150 M	Europe

20	Hungary	Development Capital Programme	2002	45 billion HUF	Europe
21	New Zealand	New Zealand Venture Investment Fund (NZVIF)	2002	NZD 200 M	Asia
22	Norway	Argentum	2002	NOK 6 B	Europe
23	Netherlands	TechnoPartner	2005	EUR 11 M	Europe
24	Poland	National Capital Fund	2005	PLN 65,86 M	Europe
25	Russia	Russian Venture Capital Fund	2006	USD 1 billion	Europe
26	Austria	Not available	2007	Not available	Europe
27	Brazil	Finep	2007	USD 158 M	Latin America
28	Portugal	Portugal Venture Capital Initiative (PVCi)	2007	EUR 111 M	Europe
29	Turkey	Istanbul Venture Capital Initiative (iVCi)	2007	EUR 160 M	Europe
30	China	National initiative with local funds	2008	USD 1 billion	Asia
31	Slovenia	Slovene Enterprise Fund Operational Programme	2010	EUR 189 M	Europe
32	Czech Republic	Enterprise and Innovations (oversight by MIT)	2011	?	Europe
33	Italy	Italian Innovation Fund	2011	Undergoing discussions	Europe
34	Estonia	N/A	N/A	N/A	Europe
35	Germany	N/A - Germany's 1975 Deutsche Wagnisfinanzierungsgesellschaft (WFG) was a direct VC fund	N/A	N/A	Europe
36	Iceland	N/A	N/A	N/A	Europe
37	India	N/A	N/A	N/A	Asia
38	Indonesia	N/A	N/A	N/A	Asia
39	Japan	N/A	N/A	N/A	Asia
40	Luxembourg	N/A	N/A	N/A	Europe
41	Slovak Republic	N/A	N/A	N/A	Europe
42	South Africa	N/A	N/A	N/A	Africa
43	Spain	N/A	N/A	N/A	Europe
44	Switzerland	N/A	N/A	N/A	Europe
45	Saudi Arabia	N/A	N/A	N/A	Middle East
46	Vietnam	N/A	N/A	N/A	Asia

### **Annex III: List of Interviews**

- 6 January 2011, Israeli Minister of Commercial Affairs in the United Kingdom, London, UK.
- 19 January 2011, Founder of a Singapore-based early-stage investment management firm, Videoconference.
- 18 March 2011, Director, European Venture Capital Association, Brussels, Belgium.
- 26 June 2011, Teleconference with a former associate at a Vietnamese VC management firm.
- 20 December 2011, Head of Hong Kong Science & Technology Parks, Hong Kong.
- 20 December 2011, Manager in a Vietnam-focused VC fund, Hong Kong.
- 20 December 2011, Head of Data for the Asian Venture Capital Journal, Hong Kong.
- 21 December 2011, Senior Manager for the Hong Kong Innovation and Technology Commission Technopreneur Funding Schemes, Hong Kong.
- 3 January 2012, Executive Director, HK Venture Capital & Private Equity Association, Hong Kong.
- 5 January 2012, General Secretary of the Taiwan Venture Capital Association, Taipei City, Taiwan.
- 5 January 2012, Manager, Committee of Communications Industry Development Office of MoEA's Institute for Information Industry, Taipei City, Taiwan.
- 5 January 2012, Planner at Institute for Information Industry and Curator of Start-up Digest, Taipei City, Taiwan.
- 6 January 2012, Angel fund investor, Taipei City, Taiwan.
- 6 January 2012, Chairman of the KT Li Institute for Digital Information (and colleague of K.T. Li), Taipei City, Taiwan.
- 6 January 2012, Senior Specialist, CEPD Department of Economic Research, Taipei City, Taiwan.
- 18 August 2012, Associate in Strategy Consulting Firm focused on advising Vietnamese financial services companies, Hanoi.
- 20 August 2012, Deputy Director in Vietnam's Ministry of Industry and Trade's Trade Promotion Agency, Hanoi.
- 20 August 2012, Projects Coordinator in External Communications and Relations Department of Vietnam's Ministry of Industry and Trade's Trade Promotion Agency, Hanoi.
- 21 August 2012, International Coordination Division Manager in Agency for SME Development of Vietnam's Ministry of Planning and Investment, Hanoi.
- 21 August 2012, Agency for SME Development Finance Programs Manager, Vietnam's Ministry of Planning and Investment, Hanoi.
- 22 August 2012, Managing Partner and Founder of a Vietnam-based PE/VC management firm, Ho

Chi Minh City.

23 August 2012, SME Association Founder and World Bank Advisor, Ho Chi Minh City.

23 August 2012, Director of Vietnamese fund management firm, Ho Chi Minh City.

24 August 2012, Managing Director of business angel investment firm, Ho Chi Minh City.

24 August 2012, Managing Director of Vietnamese VC management firm, Ho Chi Minh City.

5 September 2012, Head of Policy Southeast Asia for a technology MNC, Singapore.

11 September 2012, Associate Professor, National University of Singapore, Singapore.

12 September 2012, Former manager of the TIF from 1999 until 2005, and member of the  
Technopreneurship 21 Ministerial Committee, Singapore.

12 September 2012, Singapore Venture Capital Association member, Singapore.

13 September 2012, Country Policy Head for technology MNC, Singapore.

13 September 2012, Singapore-based entrepreneur and former civil servant, Singapore.

16 September 2012, Founder of incubator and private sector contributor to National Research  
Foundation, Singapore.

17 September 2012, VC Manager and member of SVCA leadership, Singapore.

18 September 2012, Founder of Singaporean incubator supported by government funding,  
Singapore.

18 September 2012, Journalist focused on reporting entrepreneurship and VC news and manager  
of a government-sponsored incubator, Singapore.

18 September 2012, Director of Singaporean university enterprise support center, Singapore.

19 September 2012, Confidential Government ministerial ICT policy panel meeting, Singapore.

20 September 2012, VC manager and former civil servant, Singapore.

20 September 2012, Head of Entrepreneurship Promotion, SPRING, Singapore.

20 September 2012, Head of SME Healthcare & Biomedical Programs, SPRING,  
Singapore.

24 September 2012, APEC Small & Medium Enterprise Working Group Director, Singapore.

25 September 2012, A\*STAR Deputy Director of Planning & Policy, Singapore.

25 September 2012, A\*STAR Head of Planning & Policy, Singapore.

25 September 2012, CEO of Singapore-incorporated media start-up company, Singapore.

20 May 2013, ASMED Manager, email exchange.

6 October 2013, Founder and Manager of The Yozma Group, Tel Aviv.